

Cryptocurrency-Based Waqf within the Islamic Finance Ecosystem: A Systematic Literature Review and Conceptual Framework Development

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Abstract

The development of financial technology and digital assets has driven new forms of innovation within the Islamic finance ecosystem, including the use of cryptocurrency as a waqf instrument. This development creates opportunities to broaden wakif participation, improve transaction efficiency, enhance management transparency, and leverage blockchain technology to strengthen waqf accountability. However, the application of cryptocurrency in waqf continues to face several challenges, particularly regarding its status as property (māl), value volatility, digital security risks, shariah compliance, regulatory frameworks, and the capacity of nazhir to manage digital assets. This study aims to examine the development of the literature on cryptocurrency-based waqf, identify the opportunities and challenges associated with its implementation within the Islamic finance ecosystem, and develop a conceptual framework integrating shariah, technological, regulatory, governance, and risk-management dimensions. The study adopts a qualitative approach using a Systematic Literature Review (SLR) based on the principles of Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Relevant literature is analyzed descriptively and thematically to identify patterns in the existing literature, research gaps, and relationships among concepts related to cryptocurrency, blockchain, waqf, and Islamic finance. The findings indicate that cryptocurrency has the potential to support waqf innovation, particularly through blockchain and smart contracts, which may enhance transparency, traceability, and the efficiency of waqf fund or asset management. At the same time, price volatility, uncertainty regarding its legal and shariah status, cybersecurity risks, smart contract errors, and the lack of optimal regulatory harmonization remain major challenges. This study develops a conceptual framework that positions cryptocurrency characteristics, shariah compliance and maqāṣid al-sharī'ah, waqf asset suitability, blockchain technology, nazhir governance, regulation, and risk management as interconnected elements supporting transparency, accountability, and the sustainability of waqf benefits. Accordingly, the use of cryptocurrency in waqf requires an integrated approach that extends beyond technological considerations to encompass shariah, legal, institutional, and economic sustainability dimensions.

Keywords: Cryptocurrency; Waqf; Islamic Finance; Blockchain; Maqāṣid al-Sharī'ah; Systematic Literature Review.

Introduction

The rapid development of financial technology has transformed the ways in which people conduct transactions, make investments, raise funds, and engage in philanthropic activities, including within the Islamic finance ecosystem. One of the most rapidly evolving innovations is cryptocurrency, which utilizes blockchain technology to create digital assets characterized by decentralization, traceability, and network-based transactions. Canbaz and Berkun (2021) show that the development of cryptocurrency has attracted growing attention among Muslim communities and investors, raising questions about its status and compatibility with Islamic financial principles. Similarly, Nabeel and Sumathy (2023) explain that cryptocurrency has become part of the Islamic finance discourse because it offers a form of digital asset that differs fundamentally from conventional financial instruments. These developments indicate that cryptocurrency is no longer merely a technological phenomenon but has increasingly entered the domains of economics, investment, and finance, where it requires more comprehensive examination from a shariah perspective.

The growth of cryptocurrency has also generated considerable debate over its status as *māl*, a medium of exchange, a commodity, or a digital asset under Islamic law. Fatarib and Sali (2020) demonstrate that the characteristics of cryptocurrency raise concerns related to uncertainty, speculation, and the protection of asset ownership, suggesting that its legal status cannot simply be equated with that of conventional money. Wartoyo and Haerisma (2022) likewise examine cryptocurrency through the framework of *maqāṣid al-sharī'ah* and highlight concerns regarding volatility and the potential *mafsadah* that may arise from its use. At the same time, Sahalan and Samsudin (2023) identify divergent views among Islamic scholars and Islamic economic thinkers concerning cryptocurrency, particularly with regard to *gharar*, risk, asset functions, and the possibility of its limited use under certain conditions. Accordingly, the emergence of cryptocurrency presents a multidimensional issue involving technology, economics, *fiqh al-mu'āmalāt*, and shariah governance.

At the same time, the *waqf* institution is undergoing significant transformation as a result of digitalization, which enables *waqf* collection, management, and distribution to be conducted through digital platforms. Mutmainah et al. (2021) demonstrate that blockchain technology has potential applications in *waqf* management because it can enhance transparency and broaden public access to *waqf* mechanisms. Earlier, Zulaikha and Rusmita (2018) proposed that blockchain could be utilized to develop *waqf* management, including the collection of funds and the more structured management of *waqf* assets. This development was further supported by Mohaiyadin et al. (2022), who found that blockchain could address some of the accountability and transparency challenges associated with *waqf* administration. These developments reveal a point of convergence between digital assets, blockchain technology, and the need to modernize *waqf* management within the broader Islamic finance ecosystem.

The convergence of cryptocurrency and waqf has subsequently given rise to the emerging idea of using cryptocurrency assets as waqf assets or as part of digital asset-based waqf collection mechanisms. Wathan et al. (2025) show that the emergence of cryptocurrency-based waqf raises questions concerning the legitimacy of digital assets, the perpetuity of waqf, and compliance with shariah principles. Dallah et al. (2026) likewise identify Islamic cryptocurrency and asset tokenization as potential developments in waqf management in the digital economy. These developments indicate that the scope of waqf is no longer confined to land, buildings, cash, or conventional productive assets, but is increasingly extending into the domain of digital assets with distinct economic and legal characteristics. Cryptocurrency-based waqf can therefore be regarded as an emerging phenomenon that requires a specific conceptual framework because it lies at the intersection of waqf jurisprudence, cryptocurrency, blockchain, and Islamic finance.

Blockchain technology constitutes an important foundation for examining the potential development of cryptocurrency-based waqf because it provides a distributed and traceable system for recording transactions. Al-Salahat (2022) explains that blockchain can be integrated into waqf systems to support institutional development while improving the efficiency of management processes. Anwar et al. (2024) similarly demonstrate that the use of blockchain in cash waqf has the potential to address longstanding challenges related to transparency, accountability, and efficiency in waqf management. With these characteristics, blockchain can provide the technological infrastructure required to record ownership, transactions, distributions, and changes in the status of waqf assets in a more transparent manner. Nevertheless, the use of blockchain technology does not automatically make cryptocurrency compliant with shariah principles, because the technological dimension and the substantive dimension of the underlying contract constitute two distinct issues that must be examined separately.

The first major scholarly issue concerns the high volatility of cryptocurrency, which raises questions about its compatibility with the Islamic principle of protecting wealth. Using ARCH-GARCH analysis, Sekaringsih and Al-Banna (2022) demonstrate that cryptocurrency exhibits high volatility and patterns of use associated with speculation. Katterbauer et al. (2022) likewise developed a data-driven approach to assessing the shariah compliance of cryptocurrency, indicating that the evaluation of such assets requires more systematic indicators than simply considering the blockchain technology on which they are based. This condition creates a gap between the ideal characteristics of waqf assets, which are expected to generate sustainable benefits, and the characteristics of cryptocurrency assets, whose value may fluctuate substantially. Accordingly, volatility, gharar, the risk of loss in value, and the sustainability of benefits represent fundamental issues that must be addressed before cryptocurrency can be positioned within a waqf framework.

A further gap arises from the absence of consensus in the literature concerning the status of cryptocurrency under Islamic law. Paramole and Sanni (2022) demonstrate that cryptocurrency remains a subject of debate in Islamic jurisprudence because digital assets possess diverse characteristics and cannot necessarily be treated through a uniform legal approach. Sahalan and Samsudin (2023) identify differences in the arguments advanced by scholars who reject cryptocurrency and those who allow room for its permissibility based on uşūl al-fiqh methodologies. Meanwhile, Nabeel and Sumathy (2023) argue that cryptocurrency should be assessed according to its function, characteristics, and context of use within the Islamic finance perspective. These divergent positions become even more complex when the subject of analysis is not merely cryptocurrency transactions but the use of cryptocurrency as a waqf asset, which is subject to more specific shariah, legal, and institutional requirements.

These issues are further complicated by the fact that the development of crypto-asset regulation has progressed more rapidly than the establishment of a dedicated regulatory framework for cryptocurrency-based waqf. In Indonesia, the Financial Services Authority (OJK), through OJK Regulation No. 27 of 2024, regulates the organization of digital financial asset trading, including crypto assets, with the regulation taking effect on 10 January 2025. However, regulations governing crypto-asset trading do not automatically resolve the legal questions that arise when cryptocurrency is transferred into a waqf structure, including issues of ownership, permanent waqf, nazhir management, and the distribution of its benefits. Mustagfiroh and Khoirina (2025) show that the implementation of blockchain-based waqf in Indonesia continues to face challenges related to regulation, shariah compliance, smart contracts, and technological literacy. Similarly, Zuhroh (2026) identifies continuing legal questions surrounding the validity of electronic contracts, the status of digital assets, waqf tokens, and mechanisms for shariah oversight in blockchain-based waqf.

Another gap lies in the tendency of some studies to focus more heavily on the technical benefits of blockchain than on integrating blockchain applications with the substantive requirements of waqf law and shariah principles. Wijaya et al. (2025) demonstrate that previous research on blockchain-based waqf has largely concentrated on technical and governance dimensions, while questions concerning shariah legitimacy require further examination. Ihsan and Syamsuri (2025) likewise emphasize the importance of integrated governance characteristics to ensure that blockchain applications in waqf can effectively address issues of transparency and accountability. This indicates a need for further research that connects the technological dimension of blockchain, the characteristics of cryptocurrency, the principles of maqāṣid al-sharī'ah, waqf law, and nazhir governance within a unified analytical framework. This research gap suggests that cryptocurrency-based waqf cannot be adequately examined solely through the legal perspective of cryptocurrency or through the broader perspective of waqf digitalization.

The Indonesian context is particularly important because of the interaction between state regulation and religious perspectives on crypto assets. At the 2021 Ijtima Ulama, the Indonesian Ulema Council (MUI) stated that cryptocurrency could not be recognized as a legitimate currency because it contains elements of *gharar* and *dharar* and conflicts with certain applicable provisions. At the same time, cryptocurrency as an asset may be traded provided that certain conditions are fulfilled, including the existence of an underlying asset and clearly identifiable benefits. In parallel, OJK regulations that have been effective since 2025 place crypto assets within a formally regulated and supervised digital financial asset framework. The distinction between the regulatory domain governing crypto-asset trading and the jurisprudential considerations underlying the religious ruling creates a need to clarify how a particular cryptocurrency may satisfy the criteria for acceptance within a *waqf* structure. Accordingly, research on cryptocurrency-based *waqf* needs to consider, simultaneously, positive law, fatwas, *fiqh al-mu'āmalāt*, asset characteristics, and *waqf* management mechanisms.

Research on cryptocurrency-based *waqf* is important because digital technology offers opportunities to address longstanding challenges related to transparency and accountability in *waqf* institutions. Mohaiyadin et al. (2022) demonstrate that blockchain can help address issues involving the recording of *waqf* receipts, the tracking of distributions, and the provision of *waqf*-related information through a public ledger. Mutmainah et al. (2021) likewise argue that blockchain can serve as an innovation for optimizing the realization and development of *waqf* in Indonesia. If cryptocurrency can be incorporated into a shariah-compliant *waqf* structure, the technology could potentially broaden the participation base of *wāqif*, facilitate cross-border transactions, and enhance the traceability of *waqf* assets. However, these opportunities can only be realized if issues of legal status, volatility, security, custody, and shariah governance are first addressed systematically.

Conversely, uncertainty concerning the status of cryptocurrency as a *waqf* asset may create risks for *wāqif*, *nazhir*, beneficiaries, and Islamic financial institutions. Wathan et al. (2025) emphasize that the use of cryptocurrency as a *waqf* asset raises questions concerning legitimacy, perpetuity, and shariah compliance that must be addressed before widespread implementation can be considered. Sekaringsih and Al-Banna (2022) demonstrate that cryptocurrency volatility may constitute a significant concern when such assets are treated as instruments requiring value stability. These risks may become even more complex in the context of *waqf* because the objective of *waqf* is not merely to generate financial returns but also to preserve the principal of the asset and produce benefits consistent with the *wāqif*'s intended purpose. If these dimensions are not clearly defined from the outset, cryptocurrency-based *waqf* innovation may generate legal uncertainty, the risk of asset-value loss, governance conflicts, and diminished public trust in *waqf* institutions.

The urgency of this research is further reinforced by the cross-border nature of the cryptocurrency and blockchain ecosystem, while shariah

approaches to digital assets remain highly diverse. Valeri et al. (2020) demonstrate that blockchain technology and cryptocurrency may offer efficiency, transparency, and trust in certain financial transactions, but their implementation must remain attentive to regulatory requirements and Islamic values. Through a systematic literature review of digital assets from an Islamic perspective, Tahir et al. (2025) show that the literature has addressed a range of issues, including ownership, inheritance, zakat, waqf, and the status of māl, but that the field remains under development and requires further synthesis. This situation highlights the need for a systematic mapping of themes, concepts, methodological approaches, and research findings concerning the relationship between cryptocurrency and waqf. A systematic literature review (SLR) is therefore particularly relevant because it can identify research patterns, areas of convergence, divergent positions, and unresolved research gaps that may not be readily apparent through conventional narrative literature reviews.

Against this backdrop, the research problem extends beyond the question of whether cryptocurrency is halal or haram. Instead, it needs to address the conditions and mechanisms under which cryptocurrency assets could be incorporated responsibly into the waqf ecosystem. Haliding et al. (2025) demonstrate that the digitalization of waqf offers opportunities to enhance transparency, accessibility, and efficiency, while continuing to face constraints related to digital literacy, institutional capacity, and regulatory gaps. Rupita and Afifah (2025) likewise show that digital waqf requires an ecosystem supported by regulation, literacy, and collaboration among government institutions, Islamic financial institutions, and technology providers. Accordingly, there is a need for a conceptual framework capable of integrating the characteristics of cryptocurrency, waqf principles, maqāṣid al-sharī'ah, shariah compliance, blockchain technology, governance, and regulation. Such a framework is expected to explain the relationships among these components while providing a foundation for subsequent empirical research and the development of implementation models for cryptocurrency-based waqf.

Based on these phenomena and research gaps, the study entitled "Cryptocurrency-Based Waqf within the Islamic Finance Ecosystem: A Systematic Literature Review and Conceptual Framework Development" is designed to map and synthesize the development of research on cryptocurrency, digital waqf, blockchain, and Islamic finance. Specifically, the study focuses on identifying major themes, shariah perspectives, opportunities, risks, regulatory challenges, governance mechanisms, and factors determining the feasibility of cryptocurrency as a waqf asset. Tahir et al. (2025) emphasize the importance of systematic mapping in research on Islamic digital assets, while Dallah et al. (2026) demonstrate that the development of cryptocurrency and asset tokenization creates new opportunities for conceptualizing waqf management. Based on this synthesis, the study will develop a conceptual framework connecting the dimensions of cryptocurrency assets, shariah compliance, maqāṣid al-sharī'ah, blockchain

technology, waqf governance, regulation, and the sustainability of waqf benefits. Accordingly, the central focus of this study is to provide a structured understanding of the position of cryptocurrency within the waqf ecosystem while formulating a conceptual framework that can serve as a foundation for future research and for the more systematic development of digital waqf practices.

Research Methodology

This study adopts a qualitative approach using a Systematic Literature Review (SLR) to identify, evaluate, analyze, and synthesize previous research related to cryptocurrency-based waqf within the Islamic finance ecosystem. The SLR method was selected because cryptocurrency and waqf represent relatively emerging and rapidly evolving areas of research that encompass multiple perspectives, including *fiqh al-mu‘āmalāt*, Islamic economics, blockchain technology, regulation, and waqf governance. Rather than merely summarizing previous findings, this SLR seeks to identify research patterns, thematic developments, divergent perspectives, methodological limitations, and existing research gaps in the literature. The resulting synthesis is subsequently used as the basis for developing a conceptual framework that explains the position of cryptocurrency within a waqf ecosystem consistent with Islamic finance principles.

The SLR process follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. PRISMA is employed to ensure that the processes of literature searching, screening, evaluation, and reporting are conducted systematically, transparently, and in a traceable manner. The research process consists of four main stages: identification, screening, eligibility, and inclusion. During the identification stage, scholarly articles are searched across several academic databases, including Scopus, Web of Science, ScienceDirect, SpringerLink, Emerald Insight, Google Scholar, DOAJ, and Crossref. The search strategy employs combinations of keywords such as “cryptocurrency” AND “waqf,” “cryptocurrency” AND “Islamic finance,” “crypto asset” AND “waqf,” “digital asset” AND “waqf,” “blockchain” AND “waqf,” “blockchain-based waqf,” “digital waqf” AND “Islamic finance,” and “cryptocurrency” AND “Islamic law.” These combinations are intended to ensure that the search captures not only studies explicitly using the term “cryptocurrency waqf” but also studies addressing the broader concepts that constitute this emerging ecosystem, including blockchain, digital assets, digital waqf, tokenization, and Islamic finance.

The data used in this study consist of secondary data derived from scholarly articles published in relevant academic journals. The literature is selected according to predetermined inclusion and exclusion criteria. The inclusion criteria comprise articles addressing cryptocurrency, digital assets, blockchain, waqf, digital waqf, Islamic finance, Islamic law, or other themes substantively related to the research subject; articles published in either Indonesian or English; articles for which the full text is accessible; and articles whose bibliographic information and publication sources can be verified. The

exclusion criteria comprise news reports, blogs, popular opinion pieces, articles lacking substantive relevance to the research topic, articles that merely mention cryptocurrency or blockchain in passing, and publications that do not provide sufficient information for analysis. The publication period may be limited to 2018–2026 to capture the development of research from the early application of blockchain in waqf to more recent developments concerning cryptocurrency, digital assets, tokenization, and digital transformation in Islamic finance.

During the screening stage, articles retrieved from the various databases are initially assessed based on their titles and abstracts. Articles that are not relevant to the research focus are excluded, while those demonstrating relevance to cryptocurrency, waqf, blockchain, or Islamic finance proceed to full-text assessment. During the subsequent eligibility stage, the articles are examined in full to determine their alignment with the research questions and predetermined inclusion criteria. This assessment considers the relevance of the research objectives, the object of study, methodological approach, theoretical perspective, research findings, and contribution to the understanding of cryptocurrency-based waqf. Articles that satisfy all requirements are included in the final sample, whereas those that fail to meet the criteria are excluded. The entire selection process is documented using a PRISMA flow diagram so that the number of identified, screened, excluded, and ultimately analyzed articles can be reported transparently.

Data from the articles that meet the selection criteria are extracted using a data-extraction sheet prepared by the researchers. The information collected includes authorship, publication year, journal name, country or research setting, research objectives, methodological approach, research object, theoretical perspective, key concepts, research findings, opportunities for applying cryptocurrency in waqf, identified risks, regulatory aspects, shariah-compliance considerations, and research gaps. Data extraction is conducted systematically so that information from individual studies can be compared using relatively consistent categories. The extracted data are subsequently organized according to themes and subthemes emerging from the literature. This process enables the study to develop a more comprehensive understanding of the development and direction of research on cryptocurrency-based waqf.

The data analysis employs both descriptive and thematic analysis. Descriptive analysis is used to map the development of the literature according to publication year, journal source, country of research, methodological approach, and dominant themes. This analysis provides an overview of the academic development of research on cryptocurrency and waqf and identifies research trends over time. Thematic analysis is then conducted to identify and categorize the principal themes emerging from the selected articles. These themes include the status of cryptocurrency as *māl*, shariah compliance, *gharar*, *maysir*, *dharar*, *maqāṣid al-sharīʿah*, cryptocurrency volatility, blockchain, smart contracts, asset tokenization, waqf governance, regulation, transparency, asset security, and the sustainability of waqf

benefits. The thematic findings are subsequently compared and synthesized to identify areas of convergence and divergence, developments in scholarly thought, and gaps in previous research.

This study also incorporates a simple bibliometric analysis as a complementary component of the SLR to illustrate the development and structure of research on cryptocurrency-based waqf. Bibliometric analysis can be used to identify publication frequency by year, author productivity, journal sources, countries of research, dominant keywords, and relationships among research themes. Where the number of articles and the available metadata are sufficient, keyword co-occurrence analysis may be conducted using software such as VOSviewer. The resulting analysis is not intended to evaluate the quality of a particular theory or research group, but rather to map the development of the research field and identify themes that have received substantial attention as well as those that remain relatively underexplored. Combining bibliometric analysis with thematic analysis is therefore expected to provide a more comprehensive mapping of the existing literature.

The next stage involves identifying the research gap based on the synthesis of all analyzed articles. Research gaps are identified by comparing the focus of previous studies, the perspectives adopted, methodological approaches, objects of study, and reported findings. Particular attention is given to the gap between research examining cryptocurrency from legal and shariah perspectives and research addressing blockchain-based digital waqf management. The study also examines the gap between developments in digital-asset technology and the readiness of regulatory frameworks, nazhir governance, shariah-supervision mechanisms, and waqf risk management. These findings provide the basis for determining the components that should be incorporated into the conceptual framework for cryptocurrency-based waqf.

The conceptual framework is developed through a synthesis of previous research findings categorized according to the identified themes. The framework integrates several key components, namely cryptocurrency characteristics, shariah compliance, maqāsid al-sharī'ah, blockchain technology, nazhir governance, regulation, risk management, transparency, accountability, and the sustainability of waqf benefits. Cryptocurrency characteristics are used to assess issues relating to asset ownership, value, volatility, utility, and risk, while shariah compliance provides the basis for evaluating the compatibility of cryptocurrency with the principles of fiqh al-mu'āmalāt and the objectives of shariah. Blockchain technology is positioned as an infrastructure capable of supporting transparency, transaction traceability, security, and the implementation of smart contracts, while regulation and governance function as institutional mechanisms to ensure that assets are managed responsibly. The relationships among these components are then structured into a conceptual framework that explains the conditions and mechanisms required for cryptocurrency to function as part of an Islamic waqf ecosystem.

Conceptually, the study positions cryptocurrency characteristics as the initial dimension to be assessed before determining the suitability of cryptocurrency as a waqf asset. These characteristics are subsequently evaluated against shariah principles and *maqāṣid al-sharī'ah*, particularly with respect to ownership, utility, risk, *gharar*, *maysir*, *dharar*, and the protection of wealth (*ḥifẓ al-māl*). Where the cryptocurrency satisfies the relevant shariah requirements and demonstrates the characteristics of an acceptable asset, its implementation requires the support of blockchain technology and smart contracts to enhance transparency and traceability. Such implementation must then be supported by regulation, *nazhir* governance, shariah supervision, and risk management to provide adequate protection for *wāqif* and beneficiaries. Ultimately, these mechanisms are directed toward achieving transparency, accountability, sustainable waqf benefits, and the responsible management of cryptocurrency-based waqf in accordance with Islamic finance principles.

The validity and credibility of the research findings are supported through the consistent application of literature-selection criteria, the use of verifiable academic sources, and the documentation of each stage of the article-search and selection processes. In addition, findings from previous studies are compared across different perspectives to avoid excessive reliance on a single viewpoint or research group. Divergent perspectives concerning cryptocurrency—particularly regarding its status as *māl*, a medium of exchange, a commodity, or a digital asset—are retained during the synthesis as part of the findings rather than being prematurely reconciled. The researchers also cross-check extracted information against the original sources to minimize interpretive errors. Through these procedures, the study is expected to produce a systematic and academically defensible synthesis of the existing literature.

Overall, the research methodology is designed to produce a systematic mapping of scholarship on cryptocurrency-based waqf within the Islamic finance ecosystem while identifying the research gaps that remain unresolved. The SLR findings are subsequently used to identify the principal factors that determine the feasibility and sustainability of using cryptocurrency as a waqf asset. This synthesis provides the basis for establishing conceptual relationships among shariah considerations, asset characteristics, blockchain technology, regulation, governance, and risk management. The resulting conceptual framework is expected to provide a theoretical foundation for subsequent empirical research on the implementation of cryptocurrency-based waqf. In addition, the findings may contribute academically to the development of Islamic finance scholarship while providing a conceptual reference for the development of digital waqf innovations that continue to uphold shariah principles, sound governance, and the protection of waqf assets.

Research Findings and Discussion

The findings of the Systematic Literature Review (SLR) indicate that research on cryptocurrency, blockchain, and waqf has evolved alongside the increasing digitalization of the Islamic finance ecosystem. The literature reviewed shows that early studies tended to examine cryptocurrency primarily from the perspective of Islamic law, whereas subsequent research increasingly explored the application of blockchain to waqf management. Canbaz and Berkun (2021) explain that cryptocurrency has become an important issue in Islamic finance because its characteristics differ from those of conventional financial instruments. Mutmainah et al. (2021), meanwhile, demonstrate that blockchain has increasingly been considered a technology capable of supporting transparency and efficiency in waqf management. This development indicates a gradual shift in the literature from debates concerning the legal status of cryptocurrency toward broader explorations of its potential applications within the Islamic philanthropic ecosystem.

The literature mapping reveals several dominant themes, including the status of cryptocurrency from a shariah perspective, digital-asset volatility, blockchain, digital waqf, waqf governance, regulation, and maqāsid al-sharī'ah. Nabeel and Sumathy (2023) find that discussions of cryptocurrency in Islamic finance largely revolve around ownership, the function of money, speculation, and shariah compliance. Zulaikha and Rusmita (2018), meanwhile, draw attention to the use of blockchain to improve the effectiveness of waqf management. Mutmainah et al. (2021) further support this direction by demonstrating that blockchain can enhance transparency and traceability in waqf management. Taken together, these findings indicate that the literature is increasingly moving toward an integration of technological innovation with institutional principles within Islamic finance.

One of the principal findings of the SLR is the absence of a uniform view regarding the status of cryptocurrency as an asset that may be used in Islamic economic activities. Fatarib and Sali (2020) demonstrate that the legal status of cryptocurrency in Islam is closely associated with the characteristics, function, risks, and elements of gharar inherent in the asset. Paramole and Sanni (2022) similarly find that debates surrounding cryptocurrency cannot be separated from broader questions concerning how Islam defines wealth and ownership. Katterbauer et al. (2022) further argue that assessments of cryptocurrency shariah compliance should be conducted systematically by taking into account the specific characteristics of individual assets. Accordingly, the SLR findings indicate that the use of cryptocurrency as a waqf asset cannot be justified solely on the basis that it possesses economic value; rather, it requires a comprehensive assessment of both its asset characteristics and shariah implications.

From the perspective of maqāsid al-sharī'ah, the findings indicate that cryptocurrency should be assessed by considering both the benefits and potential harms associated with its use. Wartoyo and Haerisma (2022) demonstrate that cryptocurrency needs to be examined in light of the objectives of shariah, particularly the protection of wealth and the prevention

of harm. Sahalan and Samsudin (2023) further emphasize that an *uṣūl al-fiqh* approach allows cryptocurrency to be assessed according to its characteristics and intended use rather than merely on the basis of its technological form. This approach is particularly relevant in the context of waqf because the fundamental purpose of waqf is to preserve the utility of wealth and distribute its benefits for purposes recognized as permissible under shariah. Accordingly, the suitability of cryptocurrency as a waqf asset should be assessed in terms of its capacity to generate sustainable benefits while minimizing uncertainty and potential harm.

The synthesis indicates that volatility constitutes one of the principal challenges associated with the use of cryptocurrency as a waqf asset. Sekaringsih and Al-Banna (2022) demonstrate that cryptocurrency exhibits high volatility, meaning that its value may change substantially within relatively short periods. This characteristic differs from the principles underlying waqf management, which emphasize the preservation of the underlying asset and the continuity of benefits for beneficiaries. Katterbauer et al. (2022) likewise demonstrate that the economic characteristics and risks of cryptocurrency should form part of any assessment of its shariah compliance. Therefore, if cryptocurrency is to be utilized as a waqf asset, risk-management mechanisms and strategies for managing asset value become important components of the conceptual framework developed in this study.

The findings also indicate that blockchain offers substantial technological potential for supporting cryptocurrency-based waqf management. Zulaikha and Rusmita (2018) demonstrate that blockchain technology can be used to enhance transparency in waqf management processes. Mutmainah et al. (2021) similarly find that blockchain applications can improve the efficiency and traceability of waqf transactions. Mohaiyadin et al. (2022) further emphasize that the technology can help address accountability and transparency challenges in waqf administration. Accordingly, blockchain can be positioned as technological infrastructure that enables cryptocurrency transactions within the waqf ecosystem to be recorded, traced, and verified in a more transparent manner.

In addition to blockchain, smart contracts represent another technological component with potential to strengthen cryptocurrency-based waqf management. Al-Salahat (2022) demonstrates that blockchain technology can be incorporated into waqf systems to improve the efficiency of management processes and transaction execution. In the context of cryptocurrency-based waqf, smart contracts could potentially be designed to automate specific processes, such as asset receipt, transaction recording, benefit distribution, and the fulfillment of conditions agreed upon in the waqf contract. Nevertheless, the application of this technology still requires human oversight because not every aspect of a waqf contract can be translated automatically into digital code. Accordingly, smart contracts should be positioned as instruments that support governance rather than as substitutes for the functions of the *nazhir* or for shariah supervision.

The SLR findings indicate that transparency and accountability represent the most consistently identified benefits in the literature on blockchain-based waqf. Mohaiyadin et al. (2022) explain that blockchain can provide a record-keeping system that enhances stakeholders' ability to trace waqf transactions. Anwar et al. (2024) likewise demonstrate that blockchain technology has potential to support the sustainability of cash waqf management through more transparent mechanisms for recording and monitoring transactions. In the context of cryptocurrency, such transparency is particularly relevant because digital-asset transactions may involve multiple parties and take place across digital networks. Blockchain-based transparency can therefore serve as one mechanism for strengthening wāqif confidence while enhancing the accountability of nazhir.

Although technology offers various opportunities, the findings indicate that the success of cryptocurrency-based waqf remains highly dependent on the quality of nazhir governance. Ihsan and Syamsuri (2025) demonstrate that blockchain implementation in waqf requires an integrated governance model capable of ensuring that technological considerations and shariah compliance operate together. Haliding et al. (2025) likewise show that waqf digitalization faces challenges related to institutional capacity and digital literacy. These findings suggest that nazhir are required not only to understand waqf management but also to develop sufficient knowledge of digital assets, cybersecurity, blockchain, and risk management. Accordingly, the development of cryptocurrency-based waqf needs to be accompanied by institutional capacity building to ensure that technological innovation does not introduce additional risks to waqf assets.

The findings indicate that regulation remains one of the areas requiring further development within the cryptocurrency-based waqf ecosystem. Mustagfiroh and Khoirina (2025) identify challenges associated with regulation, shariah compliance, the validity of smart contracts, and supervisory mechanisms in the implementation of blockchain-based waqf. In Indonesia, the regulation of digital financial assets, including crypto assets, has developed through OJK regulations; however, these regulations do not specifically govern cryptocurrency as a waqf asset. This situation creates a regulatory gap between the recognition of cryptocurrency as a digital financial asset and its treatment when transferred into the legal structure of waqf. Accordingly, the SLR findings point to the need for greater alignment among digital-asset regulation, waqf law, shariah fatwas, and nazhir governance mechanisms.

Another theme emerging from the synthesis is tokenization as a potential mechanism for connecting blockchain technology with waqf asset management. Dallah et al. (2026) demonstrate that developments in cryptocurrency and asset tokenization may create new opportunities for managing waqf assets within the digital economy. In essence, tokenization enables the digital representation of a particular asset or right on a blockchain network. In the context of waqf, this concept could potentially be used to create a digital representation of ownership or specific rights associated with

an asset. However, its application requires clarity regarding the legal rights represented by the token. Therefore, waqf tokenization should not be understood merely as a technological innovation but must be situated within a broader framework of ownership, contractual arrangements, waqf law, and shariah compliance.

Beyond these opportunities, the findings identify several risks that need to be addressed when cryptocurrency is applied to waqf. These include price volatility, loss of access to digital assets, cyberattacks, smart-contract errors, risks of misuse, and regulatory uncertainty. Wathan et al. (2025) emphasize that the use of cryptocurrency as a waqf asset requires careful consideration of asset legitimacy, perpetuity, and compliance with waqf requirements. Wijaya et al. (2025) likewise demonstrate that blockchain applications in waqf should be assessed through the principle of *maṣlaḥah* to ensure that the benefits of technological innovation do not overlook potential harms. Risk management should therefore constitute an integral component of the conceptual framework rather than being treated merely as a technical consideration after the cryptocurrency-based waqf system has been implemented.

The synthesis reveals that most previous studies continue to examine cryptocurrency, blockchain, and waqf as relatively separate areas of inquiry. Research on cryptocurrency has largely focused on legal status, volatility, and shariah compliance, whereas research on blockchain and waqf has tended to emphasize transparency, accountability, and management efficiency. Tahir et al. (2025) demonstrate that research on digital assets from an Islamic perspective remains an evolving field encompassing a range of themes that have not yet been fully integrated. Wathan et al. (2025) more specifically draw attention to cryptocurrency as a waqf asset, but issues relating to governance, technology, regulation, and the sustainability of waqf benefits still require further conceptual development. Thus, the principal research gap identified in this study is the absence of a comprehensive conceptual framework integrating cryptocurrency asset characteristics, shariah considerations, blockchain technology, waqf governance, regulation, risk management, and the sustainability of waqf benefits within a single model.

Based on these findings, this study develops a conceptual framework that positions cryptocurrency characteristics as the initial dimension in determining the suitability of an asset for waqf. This assessment is subsequently connected to shariah compliance and *maqāṣid al-sharī'ah*, particularly the protection of wealth, prevention of harm, and creation of beneficial outcomes. Blockchain technology and smart contracts are then positioned as supporting infrastructure for transparency, traceability, and the automation of selected management processes, while regulation, *nazhir* governance, and risk management function as control mechanisms. These relationships are ultimately directed toward the establishment of waqf management that is transparent, accountable, secure, shariah-compliant, and capable of generating sustainable benefits. The framework extends

previous research by integrating technological, shariah, institutional, and regulatory perspectives into the analysis of cryptocurrency-based waqf.

Overall, the SLR findings indicate that cryptocurrency has the potential to become part of digital waqf innovation, but its implementation requires several conditions to be satisfied simultaneously. This potential derives primarily from the capacity of blockchain technology to enhance transparency, traceability, efficiency, and accountability in waqf asset management. At the same time, volatility, security risks, uncertainty concerning shariah status, limited nazhir capacity, and regulatory gaps represent factors that need to be addressed before broader implementation can be considered. The findings demonstrate that the feasibility of cryptocurrency-based waqf cannot be determined solely by treating cryptocurrency as a digital asset; rather, it must be assessed through an integrated consideration of asset characteristics, shariah compliance, maqāsid al-sharī'ah, technology, regulation, governance, and the sustainability of waqf benefits. Accordingly, the conceptual framework developed in this study may provide a basis for subsequent empirical research examining implementation models, nazhir readiness, wāqif perceptions, regulatory arrangements, and the feasibility of cryptocurrency as a waqf asset within the Islamic finance ecosystem.

Conclusion

Based on the findings of the Systematic Literature Review and the synthesis of previous studies, it can be concluded that the development of cryptocurrency, blockchain, and the digitalization of Islamic finance has opened new opportunities for the development of waqf instruments. Cryptocurrency possesses characteristics as a digital asset that distinguish it from conventional waqf assets; therefore, its use as a waqf asset requires a more comprehensive assessment from shariah, economic, technological, legal, and institutional perspectives. The literature indicates that discussions surrounding cryptocurrency from an Islamic perspective remain subject to differing views, particularly regarding its status as māl, volatility, gharar, maysir, dharar, utility, and asset ownership. Accordingly, cryptocurrency cannot automatically be considered suitable as a waqf asset merely because it has economic value and can be digitally owned. Its suitability must instead be determined based on the characteristics of the asset and its conformity with the principles of waqf and maqāsid al-sharī'ah.

The findings also indicate that blockchain technology offers considerable opportunities to support the development of cryptocurrency-based waqf. Blockchain can provide a transparent and traceable transaction-recording mechanism that is relatively resistant to manipulation, thereby potentially strengthening accountability in waqf management. The use of smart contracts may also facilitate the automation of certain waqf management processes, including the recording of contributions, transaction management, and benefit distribution. However, these technologies cannot operate independently, as they still require nazhir oversight, shariah supervision, and

adequate regulatory mechanisms. Therefore, blockchain is more appropriately positioned as supporting infrastructure within the cryptocurrency-based waqf ecosystem rather than as a single factor determining the success of its implementation.

This study finds that cryptocurrency volatility represents one of the principal challenges to its use as a waqf asset. Relatively substantial fluctuations in cryptocurrency values may create risks to the preservation of waqf principal and the continuity of benefits received by mauquf 'alaih. Other risks include loss of access to digital assets, cyberattacks, smart contract errors, asset misuse, and uncertainty regarding mechanisms for protecting wakif. These conditions indicate that the application of cryptocurrency in waqf must be accompanied by clearly defined risk-management mechanisms, including asset custody, digital security, diversification, and transaction monitoring. Accordingly, risk management constitutes a critical component in assessing the suitability of cryptocurrency-based waqf models.

From an institutional perspective, the successful implementation of cryptocurrency-based waqf depends substantially on the capacity of nazhir and the governance system in place. Nazhir are required not only to understand the fundamental principles of waqf but also to possess adequate knowledge of cryptocurrency, blockchain, digital security, risk management, and digital-asset regulation. In addition, the involvement of shariah supervisory bodies and regulators is necessary to ensure that waqf innovation does not compromise the principles of asset protection or the interests of beneficiaries. The synthesis indicates that waqf digitalization without corresponding institutional strengthening may generate new risks, even when the underlying technology provides a high degree of transparency. Therefore, the development of cryptocurrency-based waqf should adopt an ecosystem-based approach involving nazhir, regulators, ulama or shariah experts, technology providers, Islamic financial institutions, and the wider community.

This study also identifies a research gap arising from the limited integration of research on cryptocurrency, waqf, blockchain, regulation, and maqāsid al-sharī'ah. Some previous studies have primarily focused on the legal status of cryptocurrency, whereas others have emphasized the benefits of blockchain for waqf digitalization. This condition highlights the need for a conceptual framework capable of integrating cryptocurrency characteristics, shariah compliance, blockchain technology, nazhir governance, regulation, risk management, and the sustainability of waqf benefits. Based on this synthesis, the present study develops a conceptual framework that positions cryptocurrency characteristics and shariah assessment as the foundation, supported by technology, regulation, governance, and risk management. The framework is ultimately directed toward establishing cryptocurrency-based waqf management that is transparent, accountable, secure, shariah-compliant, and oriented toward the sustainability of waqf benefits.

Overall, this study concludes that cryptocurrency-based waqf represents an innovation with potential for development within the Islamic finance

ecosystem, but its implementation requires more complex conditions and governance arrangements than conventional waqf. This potential lies not only in the use of cryptocurrency as a digital asset but also in the utilization of blockchain as a technology capable of supporting transparency and accountability in waqf management. At the same time, legal uncertainty, differing shariah perspectives, volatility, security risks, nazhir capacity, and regulatory readiness are interrelated aspects that must be addressed simultaneously. Therefore, the development of cryptocurrency-based waqf should not be pursued solely on the basis of technological advancement but through the integration of shariah principles, governance, regulation, technology, and risk management. The conceptual framework developed in this study may serve as an initial foundation for future empirical research and for the development of implementation models for cryptocurrency-based waqf within the Islamic finance ecosystem.

Recommendations

Based on the findings of this study, waqf management institutions or nazhir are encouraged to strengthen their human resource capacity in cryptocurrency, blockchain, digital-asset security, risk management, and Islamic finance principles. Such capacity building is essential to enable nazhir to manage digital assets professionally while maintaining compliance with shariah requirements. Before accepting cryptocurrency as a waqf asset, nazhir should establish clear procedures for asset verification, ownership, custody, security, asset valuation, and benefit management. Nazhir should also ensure transparency regarding the types of cryptocurrency assets accepted, their management mechanisms, associated risks, and the utilization of waqf benefits. In this way, the implementation of cryptocurrency-based waqf can be undertaken more cautiously while remaining oriented toward the protection of waqf assets and the interests of mauquf 'alaih.

For regulators, there is a need to develop a regulatory framework that brings together digital-asset regulation and waqf provisions. Such regulation should provide clarity regarding the ownership status of donated cryptocurrency, the mechanism for transferring assets to nazhir, asset custody, wakif protection, transaction supervision, and benefit distribution. Harmonization among crypto-asset regulations, waqf regulations, and shariah provisions is also necessary to prevent ambiguity in regulatory authority and legal protection. In addition, regulators may consider establishing specific governance standards for waqf institutions that utilize blockchain technology and digital assets. Regulatory clarity will be an important factor in establishing legal certainty and strengthening public trust in cryptocurrency-based waqf innovation.

For fatwa institutions, ulama, and Islamic economics scholars, further in-depth studies are needed concerning the status of cryptocurrency as māl and its potential use as an object of waqf. Such studies should not be limited to considerations of permissibility and prohibition but should also examine the characteristics of individual types of cryptocurrency, their utility, risks,

volatility, underlying assets, and intended purposes. The *maqāṣid al-sharī'ah* approach may be employed to assess whether the use of cryptocurrency in waqf genuinely generates *maṣlaḥah* while preventing or minimizing *mafsadah*. In addition, dialogue among *fiqh* scholars, economists, blockchain practitioners, regulators, and waqf managers is necessary to ensure that shariah determinations adequately account for technological developments. The findings of such studies may provide a foundation for developing more specific shariah guidelines concerning cryptocurrency-based waqf.

For Islamic financial institutions and technology providers, there is a need to develop digital infrastructure that incorporates security, transparency, and shariah compliance. Blockchain technology and smart contracts can be developed to support asset recording, transaction tracking, waqf reporting, and benefit distribution more efficiently. However, such technologies should undergo security testing and shariah audits before being deployed on a broader scale. Technology providers should also establish mechanisms for restoring access in cases involving lost private keys, transaction errors, or system disruptions. In this way, technological innovation can support the objectives of waqf without increasing risks to the continuity and security of donated assets.

For the public and prospective wakif, greater literacy regarding the characteristics of cryptocurrency and digital waqf mechanisms is needed. The public should understand that cryptocurrency entails risks that differ from those associated with conventional waqf assets, particularly in relation to value fluctuations, security, and regulatory conditions. Information regarding risks and management mechanisms should be communicated transparently before individuals decide to donate cryptocurrency as waqf. Wakif should also be provided with information concerning the identity and role of the nazhir, how the assets will be stored, how the benefits will be managed, and how reporting will be conducted. Improving such literacy is expected to help the public understand both the opportunities and risks associated with cryptocurrency-based waqf in a more informed and rational manner.

For future research, empirical studies are needed to test the conceptual framework developed in this study. Subsequent research could employ quantitative approaches to examine the relationships among cryptocurrency literacy, trust in nazhir, perceived risk, shariah compliance, technology, and public intention to participate in cryptocurrency-based waqf. Qualitative research could also be conducted through interviews with nazhir, regulators, ulama, blockchain experts, Islamic financial institutions, and prospective wakif to obtain a deeper understanding of ecosystem readiness. Future studies could further undertake cross-country comparative research to examine how countries with different Islamic finance ecosystems respond to developments in digital assets and blockchain-based waqf. In this way, research on cryptocurrency-based waqf can progress from the conceptual stage toward empirical testing and the development of more concrete implementation models.

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