



ISSN Print 2615-5648  
ISSN Online 2615-174X

## Cryptocurrency as a Medium of Rupiah Exchange: Perspective Sharia Islamic Law and Jurisprudential Analysis

Article	Abstract
<p><b>Author</b> Istianah Zainal Asyiqin<sup>1*</sup>, M. Fabian Akbar<sup>1</sup>, Manuel Beltrán Genovés<sup>2</sup></p> <p><sup>1</sup> Faculty of Law, Universitas Muhammadiyah Yogyakarta <sup>2</sup> Facultad de Derecho, Universidad Autónoma de Madrid, Spain</p> <p><b>Corresponding Author:</b> *Istianah, Email: <a href="mailto:istianah@umy.ac.id">istianah@umy.ac.id</a></p> <p><b>Data:</b> Received: Apr 30, 2024; Accepted: Nov 19, 2024 Published: Nov 22, 2024</p> <p><b>DOI:</b> <a href="https://doi.org/10.24090/volksgeist.v7i2.10975">10.24090/volksgeist.v7i2.10975</a></p>	<p>The rapid advancement of the digital age has driven significant developments in payment systems, influencing financial decisions and fostering economic activity. This study explores the use of cryptocurrencies as digital currencies in financial transactions, particularly in the context of investments, while assessing their compatibility with Islamic law. Employing a normative legal approach and a descriptive-analytical method, the research examines legal principles and facts concerning cryptocurrency regulation in Indonesia. The findings reveal that, despite the potential benefits of cryptocurrencies, their usage remains contentious from both regulatory and Islamic law perspectives. In Islamic law, cryptocurrency transactions are classified as <i>haram lighairihi</i> due to uncertainty (<i>gharar</i>) and speculative risks, making them non-compliant with Sharia principles. As a solution, this study proposes a framework for integrating cryptocurrency exchanges with Rupiah transactions using Sharia economic principles. This integration aims to mitigate risks while maintaining the flexibility of digital transactions, ensuring they align with regulatory standards and Islamic legal frameworks.</p> <p><b>Keywords:</b> Cryptocurrency; Islamic law; rupiah exchange; sharia economic law.</p>

©2024; This is an Open Access Research distributed under the term of the Creative Commons Attribution Licencee (<https://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original works is properly cited.

### INTRODUCTION

As a digital currency, cryptocurrency serves a purpose that is highly similar to that of traditional currencies. An essential distinction between Cryptocurrencies and conventional currencies is that cryptocurrencies exist solely in the form of blocks of data validated by a cipher, as opposed to a corporeal form of currency.<sup>1</sup> A data-driven technology governed by Blockchain, cryptocurrency is widely utilized as a digital currency. However, despite its widespread adoption, cryptocurrency is

<sup>1</sup> Vadim Avdeychik and Justin Capozzi, "SEC's Division of Investment Management Voices Concerns Over Registered Funds Investing in Cryptocurrencies and Cryptocurrency-Related Products," *Journal of Investment Compliance* 19, no. 2 (2018): 8–12, <https://doi.org/10.1108/JOIC-04-2018-0034>.

not without drawbacks. Among the benefits cryptocurrency provides in transactions is energy and time efficiency, primarily since they can be executed through a device.

Moreover, the transaction model operates on a peer-to-peer or sender-to-recipient basis, requiring only a suitable computer or digital device. Despite this, the transactions are still documented on the cryptocurrency network, an additional noteworthy benefit of this technology. In contrast, cryptocurrencies lack tangible assets and are not subject to regulation by the Financial Services Authority (OJK) in Indonesia; thus, engaging in such activities is deemed unlawful.<sup>2</sup> Lisk, Ripple, Ether, Litecoin, MaidSafeCoin, StorjCoinX, Ethereum, Dash, Doge-Coin, Zcash, Monero, and Bitcoin are all illustrative instances of cryptocurrencies.

Many countries have adopted cryptocurrencies as a medium of exchange for currency transactions and incorporated them into diverse online workflows. Notable examples include the United States, Japan, and China, pioneers in the widespread adoption of digital currency innovation. However, this development in China contrasts with the situation in Indonesia.<sup>3</sup> Regarding regulation and legality, cryptocurrency continues to present advantages and disadvantages. The regulations outlined in regulations No. 5 of 2019, which prohibits virtually all existing cryptocurrency exchanges by requiring substantial amounts, were announced by the Commodity Futures Trading Supervisory Agency (Bappebti). Furthermore, the Indonesian Ulema Council (MUI) asserts that using cryptocurrency as a legitimate currency is impermissible due to *gharar* and *dharar*. Bank Indonesia Regulation No. 17/3/PBI/2015 of 2015 on Obligatory Use of the Rupiah in the Territory of the Unitary State of the Republic of Indonesia and Number 7 of 2011 on Currency.<sup>4</sup>

Cryptocurrency appeared in 1983, and David Chaum discovered it with the idea of creating a payment method that could be used in cyber transactions. Payment methods with non-trackable and transferable features are based on custom systems.<sup>5</sup> This concept enables a currency to receive open support from other entities without being centralized or controlled by a single party. This system is operated using a technology referred to as blockchain. Elevated exchange rate volatility is also regarded as a deficiency of cryptocurrencies.<sup>6</sup>

The proliferation of cryptocurrency usage is giving rise to novel challenges that the cryptocurrency industry must contend with. One impediment that exists is regulation. There remains a lack of consensus among nations regarding developing cryptocurrency regulatory frameworks. Many nations have chosen to adopt these regulations concerning the usage of Cryptocurrencies. However, some nations unequivocally prohibit the circulation of cryptocurrencies because they lack the characteristics of a legitimate currency and can potentially instigate criminal activity.<sup>7</sup>

<sup>2</sup> Izwan Amsyar et al., “The Challenge of Cryptocurrency in the Era of the Digital Revolution: A Review of Systematic Literature,” *A Review of Systematic Literature. Aptisi Transactions on Technopreneurship (ATT)* 2, no. 2 (2020): 153–159, <https://doi.org/10.34306/att.v2i2.96>.

<sup>3</sup> Untung Rahardja, “The Economic Impact of Cryptocurrencies in Indonesia,” *ADI Journal on Recent Innovation* 4, no. 2 (2023): 194–200, <https://doi.org/10.34306/ajri.v4i2.869>.

<sup>4</sup> Saefudin Zuhri, Dasih Irma, and Nendi Juhandi, “The Future of Cryptocurrency Legality in Indonesia,” *Journal of Economics and Business Letters* 1, no. 1 (2021): 20–23, <https://doi.org/10.55942/jeb1.v1i1.87>.

<sup>5</sup> Agata Ferreira and Philipp Sandner, “EU Search for Regulatory Answers to Crypto Assets and Their Place in the Financial Markets’ Infrastructure,” *Computer Law and Security Review* 43, no. 105632 (2021): 1–15, <https://doi.org/10.1016/j.clsr.2021.105632>.

<sup>6</sup> A. Can Inci and Rachel Lagasse, “Cryptocurrencies: Applications and Investment Opportunities,” *Journal of Capital Markets Studies* 3, no. 2 (2019): 98–112, <https://doi.org/10.1108/jcms-05-2019-0032>.

<sup>7</sup> Hugo Pieter Raymond Opendakker Wouda, “Blockchain Technology in Commercial Real Estate Transactions,” *Journal of Property Investment & Finance* 37, no. 6 (2019): 570–79, <https://doi.org/10.1108/JPIF-06-2019-0085>.

This substantial investment in Cryptocurrencies, including Indonesia, has prompted some nations to regulate their usage. In addition to China, India, Egypt, Nepal, Morocco, and Saudi Arabia, Indonesia is among the nations that have implemented regulations prohibiting the usage of Cryptocurrencies.<sup>8</sup> In the interim, 111 additional nations, including the United States, Japan, Germany, the Netherlands, and Switzerland, have granted legal recognition to cryptocurrencies while maintaining their commitment to combating money laundering and improper use. It is not anticipated that Argentina, Tunisia, the United Arab Emirates, Peru, Uruguay, Jordan, or any other nation will adopt a position regarding this digital currency.<sup>9</sup>

Previous studies have largely focused on the technological benefits and challenges of cryptocurrency.<sup>10</sup> Still, a few have examined its intersection with Islamic law or explored its potential integration into Indonesia's Sharia-based economic system. This study aims to fill these gaps by conducting a comparative analysis of countries that have legalized cryptocurrency and those that have not while also addressing how cryptocurrency transactions align with Islamic Sharia law. The study will investigate how Indonesia could integrate cryptocurrency and rupiah exchanges into its Sharia economic framework.

In Indonesia, the presence of cryptocurrencies continues to generate debates regarding their legality and regulation, particularly regarding the application of Islamic law. Meanwhile, the Indonesian government is still reviewing and issuing several regulations regarding cryptocurrency assets, such as the government's plan to carry out digital transactions downstream. So, with these considerations in mind, it is very important to conduct a study regarding the legality of using cryptocurrency as a substitute for the rupiah in Indonesia. The core problem addressed in this research is the legal uncertainty surrounding the use of cryptocurrency in Indonesia, particularly to Sharia law. Despite the growing global acceptance of cryptocurrency, Indonesia's regulatory and religious perspectives create significant barriers to its adoption. Although there is ample literature on the use of cryptocurrency in secular contexts, there is a lack of comprehensive studies exploring how cryptocurrency transactions can be aligned with Islamic law, especially in countries like Indonesia, where both secular and religious laws influence financial systems. This study aims to bridge that gap by examining both the legal and religious challenges associated with cryptocurrency use.

## RESEARCH METHODS

This research was conducted with a normative legal nature to fulfill legal problems related to integrating cryptocurrency and Rupiah exchange within the Sharia Economic Legal Framework. This research analyzed ideas, principles, and legal regulations. Therefore, the research used a case

<sup>8</sup> Pablo Sánchez-Núñez and Yolanda García Calvente, "Tax Regulation on Blockchain and Cryptocurrency: The Implications for Open Innovation," *Journal of Open Innovation: Technology, Market, and Complexity* 7, no. 98 (2021): 1–21, <https://doi.org/10.3390/joitmc7010098>.

<sup>9</sup> Adam Turner and Angela Samantha Maitland Irwin, "Bitcoin Transactions: A Digital Discovery of Illicit Activity on the Blockchain," *Journal of Financial Crime* 25, no. 1 (2018): 109–130, <https://doi.org/10.1108/JFC-12-2016-0078>; Ria Setyawati, Stefan Koos, and Zalfa A.F. Jatmiko, "Data Driven Dominance in Digital Markets: Assessing Indonesian Competition Law in the Digital Age," *Jurnal IUS Kajian Hukum Dan Keadilan* 12, no. 2 (August 28, 2024): 264–84, <https://doi.org/10.29303/IUS.V12I2.1377>.

<sup>10</sup> Guglielmo Maria Alex Plastun Caporale, "Price Overreactions in the Cryptocurrency Market," *Journal of Economic Studies* 46, no. 5 (2019): 1137–1155, <https://doi.org/10.1108/JES-09-2018-0310>.

study approach. The information was obtained from books, law journals, newspapers, and other sources. Data collection primarily involved library research, where relevant legal documents and scholarly works specific to the Indonesian context were thoroughly reviewed. The qualitative data analysis methods included organizing, sorting, synthesizing, and categorizing the collected data.

## ANALYSIS AND DISCUSSION

### Cryptocurrency Transactions in Indonesia

The official currency of Indonesia, the Rupiah (Rp), remains the only legally recognized form of payment within the country.<sup>11</sup> Despite the growing global adoption of digital currencies like Bitcoin, the use of cryptocurrencies for transactions or as a commodity in Indonesia has not been formally sanctioned by regulatory authorities. As a result, individuals and communities engaging in cryptocurrency activities do so at their own risk, with no government safeguards over transaction security.<sup>12</sup>

Bitcoin operates as a decentralized digital currency, enabling peer-to-peer transfers without intermediaries, such as banks. While this offers efficiency and low-cost transaction benefits, the lack of centralized control presents substantial legal and security risks.<sup>13</sup> These risks are exacerbated in Indonesia, where Bitcoin and other cryptocurrencies are neither recognized as legal tender nor subject to official oversight by financial institutions.<sup>14</sup>

Bank Indonesia (BI) and the Commodity Futures Trading Supervisory Agency (Bappebti) have implemented stringent measures to limit the use of cryptocurrencies. Bank Indonesia, through Law No. 7 of 2011, explicitly prohibits using virtual currencies as a means of payment, reaffirming that only the Rupiah is authorized for such purposes within the national territory.<sup>15</sup> Meanwhile, Bappebti, through Regulation No. 7 of 2020, classifies cryptocurrencies as tradeable assets rather than legitimate payment instruments, restricting their application to the Physical Crypto Asset Market.<sup>16</sup>

<sup>11</sup> Soonpeel Edgar Chang, “Legal Status of Cryptocurrency in Indonesia and Legal Analysis of the Business Activities in Terms of Cryptocurrency,” *Brawijaya Law Journal* 6, no. 1 (April 25, 2019): 76–93, <https://doi.org/10.21776/UB.BLJ.2019.006.01.06>; Ermanto Fahamsyah et al., “The Problem of Filing for Bankruptcy in Indonesian Law: Should the Insolvency Test Mechanism Be Applied?,” *Volkgeist: Jurnal Ilmu Hukum Dan Konstitusi* 7, no. 1 (June 30, 2024): 199–218, <https://doi.org/10.24090/VOLKSGEIST.V7I1.10079>.

<sup>12</sup> Hardian Satria Jati and Ahmad Arif Zulfikar, “Transaksi Cryptocurrency Perspektif Hukum Ekonomi Syariah,” *Jurnal Al-Adalah : Jurnal Hukum Dan Politik Islam* 6, no. 2 (2021): 137–48, <https://doi.org/10.35673/ajmpi.v6i2.1616>.

<sup>13</sup> Gunawan A. Taudaa, Andy Omarab, and Gioia Arnone, “Cryptocurrency: Highlighting the Approach, Regulations, and Protection in Indonesia and European Union,” *Bestuur* 11, no. 1 (2023): 1–25, <https://doi.org/10.20961/bestuur.v11i1.67125>.

<sup>14</sup> Andriyanto Adhi Nugroho, Surahmad Surahmad, and Ahmad Ali Gibran Putra Musafak, “Legal Protection for Cryptocurrency Users as a Commodity in Indonesia,” *International Journal of Multicultural and Multireligious Understanding* 10, no. 1 (2023): 469–76, <https://doi.org/10.18415/ijmmu.v10i1.4247>.

<sup>15</sup> Yuli Indrawati, “Interpreting Fiscal Risk for Lack of Bank Indonesia’s Capital,” *Jurnal Media Hukum* 28, no. 1 (2021): 90–101, <https://doi.org/10.18196/jmh.v28i1.8712>.

<sup>16</sup> Nicolás González-Gallego and Concepción María Pérez-Cárceles, “Cryptocurrencies and Illicit Practices: The Role of Governance,” *Economic Analysis and Policy* 72, no. 1 (2021): 203–12, <https://doi.org/10.1016/j.eap.2021.08.003>.

This legal framework reflects Indonesia's cautious stance towards cryptocurrencies, driven by concerns over volatility, potential misuse in illegal activities, and incompatibility with the country's established financial systems.<sup>17</sup> Furthermore, the Indonesian Ulema Council (MUI) has declared cryptocurrencies impermissible under Islamic law, citing elements of uncertainty (*gharar*) and harm (*dharar*), adding another layer of complexity to their adoption in Indonesia.<sup>18</sup>

The lack of a clear legal framework for cryptocurrencies raises critical questions about their future in Indonesia.<sup>19</sup> While global financial markets continue to explore the potential of blockchain technology, including its ability to reduce transaction costs and enhance financial inclusivity, Indonesia has opted for a conservative approach due to concerns about the speculative nature of cryptocurrencies, as their value can fluctuate widely based on market sentiment and user adoption.<sup>20</sup> Despite these restrictions, there remains significant potential for blockchain technology in Indonesia, particularly in industries beyond financial services. Bank Indonesia has expressed interest in further exploring the potential of blockchain to strengthen the country's financial infrastructure. However, it does not extend to Bitcoin or other digital currencies as legitimate payment methods.<sup>21</sup>

### Legality of Using Cryptocurrency as a Means of Exchange for Rupiah in Indonesia

A cryptocurrency coin is the appropriate nomenclature for a digital asset that is constructed and operates on its blockchain network. Bitcoin, which functions via the Bitcoin blockchain network, is an instance of a cryptocurrency token.<sup>22</sup> A coin-shaped cryptocurrency generated by a succession of digital codes does not have a corporeal form. Cryptocurrency is a form of digital token exchange that employs cryptographic techniques to transmit data securely and extensively.<sup>23</sup>

Bitcoin is a widely recognized and popular cryptocurrency, although many others exist, including Ethereum, Ripple, Dogecoin, and Litecoin. Security measures for cryptocurrencies, being digital currencies, employ cryptographic technology to make replication and imitation challenging. In actuality, the transactions are conducted via the internet network. The encoding of information during transactions is achieved through specific cryptographic calculations. One distinguishing characteristic of cryptocurrencies over traditional currencies is their issuance, devoid

<sup>17</sup> Mudita Gunawan and Achmad Herlanto Anggono, "Cryptocurrency Safe Haven Property against Indonesian Stock Market During COVID-19," *Journal of Economics, Business, and Accountancy Ventura* 24, no. 1 (2021): 121–38, <https://doi.org/10.14414/jebav.v24i1.2661>.

<sup>18</sup> John E. Marthinsen and Steven R. Gordon, "Hyperinflation, Optimal Currency Scopes, and a Cryptocurrency Alternative to Dollarization," *Quarterly Review of Economics and Finance* 85, no. 1 (2022): 161–73, <https://doi.org/10.1016/j.qref.2020.12.007>.

<sup>19</sup> Dewa Ayu Fera Nitha and I Ketut Westra, "Investasi Cryptocurrency Berdasarkan Peraturan Bappebti No. 5 Tahun 2019," *Udayana Master Law Journal* 9, no. 4 (2020): 712–22, <https://doi.org/10.24843/JMHU.2020.v09.i04.p04>.

<sup>20</sup> Raphael Auer and David Tercero-Lucas, "Distrust or Speculation? The Socioeconomic Drivers of U.S. Cryptocurrency Investments," *Journal of Financial Stability* 62, no. 101066 (2022): 1–23, <https://doi.org/10.1016/j.jfs.2022.101066>.

<sup>21</sup> Daniar Supriyadi, "The Regulation of Personal and Non-Personal Data in the Context of Big Data," *Journal of Human Rights, Culture and Legal System*, 3, no. 1 (2023): 33–69, <https://doi.org/10.53955/jhcls.v3i1.71>.

<sup>22</sup> Sophia Kuehnlenz, Bianca Orsi, and Annina Kaltenbrunner, "Central Bank Digital Currencies and the International Payment System: The Demise of the US Dollar?," *Research in International Business and Finance* 64, no. 101834 (2023): 1–12, <https://doi.org/10.1016/j.ribaf.2022.101834>.

<sup>23</sup> M. S. Muslih and Supeno, "Financial Technology\_ Digital Legal Challenges and Indonesia's Economic Prospects after Covid-19 Outbreak," *Legality: Jurnal Ilmiah Hukum* 30, no. 2 (2021): 255–66, <https://doi.org/10.22219/ljih.v30i2.22784>.

of governmental or other central authority intervention. It renders digital currency a cryptographic system with stringent security, rendering it arduous to counterfeit.<sup>24</sup>

Vice Presidential candidate number 2 Gibran Rakabuming Raka said Indonesia needs to have young people who are talented in the field of digital technology, one of which is crypto. On the other hand, the crypto market in Indonesia is predicted to be lively in 2024, along with the Bitcoin halving. Gibran said he would encourage young people to master several areas of digital technology, namely crypto experts, artificial intelligence experts, blockchain experts, robotics experts, and Sharia banking experts. "We must have future talent with future skills. For this, we will accelerate digital downstream. We will prepare young people who are AI experts, blockchain experts, robotics experts, Sharia banking experts, young people who are crypto experts," he said in the Vice-Presidential Debate.<sup>25</sup>

However, the statement from Gibran Rakabuming Raka is controversial with what is happening in Indonesia now. In Law Number 7 of 2011 on Currency, money is said to be a symbol of state sovereignty, which must be respected and upheld by all citizens throughout Indonesia. Money is also seen as a means to show the presence or absence of a country. It is evident from the stipulations of this legislation that cryptocurrency currencies are not eligible for classification as a medium of exchange or a payment method in Indonesia. These various types of crypto coins do not have a legal basis in Indonesia for use as a means of payment, so there is no legal certainty for users of this virtual currency. Concerning crypto coins or virtual currency currently circulating in Indonesia, the government has a role in protecting by establishing legal guidelines that must align with the progress of these developing electronic products. The issuance of the new Information and Electronic Transactions Law (UU ITE), namely Law No. 19 of 2016 on Amendments to Law No. 11 of 2008 on Electronic Information and Transactions, is one manifestation of the government's role as an answer to legal problems resulting from the emergence of virtual currency in Indonesia.<sup>26</sup>

Bank Indonesia, as the regulator of the payment system, ensures that the payment system process runs according to procedures. Bank Indonesia is a regulatory institution that keeps the National Payment System running smoothly. In its capacity as the central bank, Bank Indonesia possesses the authority to establish and implement policies, including Bank Indonesia Regulation Number 18/40/PBI/2016 and Bank Indonesia Regulation Number 20/6/PBI/2018. However, several PBI regulations regulate crypto coins in a limited way. As seen in these regulations, only a few articles normally mention virtual currency, which is prohibited.

According to several regulations issued by Bank Indonesia, the use of virtual currencies or cryptocurrencies as a medium of exchange or method of payment in Indonesia was prohibited. By opposing virtual currency as a legitimate payment method, the Ministry of Finance, via Press Release of the Ministry of Finance of the Republic of Indonesia Number 3/KLI/2018, affirms its confidence in Bank Indonesia as the monetary authority's ability to sustain the payment system.

---

<sup>24</sup> Hela Mzoughi, Ramzi Benkraiem, and Khaled Guesmi, "The Bitcoin Market Reaction to The Launch of Central Bank Digital Currencies," *Research in International Business and Finance* 63, no. 101800 (2022): 1–9, <https://doi.org/10.1016/j.ribaf.2022.101800>.

<sup>25</sup> CNCB Indonesia, "Gibran Ajak Anak Muda Ahli Kripto Bangun Hilirisasi Digital," 2024.

<sup>26</sup> Radinka Dynand Mahessara and Budi Rustandi Kartawinata, "Comparative Analysis of Cryptocurrency in Forms of Bitcoin, Stock, and Gold as Alternative Investment Portfolio in 2014 – 2017," *Jurnal Sekretaris Dan Administrasi Bisnis* 2, no. 2 (2018): 38–51, <https://doi.org/10.31104/jsab.v2i2.58>.

As the authority overseeing the payment system, Bank Indonesia has unequivocally declared that all cryptocurrencies are prohibited as legal tender. In Indonesia, only the Rupiah is acknowledged as a valid medium of exchange under Law No. 7 of 2011 on Currency. The prevention of anticipated losses is achieved through the non-recognition of cryptocurrencies as a form of currency, which safeguards society. Similarly, this is attributable to the Indonesian people's comparatively low level of financial literacy, which means that in the event of their detriment, the government, as the regulator, will be held accountable.<sup>27</sup>

The value of crypto does not depend on any currency in the world. It opens up opportunities for crypto participation in the global economy. There is no fear of experiencing a decline in value, except for the loss of trust in crypto coins. With a decentralized system, crypto coins are accessible from the problems of economic and political crises that affect traditional currencies. Thus, crypto is designed as an alternative digital cash to reduce dependence on traditional money. Behind its advantages as a virtual currency, crypto also has weaknesses.<sup>28</sup> The difficulty of predicting the value of crypto in the future has the potential to cause more significant losses. Sometimes, the exchange value of crypto coins such as bitcoins is also too high and is considered unreasonable. Then, the use of cryptocurrency also has the potential for legal violations due to the lack of clarity in regulations in several countries regarding the existence of this cryptocurrency.<sup>29</sup>

The influence of virtual money or crypto coins on the Indonesian economy cannot be underestimated. Considering that many large countries are starting to legalize the use of cryptocurrency, this is connected to the Indonesian economy. The recent downward trend in cryptocurrencies must be paid close attention to. The reason is that this might affect the domestic economy. The use of crypto coins as a means of payment in Indonesia, whether juridically (positive law) or for expediency, is prohibited to maintain the sovereignty of the Rupiah as a legal means of payment in Indonesia. For this reason, using crypto coins as a means of payment in Indonesia can be interpreted as a violation of the law, followed by legal consequences. The legal consequence mentioned is the imposition of sanctions on using crypto coins.

Specifically, penalties should be imposed on Payment Service Providers (PJP) that facilitate payment transactions for payment system service consumers. It is against the law that payment service providers facilitate transactions using cryptocurrencies or virtual currencies. Regulation Number 23/6/PBI/2021 of the Bank of Indonesia pertains to Payment Service Providers. The regulation specifies that sanctions for this prohibition may include a warning, temporary, partial, or complete suspension of activities, including the implementation of cooperation, and revocation of a permit in the same manner as the PJP.<sup>30</sup> Since no organization or institution governs this

<sup>27</sup> Okta Ariani and Aji Lukman Ibrahim, "Optimizing the Role of BNPT in Preventing Terrorism Financing Using Cryptocurrency in Indonesia," *Jurnal USM Law Review* 7, no. 1 (2024): 30–44, <https://doi.org/10.26623/julr.v7i1.8027>.

<sup>28</sup> Peter Howson and Alex de Vries, "Preying on the Poor? Opportunities and Challenges for Tackling the Social and Environmental Threats of Cryptocurrencies for Vulnerable and Low-Income Communities," *Energy Research and Social Science* 84, no. 1 (2022): 1–15, <https://doi.org/10.1016/j.erss.2021.102394>.

<sup>29</sup> Winnie Stevani and Hari Sutra Disemadi, "Urgency of Cryptocurrency Regulation in Indonesia: The Preventive Action for Ransomware Crime," *Hang Tuah Law Journal* 5, no. 1 (2021): 52–66, <https://doi.org/10.30649/htlj.v5i1.32>.

<sup>30</sup> Alexander Harryandi, Fira Natasha, and Muhammad Akbar, "Regulating Initial Coin Offering Amidst the Development of Crypto Assets in Indonesia," *Journal of Central Banking Law and Institutions* 1, no. 3 (2022): 537–70, <https://doi.org/10.21098/jcli.v1i2.18>.

cryptocurrency, the government's utilization cannot be guaranteed. The fact that an uncontrollable payment system gives rise to a technological innovation concerns the government. The government deems the utilization of crypto coins as a medium of exchange in Indonesia invalid or illegal since the Indonesian government enforces legal currency regulations, specifically the Rupiah, which serves as the reference unit. No regulations in place permit the use of Crypto coins as a medium of exchange in Indonesia.

### Cryptocurrency Transactions in the View of Islamic Sharia Law in Indonesia

As per legal scholars, precisely defining the term “Islamic law” remains challenging; numerous terms require clarification before comprehending Islamic law. Before beginning the study of Islamic law, it is critical to understand terms including Sharia, *fiqh*, *ushul fiqh*, *qama*, *fatwa*, and *qanun*. Regarding legal provisions, Islam derives its methodologies and reference materials from the *Qur'an* and *al-Hadith*. In addition to describing these two sources as references for establishing laws, *mujtahids* are also familiar with *maslahah murlah* and *qiyas*, which they employ in the process. The discipline devoted to establishing Sharia law is referred to as *ushul fiqh*. In essence, all transactional activities must adhere to the values espoused in Islamic teachings or refrain from transgressing them. Consequently, such transactions should not entail exchanging counterfeit, squandered, ineffective, or damaged goods.<sup>31</sup>

Buying and selling is a transaction process by two or more people to reach an agreement based on mutual consent. Buying and selling are generally carried out directly between the seller and the buyer, meeting in one place and making a contract for the goods to be purchased.<sup>32</sup> However, technological sophistication means that nowadays, buying and selling can be done digitally. Buyers can select the items they want to buy via smartphone and wait for the items to arrive at the buyer's house. Islam allows its followers to do business online as long as there are no elements of usury, injustice, monopoly, and fraud.<sup>33</sup>

Cryptocurrency is a digital currency whose transactions use a computer-chain network. Its function is to approve cryptocurrency exchanges and prevent duplication of the same transaction. Crypto uses the blockchain method as a medium for transactions. Blockchain is an open-source, decentralized technology (software that can be accessed by anyone and is free to be used by everyone) that records and verifies all transactions using a public book. After the transaction is complete, the blockchain produces another new block at the end of each transaction, and every time, a blockchain process is executed using a network of which there are millions. If everyone agrees, the block will become a permanent link in the blockchain.

<sup>31</sup> Achmad Fageh, “Digital Currency under the Perspective of Islamic Law Title,” *Maliyah : Jurnal Hukum Bisnis Islam* 11, no. 1 (2021): 110–128, <https://doi.org/10.15642/maliyah.2021.11.1.110-128>.

<sup>32</sup> Arzetta Zahra Metthania and Siti Nurul Intan Sari Dalimunthe, “Legal Protection for Parties in Sale and Purchase Transactions of Virtual Objects,” *Volkgeist: Jurnal Ilmu Hukum Dan Konstitusi* 5, no. 2 SE-Articles (December 2022): 267–77, <https://doi.org/10.24090/volkgeist.v5i2.7066>.

<sup>33</sup> Ahmad Nouruzzaman, Abdul Wahab, and Abdul Hamid Habbe, “Cryptocurrency in Islamic Economic Principles,” *Dinasti International Journal of Education Management And Social Science* 3, no. 2 (2022): 233–239, <https://doi.org/10.31933/dijemss.v3i2.1068>; Ilham Abbas and Aditya Halim Perdana Kusuma Putra, “Utilitarianism Perspective on The Use of E-Stamps in Business Practices in Indonesia,” *Jurnal IUS Kajian Hukum Dan Keadilan* 12, no. 1 (April 29, 2024): 224–36, <https://doi.org/10.29303/IUS.V12I1.1513>.

Crypto trading in Indonesia has been announced and approved by the Commodity Futures Trading Supervisory Agency (Bappebti). The way to play crypto is: Prospective users can open an account with a crypto asset commodity trader. After completing the procedures regarding your customer (KYC), the prospective user can be approved as a user so that the user has an account for transactions. Users who have made transactions through crypto asset commodity traders (exchangers) can now use crypto wallets to store data or encryption keys, the function of which is to link to cryptocurrency and confirm the correctness of the user's identity.<sup>34</sup>

In Islam, crypto is a treasure called *maṣūfī al zimmah* (asset-guaranteed property). Something can be said to be an asset if it has the following basis:<sup>35</sup>

1. Something can be said to be an asset if it has assets or benefits that can be used as assets (*mutamawwal*) because all things that can be used as assets are assets (*kullu ma yutamawwalu fahuwa al-māl*). A wage contract in which wages are paid with something that cannot be used as property, the contract is legally void and is a *ma'dum* (fictitious) transaction that is prohibited.
2. Something can be considered a treasure if its units are recognized and can be used as a medium of exchange (*qimatu almišli*) in that area. For example, in Indonesia, the legal medium of exchange is tangible, namely the rupiah. So apart from rupiah, it cannot be said to be a medium of exchange, so if it is used for wages or something else, it cannot be counted as rupiah.

Based on the definitions above of wages denominated in a foreign currency or digital assets that may be utilized as assets but have not yet been converted to rupiah, this form of compensation encompasses a *maḥūfī alzimmah* wage agreement, which entails debt-guaranteed wages. Since the property status of the item utilized for remuneration, namely as *māl duyūn*, the transaction is deemed valid.<sup>36</sup>

Following Article 34 of Regulation 18/40/Pbi/2016 of Bank Indonesia and Law No. 7 of 2011 on Currency, which pertains to the processing of payment transactions involving violations of Virtual Currency as a payment method in Indonesia, all individuals must utilize rupiah in all payment-oriented transactions. Furthermore, the rupiah must be utilized to settle other obligations and financial transactions conducted within the country.<sup>37</sup>

According to the term, *gharar* is every sale and purchase agreement that contains risks or dangers to one of the contracting parties, resulting in losses therein. *Gharar* means the unclear nature of something. In *muamalah*, the unclear object of the transaction or transaction gives rise to disputes between the parties to the transaction. In principle, the jurists have agreed that a sale

<sup>34</sup> Nicho Hadi Wijaya, "The Challenges of Sharia Pawnshops in Indonesia in the Era of the Industrial Revolution 4.0," *El-Mashlahah* 12, no. 1 (2022): 52–69, <https://doi.org/10.23971/elma.v12i1.3910>.

<sup>35</sup> Christopher Panal Lumban Gaol, Utzinger Morales, and Vanella Lopez, "Juridical Review Concerning the Legitimacy of Cryptocurrency in Islamic Law," *At-Tasyrih: Jurnal Pendidikan Dan Hukum Islam* 8, no. 2 (2023): 115–25, <https://doi.org/10.55849/attasyrih.v8i2.148>.

<sup>36</sup> Achmad Fajaruddin et al., "The Concept of Cryptocurrency in Islam," *FINANSIA : Jurnal Akuntansi Dan Perbankan Syariah* 6, no. 1 (2023): 77–88, <https://doi.org/10.32332/finansia.v6i1.6524>.

<sup>37</sup> Moh Holilur Rohman, "Understanding the Legal and Religious Perspectives on Cryptocurrency Transactions: A Study of DSN - MUI Fatwa and Indonesian Currency Regulation," *Istinbath : Jurnal Hukum* 20, no. 1 (2023): 38–53, <https://doi.org/10.32332/istinbath.v20i01.5688>.

and purchase agreement containing *gharar* is invalid because *dharar* is a transaction that causes damage and also harms one of the parties.<sup>38</sup>

*Maisir* is a transaction that depends on uncertain circumstances and is a matter of chance. Synonymous with the word *maisir* is *qimar*. According to Muhammad Ayub, *Maisir* and *qimar* are intended as games of chance. In other words, what is meant by *maisir* is gambling. In this case, the Indonesian Ulema Council (MUI) has issued a *fatwa* regarding cryptocurrency in the 7th *Ijtima'* Ulama *Fatwa* Commission of the Indonesian Ulema Council discussing the law of cryptocurrency, in its discussion stated that the use of cryptocurrency as currency is *haram* because in this case contains elements of *dharar* and *gharar* and is also contrary to Law Number 7 of 2011 and Bank Indonesia Regulation Number 17 of 2015 on the obligation to use rupiah in every transaction in the territory of Indonesia.

Cryptocurrency, classified as a digital asset or commodity, is prohibited from trade due to its composition of *dharar*, *gharar*, and *maysir* elements. Furthermore, it fails to satisfy the *sil'ah* requirements of Islamic law, which stipulate that it must be intangible, lacks a fixed amount, has no monetary value, and permits the transfer of title to the purchaser. Notwithstanding the government's recognition of cryptocurrency as a commodity, Sharia prohibits its legalization. It is deemed *haram* since it is prohibited and unrecognized as a commodity because of a fraudulent component, and it provides no benefits following the Shari'a as taught and documented in *fiqh* books and studies.<sup>39</sup>

Regarding this problem, the legal considerations of the Indonesian Ulema Council relate to the problem of implementing the practice of cryptocurrencies as a means of exchange, which is not legal to use because it contains *gharar* (obscurity), *dharar* (danger), *maysir* (gambling). In this particular scenario, it is possible to elucidate that uncertainty (*gharar*) arises from the extreme volatility exhibited by prices, which occasionally plummet to zero.<sup>40</sup> Meanwhile, this *dharar* (loss) lies in the nominal value sent, which can go down or up according to the rotation of the coin value, and the coin value sent will not match. The element of *maysir* is a game of chance. In other words, what is meant by *maysir* is gambling. Then, the MUI *Fatwa* regarding cryptocurrency as a medium of exchange, according to legal considerations, also explains that cryptocurrency as a medium of exchange is contrary to existing regulations in Indonesia, such as Law No. 7 of 2011 on currency and Bank Indonesia Regulations concerning the Obligation to Use the Rupiah in the Territory of the Unitary State of the Republic of Indonesia. In its competence as a central bank, Bank Indonesia has one single goal: achieving and maintaining stability in the value of the rupiah.

The results concluded that cryptocurrency has detrimental elements far greater than its benefits. According to Islamic law, investing in digital cryptocurrency is not legal. Cryptocurrency has very high risks and is contrary to Islam, such as *masyir*, *gharar*, and the possibility of harming its users. These things explained in this research are *gharar*, usury, *masyir*, and *tadlis*.

<sup>38</sup> M. Fabian Akbar et al., "The Financial Balance Policy Between Central and Local Government: Toward More Just Financial Allocation," *Yuridika* 38, no. 2 (2023): 415–430, <https://doi.org/10.20473/ydk.v38i2.42904>.

<sup>39</sup> Dodik Siswanto, Rangga Handika, and Aria Farah Mita, "The Requirements of Cryptocurrency for Money, an Islamic View," *Heliyon* 6, no. 1 (2020): 1–9, <https://doi.org/10.1016/j.heliyon.2020.e03235>.

<sup>40</sup> Dewi Indrayani Hamin, "Cryptocurrency Dan Pandangan Legalitas Menurut Islam: Sebuah Literature Review," *Jurnal Ilmiah Manajemen Dan Bisnis Jambura* 3, no. 2 (2020): 127–39, <https://doi.org/10.37479/jimb.v3i2.9430>.

## Benefits and Disadvantages of Cryptocurrency According to Islamic Teachings

Indeed, a great deal of potential exists for the development of cryptocurrency itself, beginning with its benefits and transaction simplicity and extending to its drawbacks. Indeed, each *muamalat* transaction that benefits all parties concerned has the potential to benefit one of them. However, after further review regarding the use of cryptocurrency as digital currency, especially when carrying out online transactions, it contains many elements of harm. Cryptocurrency can cause a lot of risks, and it can be detrimental to its users, so this practice is not by the provisions of the Sharia taught by Islamic religious teachings, namely, *muamalat* transactions that cause harm should be abandoned, according to what is stated in several verses of the *Al-Quran*.<sup>41</sup>

The concept of these rules provides the understanding that humans must be kept away from acts of harm, both by themselves and by others, because all religious commands are established for the good of humans themselves, and all religious prohibitions should be established solely to prevent various forms of *mafsadat* (damage).<sup>42</sup> This basic principle is the main basis for every law stipulated in Islamic Sharia. Therefore, all forms of goodness and benefit must continue to be pursued, while all forms of *madharat* and *mafsadat* must be avoided. So, to avoid some of the harm that can arise from the practice of cryptocurrency), we should prioritize a careful attitude.

When using Bitcoin as a transaction tool or commodity, weighing it in terms of the risks obtained, whether it is greater than the benefits generated, if the profits are large but the risk of losses is greater, then it must be considered further. Anything related to risks that might bring losses should be abandoned, and you need to choose when making transactions or investing in commodities because the ability to choose correctly also means being able to put something in its place.<sup>43</sup>

Departing from the provisions above, the existence of cryptocurrency is not a form of currency issued by a country because based on its legality, namely the existence of a circular issued by Bank Indonesia, stating that cryptocurrency is not recognized as a form of currency circulating in that country. The aspect that is considered is the welfare side, which is greater than the benefits, both when used as a means of payment and as a transaction tool. The use of cryptocurrency as a payment transaction tool, especially in online financial transactions, is considered *syubhāt*, and something that is *sūbhāt* should be abandoned because it does not bring benefits and, at the same time, distances the goal of Islamic law, namely the benefit of all people.<sup>44</sup>

The increasing role of technology and information among humans has significantly influenced the development of legal *fatwas* that are urgent to be issued. Even though the various legal *fatwas* are not very certain about their position, from the perspective of the legal rules, they have been summarized by previous scholars by looking at various similarities in the legal *'illat*. So, to answer

<sup>41</sup> Issam Tlemsani and Robin Matthews, "Digitalization and the Prospects of Cryptocurrency in Islamic Finance," *International Journal of Technology Management & Sustainable Development* 22, no. 2 (2023): 131–52, [https://doi.org/10.1386/tmsd\\_00072\\_1](https://doi.org/10.1386/tmsd_00072_1).

<sup>42</sup> M. Pauzi et al., "Actualizing Islamic Economic Law in the Digital Era: A Study of the Application of Khiyar Al-Majlis in Electronic Contracts," *Juris: Jurnal Ilmiah Syariah* 23, no. 2 (2024): 205–14, <https://doi.org/10.31958/juris.v23i2.11573>.

<sup>43</sup> Abdulloh Hamid et al., "Bitcoin as a Means of Transaction and Investment In The Perspective of Islam," *IQTISHODUNA: Jurnal Ekonomi Islam* 10, no. 2 (2021): 33–48, <https://doi.org/10.36835/iqtishoduna.v10i2.944>.

<sup>44</sup> Rohman, "Understanding the Legal and Religious Perspectives on Cryptocurrency Transactions: A Study of DSN - MUI Fatwa and Indonesian Currency Regulation."

various legal rules that are not yet appropriate, one of them is stipulated through the provisions contained in the *Qur'an* and *As-Sunnah*.

In Indonesia, the recognized currency is the Rupiah. Regarding all forms of cryptocurrency used as a transaction tool or even a commodity, the responsibility belongs to each individual or community. Indeed, the government does not prohibit the circulation of digital money, but what needs to be a warning to the community or users is that all security risks are the users' responsibility. The government does not take part in it, so if undesirable things happen at any time or criminal acts related to the circulation and use of cryptocurrency, it is clear that the government will not take part because it is not within its authority.

## CONCLUSION

This article reveals that integrating cryptocurrency within Indonesia's legal and Sharia economic frameworks presents significant challenges. Although cryptocurrency offers innovative financial possibilities, its adoption is hindered by unresolved legal and religious issues, particularly regarding Islamic principles of *gharar* (uncertainty) and *dharar* (harm). The Indonesian Ulema Council's (MUI) stance declaring Bitcoin *haram* underscores the need for a regulatory framework that addresses both secular and Sharia concerns. This framework could offer clarity for businesses and investors and facilitate the development of compliant financial instruments, such as digital assets with tangible backing, that adhere to Islamic principles. Moving forward, future research should focus on alternative financial models that leverage blockchain technology while remaining compatible with Islamic finance, thus enhancing both compliance and innovation within the Indonesian financial system.

## REFERENCES

- Abbas, Ilham, and Aditya Halim Perdana Kusuma Putra. "Utilitarianism Perspective on The Use of E-Stamps in Business Practices in Indonesia." *Jurnal IUS Kajian Hukum Dan Keadilan* 12, no. 1 (April 29, 2024): 224–36. <https://doi.org/10.29303/IUS.V12I1.1513>.
- Akbar, M. Fabian, Irvan Mareto, Alfido Fiqri Arsy Adhiem, Ayi Dudi Firdaus, and Adriana Maisarah binti Mohd Farid. "The Financial Balance Policy Between Central and Local Government: Toward More Just Financial Allocation." *Yuridika* 38, no. 2 (2023): 415–430. <https://doi.org/10.20473/ydk.v38i2.42904>.
- Amsyar, Izwan, Ethan Christopher, Arusyi Dithi, Amar Najiv Khan, and Sabda Maulana. "The Challenge of Cryptocurrency in the Era of the Digital Revolution: A Review of Systematic Literature." *A Review of Systematic Literature. Aptisi Transactions on Technopreneurship (ATT)* 2, no. 2 (2020): 153–159. <https://doi.org/10.34306/att.v2i2.96>.
- Ariani, Okta, and Aji Lukman Ibrahim. "Optimizing the Role of BNPT in Preventing Terrorism Financing Using Cryptocurrency in Indonesia." *Jurnal USM Law Review* 7, no. 1 (2024): 30–44. <https://doi.org/10.26623/julr.v7i1.8027>.
- Auer, Raphael, and David Tercero-Lucas. "Distrust or Speculation? The Socioeconomic Drivers of U.S. Cryptocurrency Investments." *Journal of Financial Stability* 62, no. 101066 (2022): 1–23. <https://doi.org/10.1016/j.jfs.2022.101066>.

- Avdeychik, Vadim, and Justin Capozzi. "SEC's Division of Investment Management Voices Concerns Over Registered Funds Investing in Cryptocurrencies and Cryptocurrency-Related Products." *Journal of Investment Compliance* 19, no. 2 (2018): 8–12. <https://doi.org/10.1108/JOIC-04-2018-0034>.
- Caporale, Guglielmo Maria Alex Plastun. "Price Overreactions in the Cryptocurrency Market." *Journal of Economic Studies* 46, no. 5 (2019): 1137–1155. <https://doi.org/10.1108/JES-09-2018-0310>.
- Chang, Soonpeel Edgar. "Legal Status of Cryptocurrency in Indonesia and Legal Analysis of the Business Activities in Terms of Cryptocurrency." *Brawijaya Law Journal* 6, no. 1 (April 25, 2019): 76–93. <https://doi.org/10.21776/UB.BLJ.2019.006.01.06>.
- CNCB Indonesia. "Gibran Ajak Anak Muda Ahli Kripto Bangun Hilirisasi Digital," 2024.
- Fageh, Achmad. "Digital Currency under the Perspective of Islamic Law Title." *Maliyah : Jurnal Hukum Bisnis Islam* 11, no. 1 (2021): 110–128. <https://doi.org/10.15642/maliyah.2021.11.1.110-128>.
- Fahamsyah, Ermanto, Vicko Taniady, Ramadhan Dwi Saputra, Kania Venisa Rachim, and Glenn Wijaya. "The Problem of Filing for Bankruptcy in Indonesian Law: Should the Insolvency Test Mechanism Be Applied?" *Volksgeist: Jurnal Ilmu Hukum Dan Konstitusi* 7, no. 1 (June 30, 2024): 199–218. <https://doi.org/10.24090/VOLKSGEIST.V7I1.10079>.
- Fajaruddin, Achmad, Dimas Fahmi Azizy, M. Ridhauhi Pasha Parojai, Indra Sholeh Husni, and Muhamad Kharis Tambusai. "The Concept of Cryptocurrency in Islam." *FINANSIA : Jurnal Akuntansi Dan Perbankan Syariah* 6, no. 1 (2023): 77–88. <https://doi.org/10.32332/finansia.v6i1.6524>.
- Ferreira, Agata, and Philipp Sandner. "EU Search for Regulatory Answers to Crypto Assets and Their Place in the Financial Markets' Infrastructure." *Computer Law and Security Review* 43, no. 105632 (2021): 1–15. <https://doi.org/10.1016/j.clsr.2021.105632>.
- Gaol, Christopher Panal Lumban, Utzinger Morales, and Vanella Lopez. "Juridical Review Concerning the Legitimacy of Cryptocurrency in Islamic Law." *At-Tasyrih: Jurnal Pendidikan Dan Hukum Islam* 8, no. 2 (2023): 115–25. <https://doi.org/10.55849/attasyrih.v8i2.148>.
- Gunawan, Mudita, and Achmad Herlanto Anggono. "Cryptocurrency Safe Haven Property against Indonesian Stock Market During COVID-19." *Journal of Economics, Business, and Accountancy Ventura* 24, no. 1 (2021): 121–38. <https://doi.org/10.14414/jebav.v24i1.2661>.
- Hamid, Abdulloh, Anis Fittria, Ubbadul Adzkiya', and Santi Andriyani. "Bitcoin as a Means of Transaction and Investment In The Perspective of Islam." *IQTISHODUNA: Jurnal Ekonomi Islam* 10, no. 2 (2021): 33–48. <https://doi.org/10.36835/iqtishoduna.v10i2.944>.
- Hamin, Dewi Indrayani. "Cryptocurrency Dan Pandangan Legalitas Menurut Islam: Sebuah Literature Review." *Jurnal Ilmiah Manajemen Dan Bisnis Jambura* 3, no. 2 (2020): 127–39. <https://doi.org/10.37479/jimb.v3i2.9430>.
- Harryandi, Alexander, Fira Natasha, and Muhammad Akbar. "Regulating Initial Coin Offering Amidst the Development of Crypto Assets in Indonesia." *Journal of Central Banking Law and Institutions* 1, no. 3 (2022): 537–70. <https://doi.org/10.21098/jcli.v1i2.18>.

- Howson, Peter, and Alex de Vries. "Preying on the Poor? Opportunities and Challenges for Tackling the Social and Environmental Threats of Cryptocurrencies for Vulnerable and Low-Income Communities." *Energy Research and Social Science* 84, no. 1 (2022): 1–15. <https://doi.org/10.1016/j.erss.2021.102394>.
- Inci, A. Can, and Rachel Lagasse. "Cryptocurrencies: Applications and Investment Opportunities." *Journal of Capital Markets Studies* 3, no. 2 (2019): 98–112. <https://doi.org/10.1108/jcms-05-2019-0032>.
- Indrawati, Yuli. "Interpreting Fiscal Risk for Lack of Bank Indonesia's Capital." *Jurnal Media Hukum* 28, no. 1 (2021): 90–101. <https://doi.org/10.18196/jmh.v28i1.8712>.
- Jati, Hardian Satria, and Ahmad Arif Zulfikar. "Transaksi Cryptocurrency Perspektif Hukum Ekonomi Syariah." *Jurnal Al-Adalah : Jurnal Hukum Dan Politik Islam* 6, no. 2 (2021): 137–48. <https://doi.org/10.35673/ajmpi.v6i2.1616>.
- Kuehnlitz, Sophia, Bianca Orsi, and Annina Kaltenbrunner. "Central Bank Digital Currencies and the International Payment System: The Demise of the US Dollar?" *Research in International Business and Finance* 64, no. 101834 (2023): 1–12. <https://doi.org/10.1016/j.ribaf.2022.101834>.
- Mahessara, Radinka Dynand, and Budi Rustandi Kartawinata. "Comparative Analysis of Cryptocurrency in Forms of Bitcoin, Stock, and Gold as Alternative Investment Portfolio in 2014 – 2017." *Jurnal Sekretaris Dan Administrasi Bisnis* 2, no. 2 (2018): 38–51. <https://doi.org/10.31104/jsab.v2i2.58>.
- Marthinsen, John E., and Steven R. Gordon. "Hyperinflation, Optimal Currency Scopes, and a Cryptocurrency Alternative to Dollarization." *Quarterly Review of Economics and Finance* 85, no. 1 (2022): 161–73. <https://doi.org/10.1016/j.qref.2020.12.007>.
- Metthania, Arzetta Zahra, and Siti Nurul Intan Sari Dalimunthe. "Legal Protection for Parties in Sale and Purchase Transactions of Virtual Objects." *Volksgeist: Jurnal Ilmu Hukum Dan Konstitusi* 5, no. 2 SE-Articles (December 2022): 267–77. <https://doi.org/10.24090/volksgeist.v5i2.7066>.
- Mzoughi, Hela, Ramzi Benkraiem, and Khaled Guesmi. "The Bitcoin Market Reaction to The Launch of Central Bank Digital Currencies." *Research in International Business and Finance* 63, no. 101800 (2022): 1–9. <https://doi.org/10.1016/j.ribaf.2022.101800>.
- Nicolás González-Gallego, and Concepción María Pérez-Cárceles. "Cryptocurrencies and Illicit Practices: The Role of Governance." *Economic Analysis and Policy* 72, no. 1 (2021): 203–12. <https://doi.org/10.1016/j.eap.2021.08.003>.
- Nitha, Dewa Ayu Fera, and I Ketut Westra. "Investasi Cryptocurrency Berdasarkan Peraturan Bappebti No. 5 Tahun 2019'." *Udayana Master Law Journal* 9, no. 4 (2020): 712–22. <https://doi.org/10.24843/JMHU.2020.v09.i04.p04>.
- Nouruzzaman, Ahmad, Abdul Wahab, and Abdul Hamid Habbe. "Cryptocurrency in Islamic Economic Principles." *Dinasti International Journal of Education Management And Social Science* 3, no. 2 (2022): 233–239. <https://doi.org/10.31933/dijemss.v3i2.1068>.
- Nugroho, Andriyanto Adhi, Surahmad Surahmad, and Ahmad Ali Gibran Putra Musafak. "Legal Protection for Cryptocurrency Users as a Commodity in Indonesia." *International Journal*

- of Multicultural and Multireligious Understanding* 10, no. 1 (2023): 469–76. <https://doi.org/10.18415/ijmmu.v10i1.4247>.
- Pauzi, M., Farida Arianti, Ahmad Masum, and Marnia Rani. “Actualizing Islamic Economic Law in the Digital Era: A Study of the Application of Khiyar Al-Majlis in Electronic Contracts.” *Juris: Jurnal Ilmiah Syariah* 23, no. 2 (2024): 205–14. <https://doi.org/10.31958/juris.v23i2.11573>.
- Rahardja, Untung. “The Economic Impact of Cryptocurrencies in Indonesia.” *ADI Journal on Recent Innovation* 4, no. 2 (2023): 194–200. <https://doi.org/10.34306/ajri.v4i2.869>.
- Rohman, Moh Holilur. “Understanding the Legal and Religious Perspectives on Cryptocurrency Transactions: A Study of DSN - MUI Fatwa and Indonesian Currency Regulation.” *Istinbath : Jurnal Hukum* 20, no. 1 (2023): 38–53. <https://doi.org/10.32332/istinbath.v20i01.5688>.
- S. Muslih, M., and Supeno. “Financial Technology\_ Digital Legal Challenges and Indonesia’s Economic Prospects after Covid-19 Outbreak.” *Legality: Jurnal Ilmiah Hukum* 30, no. 2 (2021): 255–66. <https://doi.org/10.22219/ljih.v30i2.22784>.
- Sánchez-Núñez, Pablo, and Yolanda García Calvente. “Tax Regulation on Blockchain and Cryptocurrency: The Implications for Open Innovation.” *Journal of Open Innovation: Technology, Market, and Complexity* 7, no. 98 (2021): 1–21. <https://doi.org/10.3390/joitmc7010098>.
- Setyawati, Ria, Stefan Koos, and Zalfa A.F. Jatmiko. “Data Driven Dominance in Digital Markets: Assessing Indonesian Competition Law in the Digital Age.” *Jurnal IUS Kajian Hukum Dan Keadilan* 12, no. 2 (August 28, 2024): 264–84. <https://doi.org/10.29303/IUS.V12I2.1377>.
- Siswantoro, Dodik, Rangga Handika, and Aria Farah Mita. “The Requirements of Cryptocurrency for Money, an Islamic View.” *Heliyon* 6, no. 1 (2020): 1–9. <https://doi.org/10.1016/j.heliyon.2020.e03235>.
- Stevani, Winnie, and Hari Sutra Disemadi. “Urgency of Cryptocurrency Regulation in Indonesia: The Preventive Action for Ransomware Crime.” *Hang Tuah Law Journal* 5, no. 1 (2021): 52–66. <https://doi.org/10.30649/htlj.v5i1.32>.
- Supriyadi, Daniar. “The Regulation of Personal and Non-Personal Data in the Context of Big Data.” *Journal of Human Rights, Culture and Legal System*, 3, no. 1 (2023): 33–69. <https://doi.org/10.53955/jhcls.v3i1.71>.
- Taudaa, Gunawan A., Andy Omarab, and Gioia Arnone. “Cryptocurrency: Highlighting the Approach, Regulations, and Protection in Indonesia and European Union.” *Bestuur* 11, no. 1 (2023): 1–25. <https://doi.org/10.20961/bestuur.v11i1.67125>.
- Tlemsani, Issam, and Robin Matthews. “Digitalization and the Prospects of Cryptocurrency in Islamic Finance.” *International Journal of Technology Management & Sustainable Development* 22, no. 2 (2023): 131–52. [https://doi.org/10.1386/tmsd\\_00072\\_1](https://doi.org/10.1386/tmsd_00072_1).
- Turner, Adam, and Angela Samantha Maitland Irwin. “Bitcoin Transactions: A Digital Discovery of Illicit Activity on the Blockchain.” *Journal of Financial Crime* 25, no. 1 (2018): 109–130. <https://doi.org/10.1108/JFC-12-2016-0078>.
- Wijaya, Nicho Hadi. “The Challenges of Sharia Pawnshops in Indonesia in the Era of the Industrial Revolution 4.0.” *El-Mashlahah* 12, no. 1 (2022): 52–69. <https://doi.org/10.23971/elma.v12i1.3910>.

- Wouda, Hugo Pieter Raymond Opdenakker. “Blockchain Technology in Commercial Real Estate Transactions.” *Journal of Property Investment & Finance* 37, no. 6 (2019): 570–79. <https://doi.org/10.1108/JPIF-06-2019-0085>.
- Zuhri, Saefudin, Dasih Irma, and Nendi Juhandi. “The Future of Cryptocurrency Legality in Indonesia.” *Journal of Economics and Business Letters* 1, no. 1 (2021): 20–23. <https://doi.org/10.55942/jeb1.v1i1.87>.