

## Smart Contracts in Non-Fungible Token Transactions Using Cryptocurrency (Case Study on Ghozali Everyday)

Anissa Nabilla<sup>1)</sup> & Suherman<sup>2)</sup>

<sup>1)</sup>Faculty of Law, Universitas Pembangunan Nasional “Veteran” Jakarta, Indonesia, E-mail: [2210611171@mahasiswa.upnvj.ac.id](mailto:2210611171@mahasiswa.upnvj.ac.id)

<sup>2)</sup>Faculty of law, Universitas Pembangunan Nasional “Veteran” Jakarta, Indonesia, E-mail: [suherman@upnvj.ac.id](mailto:suherman@upnvj.ac.id)

**Abstract.** *The development of blockchain technology has given rise to new innovations in the form of smart contracts, which are widely used in digital asset transactions, including Non-Fungible Tokens (NFTs). One case that highlights this phenomenon is Ghozali Everyday, where smart contracts play a crucial role in regulating the buying and selling of NFTs. However, the implementation of smart contracts in Indonesia faces legal challenges, particularly regarding the use of cryptocurrency as a payment instrument, which is still prohibited by Bank Indonesia regulations, even though electronic contracts are recognized as valid by the ITE Law. This study uses a normative juridical method with a legislative and conceptual approach. The analysis is conducted using Hans Kelsen's Hierarchy of Norms theory and Gustav Radbruch's Legal Validity theory to assess legal certainty, fairness, and utility in regulating smart contracts and cryptocurrencies in Indonesia. The results show a conflict of norms that creates legal uncertainty and limited legal protection for digital asset transaction actors. Therefore, regulatory updates are needed that are adaptive, consistent with the hierarchy of laws and regulations, and provide more comprehensive protection for consumers and businesses.*

**Keywords:** *Cryptocurrency; NFT; Smart Contracts; Protection.*

### 1. Introduction

The development of digital technology today has brought about major changes in almost all aspects of human life (Sastrawidjaja, 2002), including in the legal and business sectors. This transformation is not unique to Indonesia but has become a global trend, driving the emergence of various new

technology-based legal instruments. One of the most impacted areas is contract law, which has long been regulated in Article 1320 in conjunction with Article 1338 of the Civil Code (*Burgerlijk Wetboek/BW*) (Tumangkar, 2016). This article stipulates that agreements can be made either orally or in writing, thus opening up space for more modern forms of contract in the digital era (Lie et al., 2023).

The emergence of electronic contracts (e-contracts) is one concrete manifestation of the adaptation of contract law to technological developments. According to Minter Ellison Rudd Watts, as quoted by Rosa Agustina, electronic contracts are formed through the exchange of electronic messages between computers.

Technological innovation has given rise to a more sophisticated form of contract, namely blockchain-based smart contracts. This concept was first introduced by Nick Szabo in 1994. A smart contract is a digital contract that can be executed automatically without third-party intervention, offering high efficiency, transparency, and security. Each provision in the contract is stored in code that is immediately executed by the system when the agreed-upon conditions are met. This advantage makes smart contracts highly sought after by both companies and individuals, as they can guarantee the certainty and effectiveness of transactions (Szabo, 1996).

In Indonesia, the application of smart contracts has begun to be seen through the phenomenon of NFT transactions, one example being the case of Ghozali Everyday. Ghozali sold photos of himself as NFTs on a blockchain platform, where transactions were conducted using cryptocurrencies such as Ethereum. This phenomenon demonstrates the enormous potential of the digital economy (BBC, n.d.). However, it also raises legal issues. On the one hand, Law No. 11 of 2008 concerning Electronic Information and Transactions (UU ITE) recognizes electronic documents as valid evidence (Article 5 paragraph (1)) and states that electronic contracts have the same legal force as conventional contracts (Article 6). This means that smart contracts can be considered valid electronic contracts. However, on the other hand, financial regulations in Indonesia actually prohibit the use of cryptocurrencies. Law No. 7 of 2011 concerning Currency stipulates that only the rupiah is recognized as legal tender, while Bank Indonesia Regulation No. 23/6/PBI/2021 and PBI No. 18/40/PBI/2016 prohibit the use of cryptocurrencies as a payment instrument.

This situation creates legal ambiguity: smart contracts are recognized as valid electronic contracts, but transactions involving cryptocurrency could

potentially be considered a violation of Bank Indonesia regulations. This is where Hans Kelsen's Hierarchy of Norms theory becomes relevant. According to Kelsen, legal norms are structured in a hierarchical manner, with higher norms forming the basis for lower norms. In the Indonesian legal system, laws hold a higher status than Bank Indonesia regulations. However, Bank Indonesia has full authority to regulate payment systems, so the ban on cryptocurrency remains in effect. This conflict has given rise to debate regarding the consistency of the application of the hierarchy of norms in Indonesia.

Gustav Radbruch's Theory of Legal Validity can also be used to assess the legality of NFT transactions. Radbruch emphasized that a legal rule can only be considered valid if it meets the elements of legal certainty, justice, and utility. Bank Indonesia's ban on cryptocurrency is indeed aimed at maintaining national financial stability (utility), but it raises questions regarding legal certainty and a sense of fairness for digital businesses seeking to utilize smart contracts. Thus, a dilemma exists between efforts to protect the financial system and the need to support digital economic innovation.

Previous research, such as that by Daffa Danendra (2023), has indeed discussed the validity of smart contracts from a civil law perspective and stated that smart contracts can be considered valid if they meet the elements of an agreement as stipulated in Article 1320 of the Civil Code. However, this research has not yet explored the conflicting norms between the recognition of electronic contracts in the ITE Law and the prohibition of cryptocurrency by Bank Indonesia. This lack of analysis creates a gap in research, particularly in assessing how this conflicting norm should be resolved to provide legal certainty.

This research is crucial. Its goal is to provide a more in-depth legal analysis of the legality of smart contract-based NFT transactions in Indonesia by reviewing the principle of the hierarchy of laws and regulations and the theory of legal validity. This research is expected to provide input for the development of clearer, more adaptive regulations that align with developments in digital technology, while simultaneously supporting national economic growth.

## **2. Research Methods**

This research employs a normative juridical method, namely legal research based on literature review, examining legal principles, norms, and doctrine. This method was chosen because it aligns with the research objective, which

addresses the use of smart contracts in NFT transactions and the legal protection provided to parties conducting cryptocurrency transactions in Indonesia.

The approaches used include: a statutory approach, examining Law No. 11 of 2008 concerning Electronic Information and Transactions, Bank Indonesia Regulation Number 18/40/PBI/2016, and Law No. 12 of 2011; a conceptual approach, referring to legal theory and doctrine regarding smart contracts and cryptocurrency; and a case approach, examining the Ghozali Everyday case study as a concrete example of NFT transactions in Indonesia.

The research data sources are secondary data consisting of: primary legal materials (statutory regulations), secondary legal materials (books, journal articles, previous research), and tertiary legal materials (legal dictionaries, encyclopedias, and news portals). The data were obtained through literature and document studies, then analyzed using descriptive and deductive qualitative analysis methods to answer the research problem formulation.

### **3. Result and Discussion**

#### **3.1 The Legal Issues in Smart Contract NFT Transactions in the Ghozali Everyday Case**

Smart contracts are an innovative breakthrough born from the development of blockchain technology. This concept refers to a computer program designed to automate and execute contracts, thereby eliminating dependence on conventional intermediaries. A smart contract is also defined as a program or set of codes that operate based on agreed-upon rules and conditions established by stakeholders/agreed parties to operate a digital system mechanism (Indrajit, 2020). Blockchain can be defined as a technology that functions in the creation and management of decentralized databases, while also serving as a digital information storage system with a high level of security and transparency.

One of the central figures who made a significant contribution to the birth of this concept was Nick Szabo, a computer scientist, legal scholar, and cryptographer who introduced the idea of smart contracts in 1994. In his view, smart contracts are understood as computer protocols capable of formulating digital agreements and executing them automatically. Szabo projected that smart contracts have the potential to replace notaries and financial institutions by offering an automated mechanism for the execution, enforcement, and verification of contracts without the need for

intermediaries. Szabo's insights became the fundamental foundation for the development of blockchain technology and smart contracts.

The development of blockchain technology through the implementation of smart contracts has given rise to various new innovations in the digital asset sector, one of which is Non-Fungible Tokens (NFTs). NFTs represent unique digital assets, cannot be exchanged for equivalent amounts, and are permanently recorded on the blockchain network. The existence of NFTs is a significant milestone in the transformation of digital asset ownership, as they guarantee authenticity, scarcity, and ownership that is automatically verified through a smart contract mechanism. Therefore, NFTs are not merely viewed as technological instruments but also as economic and legal phenomena with significant implications for digital transactions and intellectual property protection.

NFTs (Non-Fungible Tokens) are blockchain-based digital assets that are unique, cannot be exchanged for equivalent amounts, and have a transparent ownership record within the network. NFTs are typically used to represent ownership of digital works such as images, videos, music, and other forms of digital content. The value of an NFT is determined by its rarity, uniqueness, and subjective factors such as the creator's reputation and market trends. According to Kompas.com, NFT is a unique cryptographic token that represents ownership of a digital asset, and each token has a different identification code and metadata, so it cannot be exchanged directly like other crypto assets such as Bitcoin or Ethereum (Kompas, 2022).

The NFT phenomenon began to gain public attention in Indonesia through the Ghozali Everyday case. Ghozali, a student from Semarang, has consistently taken daily selfies of himself in front of his computer since 2017. These photos were then uploaded to the NFT marketplace OpenSea under the title "Ghozali Everyday" and marketed using a smart contract mechanism. Initially, the price of each photo was set at around US\$3, but after going viral on social media, their value skyrocketed, reaching billions of rupiah (CNN Indonesia, 2022). Transactions in the sale of Ghozali's NFTs are automatically recorded on the blockchain, with payments made using the cryptocurrency Ethereum (Liputan6, 2022).

The Ghozali Everyday case not only demonstrates the enormous potential of the digital economy but also sparks various legal and social debates. Liputan6 highlighted that this phenomenon has sparked "misconceptions" among the public, who then attempt to sell various digital content, including sensitive content such as ID card photos, personal documents, and even pictures of their home cabinets, without understanding the legal or ethical consequences

(Liputan6, 2022). This demonstrates the public's low level of legal and technological literacy regarding NFTs and the risks they pose, such as privacy violations and potential cybercrime.

Thus, the Ghozali Everyday case serves as a concrete example of the application of smart contracts in NFT transactions in Indonesia. From a technological perspective, this transaction is valid as it meets the elements of an electronic contract stipulated in the ITE Law. However, from a regulatory perspective, the use of cryptocurrency as a means of payment raises legal issues because it violates Bank Indonesia regulations prohibiting the use of crypto assets as payment instruments. Therefore, this phenomenon is relevant as a case study in analyzing the legal issues surrounding the use of smart contracts in NFT transactions in Indonesia.

The application of smart contracts has now become widespread, particularly in digital transactions such as stock trading and the use of cryptocurrencies. Some stores abroad even offer crypto payments. Essentially, a smart contract can be defined as a form of contract written in electronic media. Referring to Article 1313 of the Civil Code, a contract or agreement is defined as a legal act that creates a binding relationship between one party and another.

Legal regulations regarding smart contracts and NFT transactions in Indonesia essentially refer to a number of interrelated statutory provisions. Law No. 11 of 2008 concerning Electronic Information and Transactions (ITE Law) serves as the primary legal basis recognizing the existence of electronic contracts. Article 5 paragraph (1) of the ITE Law affirms that electronic documents have legal force and are valid as evidence, while Article 6 states that electronic contracts are considered valid if they meet the requirements for a valid agreement as stipulated in the Civil Code. This provision opens up space for the validity of smart contracts as a form of electronic contract in Indonesia. However, in practice, NFT transactions using cryptocurrency face legal obstacles because they conflict with national payment system regulations. Law No. 7 of 2011 concerning Currency expressly stipulates that only the rupiah is recognized as legal tender in the territory of the Republic of Indonesia. This provision is reinforced by Bank Indonesia Regulation Number 18/40/PBI/2016 concerning the Prohibition of the Use of Virtual Currency as a Means of Payment and Bank Indonesia Regulation Number 23/6/PBI/2021, which reaffirms the prohibition on the use of cryptocurrency by payment system service providers. Furthermore, Law No. 12 of 2011 concerning the Establishment of Legislation, specifically Article 7 paragraph (1), establishes a hierarchy of laws and regulations in Indonesia, placing laws above Bank Indonesia regulations. This situation indicates a potential conflict of norms, where on the one hand, the ITE Law recognizes the validity of electronic



contracts, while on the other hand, Bank Indonesia regulations prohibit the use of cryptocurrency in transactions, including NFT transactions using smart contracts.

The Ghozali Everyday case clearly demonstrates the legal challenges in the practice of NFT transactions using smart contracts in Indonesia. In practice, many problems have resulted in consumer losses as a result of the use of the internet for online buying and selling (Agustanti et al., 2021).

From a civil law perspective, the transaction meets the elements of a valid agreement as stipulated in Article 1320 of the Civil Code and the electronic contract provisions in Law No. 11 of 2008 concerning Electronic Information and Transactions (ITE Law). Article 5 paragraph (1) of the ITE Law stipulates that electronic documents constitute valid legal evidence, while Article 6 stipulates that electronic contracts have the same legal force as conventional contracts if they meet the requirements for a valid agreement. Therefore, the smart contract used by Ghozali in the NFT sale can be considered valid and binding on the parties.

Legal issues arise regarding the payment instrument. The Ghozali Everyday NFT transaction was conducted using cryptocurrency, specifically Ethereum. This violates Law No. 7 of 2011 concerning Currency, which establishes the rupiah as the sole legal tender in Indonesia. This prohibition is emphasized in Bank Indonesia Regulation Number 18/40/PBI/2016 concerning the Prohibition of the Use of Virtual Currency as a Means of Payment, and is further strengthened by Bank Indonesia Regulation Number 23/6/PBI/2021, which expressly prohibits payment system service providers from using crypto assets as transaction instruments. Therefore, although smart contracts are valid as a form of electronic contract under the ITE Law, the use of cryptocurrency in such transactions could potentially be considered illegal under Bank Indonesia regulations.

This situation gives rise to what is known as a clash of norms. On the one hand, electronic contracts are recognized and legitimized by the Electronic Information and Transactions (ITE) Law, which holds a higher position in the hierarchy of laws and regulations than Bank Indonesia regulations. On the other hand, Bank Indonesia regulations remain operationally valid and binding, given that this institution has full authority to regulate payment systems in Indonesia. This conflict creates legal uncertainty for digital transaction actors, as the legal status of smart contracts does not align with the legal status of the payment instruments used.

There is also the issue of legal validity from the perspective of Gustav Radbruch's theory. Bank Indonesia's cryptocurrency ban can be seen as fulfilling the element of expediency because it protects the stability of the national financial system. However, this policy raises questions regarding legal certainty and fairness, particularly for digital creative entrepreneurs who utilize NFTs as a source of livelihood. In other words, the implementation of existing regulations has the potential to hinder innovation and the development of the digital economy, despite its initial aim of maintaining order and security in the financial system.

The legal issue in the Ghozali Everyday case lies not only in the recognition of electronic contracts, but also in the regulatory contradiction between the recognition of smart contracts in the ITE Law and the prohibition on cryptocurrency use in Bank Indonesia regulations. This conflict reflects the urgent need for regulatory harmonization to ensure a balance between legal certainty, justice, and benefit in digital transaction practices in Indonesia.

The legal issues in the Ghozali Everyday case can be analyzed more deeply using relevant legal theories, specifically Hans Kelsen's Theory of Norm Hierarchy and Gustav Radbruch's Theory of Legal Validity. These two theories are important because they can systematically explain the regulatory conflict that arises between the recognition of smart contracts in Law No. 11 of 2008 concerning Electronic Information and Transactions (ITE Law) and the prohibition on cryptocurrency use in Bank Indonesia Regulations.

According to Hans Kelsen, legal norms are structured hierarchically within a system called the *Stufenbau des Recht*, where lower norms must be derived from and must not conflict with higher norms. Based on Law No. 12 of 2011 concerning the Formation of Legislation, laws have a higher status than Bank Indonesia regulations. Therefore, the recognition of electronic contracts in the ITE Law should not be limited by Bank Indonesia regulations, which are hierarchically subordinate to laws. However, in practice, Bank Indonesia has constitutional authority to regulate payment systems in Indonesia, including banning the use of cryptocurrencies. This situation creates a normative paradox: in theory, the ITE Law holds a higher position in regulatory law, but in practice, Bank Indonesia's regulations are more dominant because they directly control the monetary system.

Gustav Radbruch's theory emphasizes that a legal norm can only be considered valid if it meets three main elements: legal certainty (*Rechtssicherheit*), justice (*Gerechtigkeit*), and utility (*Zweckmäßigkeit*). From a utility perspective, Bank Indonesia's ban on cryptocurrency can be understood as an effort to maintain the stability of the national financial



system and prevent speculative risks that could harm the public. However, from a legal certainty perspective, this situation creates confusion for the public due to the conflict between the ITE Law, which recognizes the validity of electronic contracts, and Bank Indonesia's regulations prohibiting the use of cryptocurrency in transactions. Furthermore, from a fairness perspective, this prohibition policy has the potential to harm digital economy actors, such as NFT creators, who rely on cryptocurrency as their primary means of conducting transactions.

Thus, analysis using Hans Kelsen's theory indicates a conflict of norms within the legal hierarchy, while analysis based on Gustav Radbruch's theory emphasizes a misalignment between legal certainty, justice, and utility in the regulation of smart contract-based transactions. Both theories lead to the conclusion that the Indonesian legal system still requires regulatory adjustments to accommodate the development of digital technology without sacrificing monetary stability and public protection.

Several researchers have conducted studies on smart contracts and cryptocurrency-based transactions in Indonesia, but their focus has been limited to the validity of contracts from a civil law perspective. One such study, conducted by Daffa Danendra (2023), concluded that smart contracts can be considered valid if they meet the requirements for a valid agreement as stipulated in Article 1320 of the Civil Code, even though their automatic nature does not explicitly create legal obligations for the parties. This research is important in explaining the legality of smart contracts from a formal perspective, but it has not yet addressed the problematic conflict of norms between the recognition of electronic contracts in the Electronic Information and Transactions Law (UU ITE) and the prohibition on the use of cryptocurrency as stipulated in Bank Indonesia regulations.

The Ghozali Everyday phenomenon concretely demonstrates a gap in Indonesian legal analysis. NFT transactions via smart contracts, in this case, are normatively valid under the Electronic Information and Transactions (ITE) Law, but simultaneously face legal obstacles because the use of cryptocurrency is prohibited by Bank Indonesia. This situation creates legal uncertainty, as digital economy actors are uncertain about whether such transactions are fully recognized by the Indonesian legal system or potentially violate payment system regulations.

The urgency of this research lies in the importance of harmonizing regulations to achieve a balance between legal certainty, justice, and utility. Without regulatory clarity, the development of blockchain-based digital technology could potentially be hampered, even though this innovation could create new

economic opportunities and increase Indonesia's competitiveness in the global digital economy. Therefore, this research is expected to contribute academically by presenting an in-depth normative analysis of the conflicting norms in regulating smart contracts and cryptocurrencies, as well as providing practical benefits in the form of recommendations for policymakers to formulate regulations that are more adaptive, consistent, and aligned with the needs of society in the digital era.

### **3.2 The Protection in Cryptocurrency Transactions in Indonesia**

Legal protection for cryptocurrency transactions in Indonesia is an issue that is receiving increasing attention, along with the growing public interest in blockchain-based digital assets. Cryptocurrency, or crypto assets, presents a form of financial innovation that offers a new investment alternative and opens up opportunities for faster and more efficient cross-border digital transactions. However, this development presents legal challenges because cryptocurrencies are not yet fully recognized as legal payment instruments in Indonesia. This creates complexities in providing legal protection to parties involved in transactions, including investors, consumers, and providers. This issue is further complicated by the fact that in practice, cryptocurrencies are used not only as investment commodities but also as a medium for digital transactions, such as Non-Fungible Token (NFT) trading involving smart contracts. Given these conditions, analysis of legal protection in cryptocurrency transactions needs to focus on the applicable regulatory framework, supervisory institutions, and consumer rights guaranteed by law.

Within the national legal framework, there are fundamental differences between the provisions regarding payment instruments and digital assets as commodities. Law No. 7 of 2011 concerning Currency stipulates in Article 21 that the rupiah is the sole legal tender within the territory of the Unitary State of the Republic of Indonesia. This provision means that all payment transactions in Indonesia must be conducted in the rupiah, and the use of foreign currencies or cryptocurrencies as a means of payment is prohibited. This also confirms that cryptocurrencies have no legal standing as currencies in the Indonesian financial system. Nevertheless, the government, through the Commodity Futures Trading Regulatory Agency (Bappebti), recognizes cryptocurrencies as commodities that can be traded on the futures market. This is stipulated in Bappebti Regulation Number 5 of 2019 concerning Technical Provisions for the Implementation of Physical Crypto Asset Markets, which was later updated by Bappebti Regulation Number 8 of 2021 concerning Guidelines for the Implementation of Physical Crypto Asset Markets on Futures Exchanges. This regulation emphasizes that crypto asset

trading can only be conducted through physical crypto asset traders officially registered with Bappebti. Thus, legal protection is provided to consumers through registration mechanisms, supervision, and organizers' compliance with specified security standards.

Furthermore, significant developments occurred with the enactment of Law No. 4 of 2023 concerning the Development and Strengthening of the Financial Sector (PPSK Law), which brought fundamental changes to the regulation of digital assets. Article 213 of the PPSK Law states that the authority to supervise technological innovation in the financial sector, including crypto assets, is transferred from Bappebti to the Financial Services Authority (OJK). This transfer of authority is crucial because the OJK has a broader mandate to oversee the financial services sector, including the obligation to provide comprehensive consumer protection. With this regulation, legal protection for cryptocurrency transactions is no longer viewed solely from the perspective of futures trading commodities, but also from the perspective of digital financial services. This means that every crypto asset service provider in Indonesia is not only required to obtain a license from Bappebti but must also comply with the principles of transparency, accountability, and consumer protection in accordance with OJK standards.

Legal protection in cryptocurrency transactions can be seen in the enactment of Law No. 8 of 1999 concerning Consumer Protection. This law provides fundamental rights for consumers, such as the right to comfort, security, and safety in consuming goods and services (Article 4), as well as the right to receive clear, honest, and non-misleading information. In the context of cryptocurrency transactions, this right means that every consumer has the right to transparent information regarding investment risks, potential losses, transaction costs, and the legal status of the provider. If the provider fails to fulfill these obligations, the consumer has the right to seek compensation as stipulated in Article 19 of the Consumer Protection Law. Thus, preventative and repressive legal protection is available through a combination of regulations in the futures trading, financial services, and consumer protection sectors.

Furthermore, Law No. 11 of 2008 concerning Electronic Information and Transactions (ITE Law), along with its amendments through Law No. 19 of 2016, also strengthens the legitimacy of cryptocurrency transactions. Article 5 of the ITE Law recognizes electronic documents and electronic contracts as valid legal evidence, while Article 11 states that electronic signatures have binding legal force. This provision is relevant in the context of the use of smart contracts in cryptocurrency-based NFT trading, as such digital agreements can

be considered valid as long as they do not conflict with statutory provisions. With this recognition, consumers conducting cryptocurrency transactions through electronic contracts receive formal legal protection for the agreements they enter into.

However, legal protection for cryptocurrency transactions in Indonesia still faces several challenges. First, the status of cryptocurrency, which is only recognized as a commodity and not as a means of payment, creates confusion among the public. Many lay people still treat cryptocurrency as a means of payment, even though this is expressly prohibited by the Currency Law. This situation creates potential legal losses if payment transactions are made using cryptocurrency, as such transactions are not legally recognized. Second, the extremely high price volatility of cryptocurrency poses significant speculative risks for consumers. Regulations can only guarantee the legality of the organizers and transaction mechanisms, but cannot guarantee the stability of asset values. Thus, legal protection for price risk remains very limited. Third, the cross-border nature of cryptocurrency transactions raises jurisdictional issues. If a dispute arises with a foreign party or if the platform provider is based abroad, Indonesian authorities will find law enforcement difficult due to limited national jurisdiction. This means that effective legal protection can only be applied to providers operating and licensed in Indonesia.

Despite these challenges, the transition of supervision from Bappebti to the Financial Services Authority (OJK), as stipulated in the PPSK Law, offers hope for strengthened legal protection in the future. As an institution with extensive experience in supervising the financial services sector, the OJK can apply the principles of information transparency, risk management, personal data protection, and consumer dispute resolution mechanisms more comprehensively. This aligns with Article 28 of Law No. 21 of 2011 concerning the Financial Services Authority, which stipulates that the OJK is obligated to protect the interests of consumers and the public. With this legal framework, legal protection for cryptocurrency transactions in Indonesia is projected to become stronger and more comprehensive, through both preventive regulations and effective dispute resolution mechanisms.

From the above description, it can be concluded that protection for cryptocurrency transactions in Indonesia is based on a combination of various legal instruments, namely the Currency Law, the Electronic Information and Transactions Law, the Consumer Protection Law, the PPSK Law, and Bappebti and OJK regulations. Available protection focuses more on the legality of the provider, the validity of electronic contracts, and consumers' rights to obtain honest information and compensation in the event of violations. However, this legal protection does not fully address the main challenges, such as the

prohibition of cryptocurrency as a means of payment, the risk of price volatility, and international jurisdictional issues. Therefore, it is understandable that current legal protection is more limited to the investment commodity aspect, not yet addressing the legitimacy of cryptocurrency as a means of payment in Indonesia.

#### **4. Conclusion**

The application of smart contracts to NFT transactions in Indonesia raises quite complex legal issues. From a civil law perspective, smart contracts meet the requirements for a valid agreement as stipulated in the Civil Code and the Electronic Information and Transactions Law (UU ITE), and therefore can be recognized as a valid and binding electronic contract. However, problems arise regarding payment instruments, as NFT transactions use cryptocurrency, which is prohibited as a means of payment under the Currency Law and Bank Indonesia regulations. This creates a conflict between the recognition of smart contracts in the ITE Law and the prohibition on the use of cryptocurrency in payment system regulations, creating legal uncertainty. Analysis based on the theory of Hans Kelsen and Gustav Radbruch confirms that this situation reflects a lack of synchronization between legal certainty, justice, and utility, and indicates the need for regulatory adjustments to ensure that digital economic development can align with national monetary stability. Furthermore, legal protection for cryptocurrency transactions in Indonesia remains limited and focuses more on the investment aspect, rather than its function as a means of payment. Existing regulations, such as the Currency Law, the ITE Law, the Consumer Protection Law, the CoFTRA (Bappebti) regulations, and the PPSK Law, which transfers supervision of crypto assets from Bappebti to the Financial Services Authority (OJK), have provided a legal basis for consumer protection and the legality of providers. However, this protection does not fully address the main challenges of prohibiting cryptocurrency as a means of payment, high price volatility, and cross-border jurisdictional issues. Therefore, although the existing legal framework already addresses transaction security and transparency, regulations in Indonesia still need to be strengthened to provide legal certainty, protect consumers, and at the same time encourage innovation in the digital economy.

#### **5. References**

##### **Books:**

Alexander Sugiharto, S. H., Muhammad Yusuf Musa, M. B. A., & Mochamad James Falahuddin, S. T. (2022). *NFT & Metaverse: Blockchain, Dunia*

*Virtual & Regulasi*. Indonesian Legal Study for Crypto Asset and Blockchain.

Sastrawidjaja, M. S. (2002). *Perjanjian Baku Dalam Aktivitas Dunia Maya, Cyberlaw: Suatu Pengantar*. Jakarta: Elips.

---

#### Journals:

- Agustanti, R. D., Dirkareshza, R., Taupiqqurrahman, T., Fatahaya, S., & Wardoyo, R. A. (2021). Peningkatan Pengetahuan Praktik Jual Beli Online Berdasarkan Undang-Undang Informasi Dan Transaksi Elektronik Pada Masa Pandemi COVID-19. *JMM (Jurnal Masyarakat Mandiri)*, 5(5), 2824-2837.
- Danendra, D. (2023). Keabsahan Perjanjian Jual Beli Crypto Aset Menggunakan Smart Contract. *Doctoral dissertation*, Universitas Islam Indonesia.
- Indrajit, R. E. (2020). Smart Contract: Fenomena, Peluang dan Tantangannya dalam Konsistensi Perkembangan Konvergensi Teknologi 4.0. *Materi Webinar Fakultas Hukum Atma Jaya Yogyakarta*, 2 Maret 2022.
- Lie, C., Clarosa, V., Yonatan, Y. A., & Hadiati, M. (2023). Pengenalan Hukum Kontrak dalam Hukum Perdata Indonesia. *Jurnal Kewarganegaraan*, 7(1), 918-924.
- Murizqy, M. A., & Dirkareshza, R. (2022). Peninjauan Aspek Keamanan Dan Perlindungan Hukum Terhadap Investor Cryptocurrency. *Jurnal Ius Constituendum*, 7(2), 277-292.
- Szabo, N. (1996). Smart contracts: Building blocks for digital markets. *Entropy: The Journal of Transhumanist Thought*, (16), 18(2), 28.
- Sulistianingsih, D., & Kinanti, A. K. (2022). Hak Karya Cipta Non-Fungible Token (NFT) Dalam Sudut Pandang Hukum Hak Kekayaan Intelektual. *Krtha Bhayangkara*, 16(1).
- Tumangkar, T. (2016). Keabsahan Kontrak dalam Transaksi Komersial Elektronik. *Jurnal Ilmiah Hukum dan Dinamika Masyarakat*, 10(1).
- 

#### Website:

- BBC. (n.d.). Foto Selfie Ghazali di OpenSea Laku Miliaran Rupiah dengan Mata Uang Kripto, Apa Itu NFT dan Mengapa Bernilai Mahal? BBC News Indonesia. <https://www.bbc.com/indonesia/majalah-59976296>
- CNN Indonesia. (2022). Kasus Ghazali Everyday. CNNIndonesia.com. <https://www.cnnindonesia.com/>
- Kompas. (2022). Apa Itu NFT? Kompas.com. <https://www.kompas.com/>
- Kompas. (2022). Mengenai Apa Itu NFT yang Baru-baru Ini Ramai Dibicarakan Publik. Kompas.com. <https://www.kompas.com/tren/read/2022/01/13/193000765/mengenal-apa-itu-nft-yang-baru-baru-ini-ramai-dibicarakan-publik?page=all>
-



Liputan6. (2022). Fenomena NFT Ghozali Everyday. Liputan6.com.  
<https://www.liputan6.com/>

**Regulation:**

Civil Code (BW).

Law Number 11 of 2008 concerning Electronic Information and Transactions.

Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Electronic Information and Transactions (ITE).

Law Number 7 of 2011 concerning Currency.

Law Number 12 of 2011 concerning the Establishment of Legislation.

Law Number 8 of 1999 concerning Consumer Protection.

Law Number 21 of 2011 concerning the Financial Services Authority.

Law Number 4 of 2023 concerning the Development and Strengthening of the Financial Sector (PPSK Law).

Bank Indonesia Regulation Number 18/40/PBI/2016 concerning the Prohibition of the Use of Virtual Currency as a Means of Payment.

Bank Indonesia Regulation Number 23/6/PBI/2021 concerning the Implementation of Payment System Infrastructure.

Bappebti Regulation Number 5 of 2019 concerning Technical Provisions for the Implementation of Physical Crypto Asset Markets.

Bappebti Regulation Number 8 of 2021 concerning Guidelines for the Implementation of Physical Crypto Asset Markets on Futures Exchanges.

---