



ISLAMIC LEGAL PROTECTION FOR CRYPTO INVESTORS: A JURIDICAL ANALYSIS OF DIGITAL CRIMES IN VIRTUAL CURRENCY TRANSACTIONS

PERLINDUNGAN HUKUM ISLAM UNTUK INVESTOR KRIPTO: ANALISIS YURIDIS TENTANG KEJAHATAN DIGITAL DALAM TRANSAKSI MATA UANG VIRTUAL

Jaya Darmawan^{1*}, Husin Ritonga², Abdul Halim³

^{1*} State Islamic University Sulthan Thaha Saifuddin Jambi, Email: uninesia@gmail.com

² State Islamic University Sulthan Thaha Saifuddin Jambi, Email: ahusein_ritonga@yahoo.com

³ State Islamic University Sulthan Thaha Saifuddin Jambi, Email: halimhavizh@gmail.com

*email koresponden: uninesia@gmail.com

DOI: <https://doi.org/10.62567/micjo.v3i3.2483>

Abstract

This study aims to analyze and formulate a concept of Islamic legal protection for crypto investors in responding to the dynamics of digital crimes within virtual currency transactions. Departing from the rapid development of blockchain technology and the recognition of crypto assets as tradable commodities in Indonesia, this research identifies a normative ambiguity between positive law and religious fatwas, particularly concerning the permissibility and legal legitimacy of cryptocurrencies from a sharia perspective. The inherent characteristics of crypto assets-namely volatility, speculative tendencies, and vulnerability to digital crimes such as hacking, fraud, market manipulation, and money laundering-generate significant risks for Muslim investors. Within the framework of *fiqh al-mu'āmalāt* and *maqāṣid al-sharī'ah*, especially the principle of *ḥifẓ al-māl* (protection of wealth), this study asserts that investor protection constitutes not merely a regulatory necessity but an integral dimension of the higher objectives of Islamic law in safeguarding justice, transparency, and economic welfare. Methodologically, this research employs a normative-maqāṣidī approach through an interdisciplinary analysis integrating Islamic jurisprudence, national positive law, and the study of digital financial technology. The focus of the inquiry is directed toward identifying the typologies of digital crimes within the crypto ecosystem, evaluating the effectiveness of national regulations and religious fatwas, and formulating a model of Islamic legal protection that is preventive, corrective, and educational in nature. The expected outcome of this dissertation is the construction of a conceptual framework of *ḥimāyah al-mustatmir* (investor protection) grounded in *maqāṣid al-sharī'ah*, adaptive to the digital era, and strengthened through synergy among the state, financial authorities, and fatwa institutions. Accordingly, this study contributes not only to the advancement of contemporary *fiqh al-mu'āmalāt* discourse but also offers an applicable normative framework for the development of a secure, equitable, and sustainable sharia-based digital economic system.

Keywords : Islamic Legal Protection, Crypto Investors, Digital Crime, Virtual Currency, Sharia Economic Law.



Abstrak

Studi ini bertujuan untuk menganalisis dan merumuskan konsep perlindungan hukum Islam bagi investor kripto dalam menanggapi dinamika kejahatan digital dalam transaksi mata uang virtual. Berangkat dari perkembangan pesat teknologi blockchain dan pengakuan aset kripto sebagai komoditas yang dapat diperdagangkan di Indonesia, penelitian ini mengidentifikasi ambiguitas normatif antara hukum positif dan fatwa agama, khususnya mengenai kebolehan dan legitimasi hukum mata uang kripto dari perspektif syariah. Karakteristik inheren aset kripto—yaitu volatilitas, kecenderungan spekulatif, dan kerentanan terhadap kejahatan digital seperti peretasan, penipuan, manipulasi pasar, dan pencucian uang—menimbulkan risiko signifikan bagi investor Muslim. Dalam kerangka *fiqh al-mu'āmalāt* dan *maqāṣid al-sharī'ah*, khususnya prinsip *ḥifz al-māl* (perlindungan kekayaan), studi ini menegaskan bahwa perlindungan investor bukan hanya merupakan kebutuhan regulasi tetapi juga dimensi integral dari tujuan yang lebih tinggi dari hukum Islam dalam menjaga keadilan, transparansi, dan kesejahteraan ekonomi. Secara metodologis, penelitian ini menggunakan pendekatan normatif-*maqāṣidī* melalui analisis interdisipliner yang mengintegrasikan yurisprudensi Islam, hukum positif nasional, dan studi teknologi keuangan digital. Fokus penelitian diarahkan pada identifikasi tipologi kejahatan digital dalam ekosistem kripto, evaluasi efektivitas regulasi nasional dan fatwa agama, serta perumusan model perlindungan hukum Islam yang bersifat preventif, korektif, dan edukatif. Hasil yang diharapkan dari disertasi ini adalah pembangunan kerangka konseptual *ḥimāyah al-mustatsmir* (perlindungan investor) yang berlandaskan *maqāṣid al-sharī'ah*, adaptif terhadap era digital, dan diperkuat melalui sinergi antara negara, otoritas keuangan, dan lembaga fatwa. Dengan demikian, studi ini tidak hanya berkontribusi pada kemajuan wacana *fiqh al-mu'āmalāt* kontemporer tetapi juga menawarkan kerangka normatif yang dapat diterapkan untuk pengembangan sistem ekonomi digital berbasis syariah yang aman, adil, dan berkelanjutan.

Kata Kunci : Perlindungan Hukum Islam, Investor Kripto, Kejahatan Digital, Mata Uang Virtual, Hukum Ekonomi Syariah.

1. INTRODUCTION

The development of information and communication technology in the last two decades has accelerated the structural transformation in the global economic system towards an integrated and network-based digital economy order. Digitalization is no longer just an instrument to support economic activity, but has become the main foundation in the construction of the contemporary financial system. One of the most significant manifestations of this transformation is the birth of crypto assets (cryptocurrencies) that operate on blockchain technology and distributed ledger technology (DLT). Crypto assets introduce a new paradigm in financial transactions that is decentralized, without a single authority, and minimizes the role of conventional intermediaries such as banks and formal financial institutions. These changes are not only technical, but also epistemological, as they challenge basic assumptions about monetary authority, value legitimacy, and financial supervision systems that have been dominated by the state.

Ontologically, crypto assets are a representation of value in digital form that is secured through cryptographic mechanisms and verified through network consensus. Blockchain systems record each transaction in a chronologically connected and immutable block of data, creating a structure of high transparency and technical complexity. However, although these systems are designed to improve data security and integrity, practice on the ground shows that technological security is not always comparable to social security and the law. Extreme price volatility, uncontrolled market speculation, and lack of financial digital literacy make crypto a high-risk investment instrument that has the potential to cause huge losses for investors.

In the Indonesian context, the recognition of crypto assets as a commodity through the regulation of the Commodity Futures Trading Supervisory Agency (Bappebti) marks the formal steps of the state in responding to the digital economy phenomenon. [3] However, Bank Indonesia still



insists that crypto is not a legal tender, so only the rupiah is recognized as the country's official currency. This policy dualism creates a space of normative ambiguity that has an impact on legal uncertainty, especially in the aspect of investor protection. Muslim investors, as part of the majority of Indonesia's population, face the additional dilemma of the need to ensure that investment activities are not carried out in accordance with sharia principles. Furthermore, the dynamics of crypto cannot be separated from the increasing intensity of digital crime (cybercrime) in the technology-based economic ecosystem. Reports from various international institutions show that crimes such as digital wallet hacking, smart contract manipulation, Initial Coin Offering (ICO) scams, as well as token-based ponzi schemes have led to billions of dollars in losses globally. The cross-border nature and relative anonymity of crypto transactions complicate the process of tracking and enforcing the law, so investors are often in a vulnerable position without adequate recovery mechanisms. This phenomenon suggests that technological security does not automatically guarantee effective legal protection.

From the perspective of Islamic law, every economic activity must be subject to the principles of muamalah fiqh that uphold justice ('adl), transparency (bayān), and benefit (maṣlaḥah). The prohibition against gharar (excessive uncertainty), maysir (speculation/gambling), and riba are normative instruments to prevent exploitation and injustice in transactions. Therefore, the discourse on crypto in Islamic law does not only revolve around the question of whether it is halal or haram, but also the extent to which the system and practices are in harmony with the goals of the sharia (maqāṣid al-syarī'ah), especially in safeguarding property (ḥifz al-māl).

Maqāṣid al-syarī'ah as a theoretical framework provides a teleological orientation in understanding Islamic law contextually. Al-Ghazālī and al-Shāṭibī emphasized that the main purpose of the Shari'ah is to maintain the five main elements of life, namely religion, soul, intellect, descent, and property. In the context of crypto, the ḥifz al-māl dimension has become particularly relevant, as digital investing concerns the management and protection of individual wealth assets. Any form of economic system that has the potential to harm or illegally exploit wealth is contrary to the spirit of maqāṣid and must be critically reviewed.

The debate of contemporary scholars regarding the status of crypto law reflects the dynamics of ijtihad in the face of modern technological realities. Some scholars view crypto as an instrument that contains high gharar due to its volatility, while others see it as a legitimate asset (māl) as long as it fulfills the elements of ownership, benefit, and recognition ('urf). This distinction suggests that Islamic law has methodological flexibility, but requires a systematic framework of analysis so as not to get caught up in the simplistic dichotomy between total prohibition and unconditional permissibility.

Within the framework of shar'iyyah siyāsah, the state has a moral and legal responsibility to ensure security and justice in people's economic transactions. Regulation of crypto is not only intended to maintain market stability, but also to protect society from exploitative and criminal practices. In this context, collaboration between state authorities, fatwa institutions, and financial institutions is crucial in shaping crypto governance that is oriented towards the public benefit. On the other hand, technological developments such as smart contracts, decentralized finance (DeFi), and asset tokenization open up integration opportunities between blockchain and Islamic finance. This technology has the potential to increase the transparency of contracts and the efficiency of the distribution of Islamic social funds such as zakat and waqf. However, without a clear legal framework, such innovations can also become a new medium for abuse and manipulation. Therefore, the Islamic law's approach to crypto must be both constructive and critical.

This research departs from the assumption that Islamic legal protection for crypto investors is not enough to be solved through a textual normative approach alone. A normative-maqāṣidī approach is needed that comprehensively considers legal objectives, social contexts, and technological risks. With this approach, legal analysis does not only stop at the status of validity, but also formulates preventive, corrective, and educational protection models that are able to answer the challenges of the digital era. The urgency of this research is getting stronger as the participation of the Muslim



community in the national and global crypto market increases. Without an adequate sharia-based protection system, Muslim investors risk financial losses as well as normative confusion related to the halalness of transactions. This condition has the potential to cause a crisis of trust in the Islamic financial system if it is not handled seriously and systematically.

Based on this background, this research is directed to in-depth examine the characteristics of crypto assets from the perspective of Islamic law, analyze the forms of digital crime that threaten investors, and formulate a model of Islamic law protection based on *maqāṣid al-syarī'ah* that is adaptive to technological developments. Thus, this dissertation is expected to make a theoretical contribution to the development of contemporary *muamalah fiqh* as well as a practical contribution to the formation of a safe, fair, and sustainable Islamic digital economy system.

2. RESEARCH METHOD

This research is a normative juridical research oriented towards the construction of Islamic law argumentation in formulating a model to protect crypto investors from the threat of digital crime. Normative law research was chosen because of the character of the problems studied related to normative vacuum, regulatory ambiguity, and the need for conceptual reconstruction in the area of contemporary *muamalah fiqh*. In this context, crypto is understood as a new legal phenomenon (*novum*) that does not yet fully have an explicit normative foundation in classical literature, thus requiring a methodological *ijtihad* process based on *maqāṣid al-shari'ah*. Therefore, this study does not just describe existing legal provisions, but conducts a prescriptive analysis to formulate a model of Islamic legal protection that is responsive to systemic risks in the digital ecosystem.

The research approach used is multidimensional and integrative. First, the statute approach is used to examine national regulations related to crypto assets, commodity futures trading, consumer protection, and electronic transactions. An analysis of the laws and regulations was conducted to identify the positive legal protection structures available to crypto investors. Second, the conceptual approach is used to explore basic concepts in *muamalah fiqh* such as *māl* (property), *gharar*, *maysir*, and *ḥifẓ al-māl* as normative foundations. Third, the philosophical approach is used to examine the ontological and axiological basis of legal protection in Islam, so that the resulting legal construction is not only legalistic, but also rooted in the value of substantive justice.

Methodologically, this study uses the normative-*maqāṣidī* approach as the main analytical framework. This approach places *maqāṣid al-syarī'ah* not merely as a theory of legal objectives, but as a method of evaluation and reconstruction of law in the face of social and technological changes. In the context of crypto, the principle of *ḥifẓ al-māl* (protection of property) becomes the central point of analysis because digital investments directly concern the security and sustainability of individual wealth. In addition, the principles of *dar' al-mafāsid* (prevention of harm) and *jalb al-maṣāliḥ* (taking benefits) are used as parameters to assess the balance between technological innovation and the risk of digital crime. The types of legal materials used in this study consist of primary, secondary, and tertiary legal materials. Primary legal materials include the main normative sources of Islamic law (the Qur'an and hadith), classical and contemporary *fiqh* books, fatwas of authoritative institutions, as well as laws and regulations related to crypto assets and investor protection. Secondary legal materials include reputable scientific journals, academic books, reports of international institutions, and the results of cutting-edge research on blockchain, fintech, and cybercrime. Meanwhile, tertiary legal materials are used as terminological and conceptual support. This classification aims to maintain the systematics of the analysis and ensure the depth of scientific argumentation.

The technique of collecting legal materials is carried out through library research with a systematic approach and based on thematic relevance. This process involves identifying literature through international academic databases, selection based on credibility and year of publication (maximum last 10 years), and grouping literature according to the focus of analysis. In addition to the Islamic legal literature, this study also examines official reports of global institutions such as the FATF and OECD to obtain an empirical picture of the patterns of digital crime in crypto transactions. This



approach ensures that normative arguments are built on a factual understanding of the dynamics of financial technology. The method of analyzing legal materials is carried out qualitatively with a descriptive-analytical analysis model. Descriptive analysis is used to map the existing regulatory structure and legal concepts, while analytical analysis is used to evaluate the adequacy of norms in providing protection to investors. Deductive reasoning is used to derive the principles of *maqāṣid al-shari'ah* into concrete cases of crypto investments, while inductive reasoning is used to draw normative generalizations from various cases of digital crime. This combination allows for the formation of a coherent and contextual legal synthesis.

This research also applies a normative comparative method between Islamic law and Indonesian positive law. Comparisons were made on the aspects of asset recognition, supervision mechanisms, responsibilities of business actors, and dispute resolution systems. Through this comparative analysis, the normative gap and the potential for harmonization between sharia principles and state regulations were identified. This method is important to formulate a model of Islamic legal protection that is not utopian, but is in harmony with the national legal framework. In the process of legal *istinbāt*, this study uses the instruments of *fiqh* proposal and *qawā'id fiqhiyyah* as a normative analysis tool. The rules of "*al-ḍarar yuzāl*" (danger must be eliminated) and "*dar' al-mafāsid muqaddam 'alā jalb al-maṣāliḥ*" (prevention of damage takes precedence over profit-taking) are the basis for evaluating the legitimacy of speculative practices and potential fraud in crypto. This approach shows that Islamic law has an internal mechanism to respond to digital economy risks without having to reject innovation altogether.

The validity of the research is maintained through the principles of methodological consistency and triangulation of sources. Each argument is verified through comparisons between classical *fiqh* literature, contemporary fatwas, and modern regulations. In addition, a conceptual test was also carried out on the compatibility between the principles of *maqāṣid* and the practice of legal protection in the national system. Thus, the results of the research have epistemological legitimacy and practical relevance at the same time. In the final stage, this study uses a reconstructive-prescriptive approach to formulate a model of Islamic legal protection for crypto investors. The model is designed in three dimensions: preventive (*maqāṣid*-based regulation and supervision), corrective (dispute resolution and restitution mechanism), and educational (increasing sharia-digital literacy). With this integrative and systematic methodological approach, the research is expected to make a significant contribution to the development of contemporary Islamic legal theories and the formation of a fair and sustainable sharia digital economy policy.

3. RESULT AND DISCUSSION

The results of the study show that crypto assets are ontologically digital entities based on blockchain technology with decentralized systems, cryptography, and distributed consensus mechanisms. This system allows for the validation of transactions without the intermediary of a central institution, thus presenting a new paradigm in the global financial system. In contrast to conventional currencies that are guaranteed by monetary authorities, the value of cryptos depends on market mechanisms and the trust of the user community. Recent literature states that the nature of decentralization is a strength as well as a weakness of crypto because it eliminates centralized control but also weakens legal accountability when digital breaches or crimes occur (IMF, 2022; FATF, 2021).

From the perspective of Islamic law, an entity can be categorized as *māl* (property) if it meets three main elements: it has value (*qīmah*), it can be used (*manfa'ah*), and it is recognized in social practice (*'urf*). Contemporary *fiqh* studies state that digital assets, including crypto, can meet the criteria of *māl* if they have an exchange rate and are used in real transactions (Auda, 2016; Al-Raysuni, 2016). However, recognition as a *māl* does not automatically make all transaction practices legal in sharia. Transactions must still be free from the elements of *gharar fāḥish* (excessive uncertainty), *maysir* (extreme speculation), and *dharar* (losses that are detrimental to the other party). The study found that the extremely high volatility of crypto prices poses significant *gharar* potential, especially when investments are made solely for short-term speculation without a real economic utility base. The



OECD (2019) emphasizes that most retail investors in the crypto market suffer losses due to extreme price fluctuations and lack of understanding of risks.³ In the perspective of *maqāṣid al-syarī'ah*, this condition can be contrary to the principle of *ḥifẓ al-māl* (protection of property), so a legal protection design is needed that is able to balance technological innovation with the economic stability and security of the people.

This study identifies that the risks of crypto investment come not only from market volatility, but also from the increase in cybercrime. The FATF report (2021) shows that crypto assets have been used in various fraud, money laundering, ransomware, and market manipulation schemes.⁴ The World Bank (2018) also noted that the anonymous and cross-jurisdictional nature of blockchain transactions complicates law enforcement and tracking of criminals.

In the Indonesian context, cases of crypto-based investment fraud show a gap in literacy and supervision. Many investors are tempted by the promise of high profits without understanding the technical risks and legality aspects of the project that are followed. This shows that digital crime in crypto is often systemic and takes advantage of information weaknesses. From the perspective of Islamic law, this kind of practice is clearly contrary to the principles of justice (*'adl*) and transparency (*bayān*) in *muamalah*. The *fiqhiyyah* rule "*al-ḍarar yuzāl*" (danger must be eliminated) provides a normative basis that the state is obliged to create an effective prevention system against such potential harm. Furthermore, the *maqāṣid* approach emphasizes that the protection of property not only means avoiding material loss, but also maintaining the social and psychological stability of society. Huge losses due to crypto fraud can have an impact on public distrust of the Islamic economic system as a whole. Therefore, digital crime in crypto is not just a technical issue, but a moral and structural issue that requires a comprehensive legal response.

The results show that national regulations in Indonesia recognize crypto as a tradable commodity through Bappebti's supervision, but have not fully integrated the digital risk-based investor protection aspect. The IMF (2022) recommends that countries develop a risk-based regulatory framework (risk-based approach) to address volatility and potential misuse of crypto assets. From the perspective of religious fatwas, there is a dynamic of *ijtihād* in responding to crypto. DSN-MUI Fatwa No. 144/2021 states that crypto as a legal medium of exchange is *haram* because it contains elements of *gharar* and *dharar*, but can be traded as a commodity with certain conditions. Meanwhile, some contemporary scholars provide a space for conditional abilities if crypto has an underlying asset or real utility. This difference shows that Islamic law has methodological flexibility, but remains *maqāṣid*-oriented.

This study found that both national regulations and fatwas have not fully addressed the need for preventive investor protection. The existing approach is still administrative dominant and has not touched the educational aspects and restitution of victims of digital crime optimally. This shows the need to reconstruct a more integrative legal protection model between *sharia* norms and positive law.

The *maqāṣid* approach in this study shows that crypto investment is basically *mubah* as long as it does not violate *sharia* principles. However, speculative practices that resemble gambling (*maysir*) can undermine *maqṣad ḥifẓ al-māl*. Jasser Auda (2016) emphasized that *maqāṣid* must be understood systemically, not only textually, so that Islamic law can respond to social changes while maintaining its basic purpose.

This study concludes that crypto is not an entity that is inherently contrary to *sharia*, but rather depends on its governance and transaction mechanisms. If the system of supervision, transparency, and risk mitigation is strengthened, then crypto can become an economic instrument that is compatible with the principles of *maqāṣid*. But without adequate protection, the potential for systemic harm outweighs the benefits. Based on the findings of the research, the model of Islamic legal protection was formulated in three main layers. First, the preventive dimension through strengthening *maqāṣid*-based regulations, *sharia* security audits, transparency obligations for crypto projects, and minimum literacy standards for investors. The OECD (2019) emphasizes the importance of education and transparency as the key to consumer protection in the digital era.



Second, the corrective dimension through dispute resolution and restitution mechanisms based on restorative justice. In the context of sharia, this mechanism can be developed through sharia arbitration and special mediation institutions for digital investments. Third, the educational dimension through strengthening sharia-digital literacy so that investors understand the risks and limitations of Islamic law before making transactions. This model shows that the protection of Islamic law is not only halal-haram-oriented, but includes an institutional design that guarantees social welfare and justice. Thus, Islamic law functions as a normative system that is proactive and adaptive to technological developments.

Theoretically, this study confirms that *maqāsid al-syarī'ah* is a relevant methodology for evaluating digital financial innovations. Crypto as a new phenomenon cannot be rejected a priori, but must be judged based on its impact on benefits and harm prevention. In practical terms, this study recommends synergy between state regulators, fatwa institutions, and Islamic financial authorities to build a comprehensive investor protection system. Thus, the results of this study expand the treasures of contemporary *muamalah fiqh* while making a practical contribution to the formation of a just, safe, and sustainable sharia digital economy policy.

4. CONCLUSION

Based on the results of the research and discussion that has been described, it can be concluded that crypto assets are a digital economic phenomenon that has ontological and juridical characteristics that are different from conventional financial instruments. Conceptually, crypto can be categorized as *māl* (property) in the perspective of contemporary *muamalah fiqh* because it has value, benefits, and social recognition in global economic practice. However, this recognition does not automatically make all crypto transaction practices legal in sharia, as they must still be tested against the fundamental principles of Islamic law, especially the prohibition of *gharar*, *maysir*, and *dharar*. High price volatility and the dominance of speculation in the crypto market indicate the potential for significant uncertainty, thus requiring a strict regulatory and supervisory framework to align with the goal of asset protection (*ḥifẓ al-māl*).

The study also concluded that the main threat to crypto investors is not solely market fluctuations, but rather the rise of digital crimes such as hacking, fraud, market manipulation, and fictitious investment schemes. The decentralized nature and anonymity of blockchain technology complicates the law enforcement process as well as the recovery of victims' losses. In the perspective of *maqāsid al-syarī'ah*, this condition is contrary to the principles of prevention of damage (*dar' al-mafāsīd*) and the protection of the public interest (*jalb al-maṣāliḥ*). Therefore, the state and religious authorities have a normative responsibility to establish a comprehensive protection system, not only repressive, but also preventive and educational.

Furthermore, the dynamics of fatwa and regulations show that there is an open *ijtihad* space in assessing the legality and governance of crypto. The difference of opinion among scholars reflects the methodological flexibility of Islamic law in responding to technological developments, but at the same time emphasizes the importance of the *maqāsid* approach as a systematic evaluative framework. Crypto cannot be simplistic to be halal or haram, but must be analyzed based on its risk structure, governance, and impact on people's economic stability.

Finally, this study formulates a model of Islamic legal protection for crypto investors in three main dimensions: preventive, corrective, and educational. The preventive dimension emphasizes strengthening risk-based regulations and sharia compliance audits; the corrective dimension includes dispute resolution and restitution mechanisms for victims; Meanwhile, the educational dimension focuses on improving sharia-digital literacy. This model emphasizes that Islamic law is not just a normative system that determines the legal status of a transaction, but also an ethical and institutional framework that aims to realize justice, security, and benefits in the digital economy ecosystem. Thus, the protection of Islamic law for crypto investors is a structural need in maintaining the stability and economic integrity of the *ummah* in the era of digital transformation.



5. REFERENCES

- Abu Ishaq al-Shāṭibī, *Al-Muwāfaqāt fī Uṣūl al-Sharī‘ah*, Jilid II (Beirut: Dār al-Ma‘rifah, 2005), hlm. 6–10.
- Ahmad Al-Raysuni, *Maqasid al-Shariah* (2016).
- Arvind Narayanan et al., *Bitcoin and Cryptocurrency Technologies* (Princeton: Princeton University Press, 2016)
- Don Tapscott & Alex Tapscott, *Blockchain Revolution* (New York: Penguin, 2016), hlm. 3–15.
- FATF, *Updated Guidance for a Risk-Based Approach to Virtual Assets* (2021).
- Ibn al-Qayyim, *I‘lām al-Muwaqqi‘īn*, Jilid III (Kairo: Maktabah al-Kulliyyāt al-Azhariyyah, 1993), hlm. 87.
- IMF, *Regulating Crypto Assets* (2022).
- Jasser Auda, *Re-Envisioning Islamic Law* (IIIT, 2016).
- Muhammad Taqī Usmani, *An Introduction to Islamic Finance* (Karachi: Idaratul Ma'arif, 2002), pp. 88–94.
- OECD, *Consumer Policy and Fraud in the Digital Age* (2019).
- OECD, *Crypto Assets and Financial Crime* (Paris: OECD Publishing, 2021).
- Bappebti Regulation Number 5 of 2019 concerning the Implementation of the Physical Market of Crypto Assets.
- Peter Mahmud Marzuki, *Legal Research* (Jakarta: Kencana, 2017).
- Salim HS & Erlies Nurbani, *The Application of Legal Theory to Dissertation Research* (Jakarta: RajaGrafindo, 2019).
- Shamsiah Mohamad, “Smart Contract in Islamic Finance: A Shariah Analysis,” *ISRA International Journal of Islamic Finance*, Vol. 12 No. 2 (2020)
- Terry Hutchinson, *Researching and Writing in Law* (London: Thomson Reuters, 2018).
- Law Number 7 of 2011 concerning Currency.
- Wahbah al-Zuhayli, *Al-Fiqh al-Islami wa Adillatuhu*, latest edition (Damascus: Dar al-Fikr, 2017).
- Wahbah al-Zuhaylī, *Al-Fiqh al-Islāmī wa Adillatuhu*, Juz V (Damascus: Dār al-Fikr, 2006), hlm. 3433–3436.
- World Bank, *Blockchain and Distributed Ledger Technology in Finance* (2018).