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Legal Analysis of Ownership Rights to Intangible Movable Property (Digital Assets) From the Perspective of Property Law In Indonesia

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Abstract

The The rapid development of digital assets has posed fundamental challenges to Indonesia's property law system, which is still based on the colonial-era Civil Code (KUHPerdata). This legal system is inadequate to accommodate digital assets, resulting in legal vacuums and regulatory paradoxes. This study aims to analyze the status and regulation of digital asset ownership in Indonesia's property law system and the effectiveness of civil law protection for asset owners in ownership disputes. This research uses a normative approach by analyzing relevant legislation and legal doctrines. The results of the study show that there are legal loopholes and regulatory paradoxes in the regulation of digital asset ownership. The classification of digital assets as "intangible movable property" causes fatal incompatibilities in the process of transferring rights. Legal protection for digital asset owners is also illusory due to procedural paralysis. This study recommends a two-pronged reform, namely redefining the concept of "wealth" in the Draft Civil Code to include digital assets and drafting a lex specialis that regulates the procedural law of evidence and execution of digital assets. Thus, it is hoped that effective legal certainty can be created for digital asset owners in Indonesia.

INTRODUCTION

Technological developments have led to a shift in economic paradigms at both the national and international levels, from one that was fundamentally physical-industrial to one that is shifting towards a digital economy. Indonesia, as a country that supports technological development, has also experienced this paradigm shift, as evidenced by the increased adoption of financial technology and digital assets, such as crypto assets.[1] Data from the Commodity Futures Trading Regulatory Agency (Bappebti) shows an exponential increase in transaction volume and the number of crypto asset investors in recent years.[2]

The existence of technology adoption as described earlier in this case has given rise to other forms of technology in its development. In this case, technological developments have given rise to new forms of wealth (assets) that were not previously comprehensively regulated in traditional law. These assets include cryptocurrencies, Non-Fungible Tokens (NFTs), and even virtual land in the metaverse. The existence of these assets must be taken seriously, considering that they are not merely imaginary but have real, substantial economic value and can be traded globally.[3]

The existence of such assets as described above is certainly something new, and due to this novelty, it certainly carries various potential problems, including legal issues. When viewed from a legal perspective, particularly in terms of the civil law system in Indonesia, the existence of digital assets becomes problematic considering that property law, as codified in Book II of the Civil Code, is fundamentally formulated for agrarian and industrial societies. In this case, the codification is based on a fundamental distinction between tangible (lichamelijk) and intangible (onlichamelijk) objects, as well as movable (roerend) and immovable (onroerend) objects, which are certainly very different from the digital concept that is not bound by physical existence and materiality.[4]

The Civil Code, with all its paradigms, was not designed and is unable to accommodate the existence of assets that are purely digital in nature, whose ownership is decentralized (on the blockchain), and whose control (bezit) depends on unique

[1] Amory, Jeffriansyah Dwi Sahputra, and Muhtar Mudo. "Transformasi ekonomi digital dan evolusi pola konsumsi: Tinjauan literatur tentang perubahan perilaku belanja di era internet." *Jurnal Minfo Polgan* 14, no. 1 (2025): 28-37.
[2] Setiawan, Rizki Candra, Soesi Idayanti, and Muhammad Wildan. "Perkembangan Komoditi Digital dalam Asset Kripto di Indonesia." *Pancasakti Law Journal (PLJ)* 1, no. 2 (2023): 369-384.
[3] Tambun, Maria Arbina, and M. Ilham Putuhena. "Tata Kelola Pembentukan Regulasi Terkait Perdagangan Mata Uang Kripto (Cryptocurrency) sebagai Aset Kripto (Crypto Asset)." Mahadi: Indonesia Journal of Law 1, no. 1 (2022): 33-57.
[4] Kheista, Kendelif, Evellyn Abigael Rhemrev, and Michelle Christie. "Implementasi Hukum Benda (Zaak) dalam Perspektif Hukum Perdata Indonesia." *Jurnal Kewarganegaraan* 8, no. 1 (2024): 880-892.

cryptographic data called a private key. The Indonesian civil law system, which is rooted in the Burgerlijk Wetboek (Civil Code) inherited from the Dutch colonial era, is still oriented towards the concept of tangible assets. Therefore, when new forms of technology-based ownership such as digital assets emerged, positive law was not yet ready to provide a clear basis for the recognition, protection, or transfer of rights over them.

As a result, there is a significant legal vacuum. This vacuum not only creates uncertainty for digital economy players but also has the potential to hinder the development of innovation and blockchain-based transactions. In practice, digital assets such as cryptocurrency or non-fungible tokens (NFTs) often cannot be clearly classified as movable or immovable, tangible or intangible, as regulated in the Civil Code. Therefore, legal reform is imperative to adjust the concept of ownership and legal protection of digital assets in the context of a modern technology-based society.

In relation to this issue, the government can be said to be attempting to resolve the problem in order to respond to economic pressures and market needs. In this case, the government has taken ad hoc measures by recognizing the existence of crypto assets through sectoral regulations. Through the Coordinating Minister for Economic Affairs Letter No. S-302/M.EKON/09/2018[5] and a series of Bappebti Regulations (starting with Bappebti Regulation No. 5 of 2019), crypto assets are officially recognized as "Commodities" that can be legally traded on futures exchanges.[6] The existence of these measures actually demonstrates recognition of the economic value and investment potential of digital assets, as well as the government's efforts to control trading activities that previously operated without a clear legal framework.

Although the government has made efforts to address the issues described above, they have not been fully resolved because the government's approach is still partial, as it only places crypto assets in the perspective of futures trading, rather than as legal objects with full ownership, contractual, or civil dimensions. Thus, it can be explained that although the government's attention can be considered progress, in practice, the main problem, which is the need for a more comprehensive legal basis to regulate the existence, protection, and utilization of digital assets in the national legal system, has not yet been resolved.

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[5] Anam, Muhammad Abil, Imron Choeri, and Amrina Rosyada. "Dinamika Regulasi Pasca Undang-Undang Cryptocurrency 2023 Dan Dampaknya Pada Performa Pasar di Indonesia." *Jurnal Ilmu Hukum, Humaniora dan Politik (JIHHP)* 5, no. 1 (2024).

[6] Habiburrahman, Muhammad, Muhaimin Muhaimin, and Abdul Atsar. "Perlindungan hukum bagi pengguna transaksi cryptocurrency di indonesia." *Jurnal Education and development* 10, no. 2 (2022): 697-706.

The government's attention to implementing these partial regulations not only provides economic legitimacy but also creates a paradox in the regulatory sphere. In this case, crypto assets are now legal to trade (commercial law domain), but their ownership status (eigendom) in civil law (Book II of the Civil Code domain) remains ambiguous. The regulations currently available, such as the Bappebti Regulation, have not been able to cover this issue. Instead, the existing regulations only regulate the relationship between investors and traders (exchanges) and exchanges, but do not resolve the fundamental question of property rights over the assets themselves.

The existence of the above regulations can be said to have created a "false sense of security" among the public. Many parties feel protected by the existence of crypto asset trading regulations issued by the government, even though this protection is only administrative in nature and does not touch on more fundamental civil law aspects. As a result, the public invests massively in assets that they consider "legal," without realizing that the foundation of property rights (eigendom) over these digital assets is still very fragile and does not have a clear definition in the national legal system.

This ambiguity raises various issues when disputes arise, whether in contractual relationships with exchanges (crypto exchanges), cases of hacking and theft of digital assets, or in other private law contexts such as inheritance law and the distribution of assets. In practice, heirs often face extreme confusion and uncertainty when trying to identify, access, and transfer the digital assets of the deceased stored in a closed blockchain system.

Based on the various issues described above, the researcher intends to address these issues in this study by raising them in the title "Legal Analysis of Ownership Rights over Intangible Movable Objects from the Perspective of Property Law in Indonesia" so that later it can be comprehensively analyzed regarding the legal vacuum that occurs in order to explain the status of digital asset ownership within the existing property law framework, as well as to evaluate the effectiveness of civil law instruments in providing protection of rights when disputes arise.

Based on the background described above, this study will focus on the following two issues How are intangible movable assets, such as digital rights or crypto assets, regulated in Indonesia's property law system? And How are digital asset owners protected in the event of ownership disputes according to the principles of civil law? The purpose of this research is to conduct an in-depth analysis of ownership rights over digital assets from the perspective of property law in Indonesia, identify legal issues that arise, and formulate legal policy recommendations to improve the existing legal framework related to digital asset ownership.

METHOD

Conducting research requires methods to assist researchers in analyzing the issues discussed. In this study, the research method used is normative juridical research conducted through descriptive-analytical research. This research method was chosen because this study aims to explain the results of the analysis that has been carried out. In its implementation, this research also uses the following approaches:

a. Statute Approach: Critically analyzing relevant legal norms[7], particularly Book II of the Civil Code on Property Law, Law No. 1 of 2024 concerning the Second Amendment to Law No. 11 of 2008 concerning Electronic Information and Transactions (ITE Law), as well as the sectoral regulatory framework issued by Bappebti, particularly Bappebti Regulation No. 5 of 2019 and various regulations relevant to the issues to be discussed.
b. Conceptual Approach: this approach is used to assist in reviewing and elaborating various concepts and doctrines that are relevant to property law, such as zaak (property), eigendom (property rights), bezit (possession), and levering (transfer), and in this case also includes concepts and doctrines of contract law that are relevant to the issues to be discussed, such as onrechtmatige daad (unlawful acts), to test their relevance and applicability to the phenomenon of digital assets.

The implementation of this research also uses legal materials, which in this case consist of primary legal materials (laws and regulations), secondary legal materials (legal journals, textbooks, research results, scientific articles), and tertiary legal materials. Once all relevant data and legal materials have been collected, a qualitative analysis will be conducted to draw logical and systematic conclusions in order to answer the research questions.

RESULT AND DISCUSSION

1. Status and Ownership Arrangements of Digital Objects in the Indonesian Property Law System

As explained in the background of the issue, there is a legal vacuum regarding the existence of digital objects. This vacuum can be explained as resulting from the incompatibility of legal mechanisms and regulatory paradoxes that have not yet been comprehensively regulated. In this regard, what needs to be done in order to address the existing problems is to test digital assets as "objects" (zaak) according to the definition of

[7] Arlinandes, M. Jeffri, Chandra Febrian, and Bayu Dwi Anggono. "Rekonstruksi Tahapan Pembentukan Perundang-Undangan: Urgensi Re-Harmonisasi Dan Evaluasi Sebagai Siklus Pembentukan Undang-Undang Yang Berkualitas." *Jurnal Legislasi Indonesia* 19 (2022): 549-550.

civil law. Referring to the provisions of Article 499 of the Civil Code, objects can be defined as "every item and every right that can be controlled by ownership rights"[8] and to be classified as a zaak, an entity must fulfill two main elements: (1) controllability (beheersbaarheid), and (2) economic value or the ability to be the object of property rights.

When linked to the criteria for objects as defined in the Civil Code, digital objects, including crypto sets, Non-Fungible Tokens (NFTs), and virtual land, substantively meet the qualifications for zaak in the perspective of property law, which can be based on two aspects that can be explained as follows:

a. Controllability: Even though they have no physical form, digital assets can be exclusively controlled by their owners. This control is realized through ownership and control of unique cryptographic data, namely the private key. Ownership of the private key gives the holder the sole right and ability to access, manage, and transfer the assets in question. Thus, the private key is a modern representation of the concept of bezit in the context of ownership in the digital age.
b. Economic value and as an object of property rights, it is undeniable that digital assets have real and significant economic value. These assets are traded globally without time restrictions (24/7 market) and can be transferred from one party to another. With these characteristics, digital assets not only fulfill the elements of objects in an economic sense, but can also be viewed as objects of property rights in modern civil law construction.

Once digital assets fulfill the elements of a zaak in the perspective of property law, the next step is to determine their classification in the system of classification of objects according to the Civil Code (KUHPerdata). This classification is important because it determines the applicable legal regime, including aspects of ownership, transfer of rights, and legal protection of these assets. Thus, the grouping of digital assets into specific categories of objects is not only conceptual in nature, but also has significant legal implications in modern civil law practice.

In terms of form, Articles 503 and 504 of the Civil Code distinguish between tangible (lichamelijk) and intangible (onlichamelijk) objects. Digital assets, such as crypto assets, NFTs, and virtual land, do not have a physical existence that can be perceived by the five senses. However, their existence can still be identified and controlled through technological means in the form of cryptographic systems. Based on this, digital assets are most appropriately classified as intangible objects (onlichamelijk), in line with other

[8] Febrianto, Surizki, Askarial Askarial, and Teguh Rama Prasja. "Sosialisasi Perlindungan Hukum Hak Kebendaan Bagi Masyarakat Desa Sei. Rambai, Kecamatan Kampar Kiri Kabupaten Kampar Provinsi Riau." *ARSY: Jurnal Aplikasi Riset kepada Masyarakat* 3, no. 2 (2023): 284-287.

categories of intangible rights such as receivables (schuldvordering) or intellectual property rights (HKI).[9]

Meanwhile, in terms of transferability, Article 509 of the Civil Code defines movable property as property that, by its nature, can be moved or transferred. Digital assets, which can be transferred instantly across jurisdictions via the internet, functionally meet these criteria. On the other hand, digital assets do not meet the characteristics of immovable property (onroerend), which in the Civil Code is limited to land and everything permanently attached to it. Thus, it can be concluded that digital assets fall under the category of intangible movable property (onlichamelijk roerend goed), a new form of legal object that reflects developments in information technology and the digital economy. Although in this case the doctrinal status of digital objects can be explained, in practice there is still a legal paradox.

A legal paradox arises when the state begins to intervene in the existence of digital assets through sectoral regulatory instruments. Instead of updating the property law regime in the Civil Code, the government has taken the administrative route through the futures trading supervisory agency, namely the Commodity Futures Trading Supervisory Agency (Bappebti). This approach shows that the state views crypto assets not as objects of property rights subject to civil law, but as economic instruments that need to be regulated within the framework of trade law.

Through a series of regulations, particularly Bappebti Regulation No. 5 of 2019, crypto assets are defined as "intangible commodities in the form of digital assets" that can be traded on futures exchanges.[10] These provisions were then reinforced by follow-up regulations such as Bappebti Regulation Number 11 of 2022 concerning the List of Traded Crypto Assets and Bappebti Regulation Number 1 of 2023.[11] The series of regulations basically focuses on three main things: first, establishing the legality of trading certain crypto assets; second, regulating and supervising the business activities of Physical Crypto Asset Traders (crypto exchanges); and third, providing protection for consumers in crypto asset transactions in the realm of futures trading.

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[9] Dragono, Thomas, Wiwik Sri Widiarty, and Bernard Nainggolan. "Perlindungan Aset Digital Dalam Dunia Metaverse Berdasarkan Hukum Nasional." *Jurnal Kewarganegaraan* 7, no. 1 (2023): 742-750.

[10] Hakim, Lukmanul, and Angga Bela Dinata. "Penggunaan Cryptocurrency Untuk Kepentingan Investasi Berdasarkan Peraturan Bappebti Nomor 5 Tahun 2019 Tentang Ketentuan Teknis Penyelenggaraan Pasar Fisik Aset Kripto (Crypto Asset) di Bursa Berjangka." *Journal of Health Education Law Information and Humanities* 2, no. 1 (2025): 541-554.

[11] Tambun, Maria Arbina, and M. Ilham Putuhena. "Tata Kelola Pembentukan Regulasi Terkait Perdagangan Mata Uang Kripto (Cryptocurrency) sebagai Aset Kripto (Crypto Asset)." *Mahadi: Indonesia Journal of Law* 1, no. 1 (2022): 33-57.

It is these actions taken by the government that, in the author's opinion, constitute the legal paradox. The use of the term "commodity" is terminology that originates from commercial law, not civil law. Thus, Bappebti's recognition of crypto assets as digital commodities does not necessarily have legal consequences in the form of recognition of property rights (eigendom) to their owners as regulated in Book II of the Civil Code. The regulation only governs transactional aspects arising from contractual relationships (Book III of the Civil Code), while the dimensions of ownership and protection of property rights remain untouched.

This situation ultimately gives rise to problematic legal dualism. An investor can legally purchase and trade crypto assets through a state-recognized platform, but from a civil law perspective, the ownership status of these assets still lacks a clear basis. This discrepancy creates legal uncertainty, where the legality of transactions is recognized administratively, but the property rights attached to the transaction objects are not explicitly recognized by the national legal system.

This legal inconsistency or ambiguity regarding digital objects, or in this case crypto assets, in relation to property law in the Civil Code is also evident in the acquisition and transfer of ownership rights. In civil law doctrine, ownership (eigendom) is the highest and absolute property right, while possession (bezit) is the factual manifestation of that right. In the context of digital assets, the concept of eigendom is represented through control over the private key as the main control tool. Article 1977 of the Civil Code affirms an important principle for movable objects: "bezit geldt als volkomen titel" (possession is considered a perfect title).[12] Theoretically, this principle seems ideal because whoever controls the private key owns the digital asset. However, this article requires good faith (te goeder trouw), which becomes a source of problems in cases of theft or hacking. In such situations, the hacker becomes the bezitter (holder of power), but with bad faith. Meanwhile, the original owner who has lost control of the private key is forced to prove their eigendom rights, a very complex burden of proof in court.

Not only related to acquisition and transfer of ownership rights, issues related to digital objects in this case can also be seen from the mechanism of transfer of rights (levering) as regulated in the Civil Code. When examined from a legal perspective, it can be explained that the transfer of ownership rights is only valid if it meets two conditions, namely the existence of a valid legal basis (title) such as sale and purchase, and the existence of a transfer (levering). Untuk benda bergerak berwujud, penyerahan

[12] Sembiring, Maria Selviana Br, and Muhammad Ilham. "Akibat hukum terhadap pembatalan risalah lelang eksekusi hak tanggungan: Studi Putusan Mahkamah Agung Nomor: 2868 K/Pdt/2018." *Indonesia of Journal Business Law* 2, no. 2 (2023).

dilakukan secara nyata (*feitelijke levering*). However, for intangible movable objects, the category that most closely approximates the characteristics of digital assets in the Civil Code through Article 613 paragraph (1) requires delivery to be carried out through a cessie mechanism, namely by means of an authentic deed or a private deed, as well as notification to the debtor.

Based on this explanation, it can be seen that there is an incompatibility between positive law and the reality of blockchain technology. Crypto asset transactions are peer-to-peer, do not involve notarial deeds, do not have a debtor, and do not require notification to any entity. The transfer of rights occurs through cryptographic consensus in a decentralized network, not through written legal formalities. From a formal legal perspective, if Article 613 of the Civil Code is applied literally, then all crypto asset transactions in Indonesia without a deed of assignment can be categorized as invalid in terms of delivery. As a result, the transfer of ownership rights to crypto assets is never considered to have occurred legally. The existence of this issue is, in fact, a major problem for the digital asset ownership system in Indonesia. On the one hand, Bappebti regulations have regulated and legalized crypto asset trading within the realm of contract law (Book III of the Civil Code); however, on the other hand, Book II of the Civil Code, specifically Article 613, inadvertently delegitimizes ownership.

Based on the explanation above, it can be concluded that currently, the existence of digital objects/assets still lacks legal certainty under civil law, particularly in terms of property law. This occurs because the Civil Code, as the legal instrument that addresses property law, is still unable to cover the existence of digital assets. In light of this, what the government must do in this case is to update the fundamental rules of property law as a whole, rather than making improvements by only utilizing sectoral regulations.

2. Legal Protection and Dispute Resolution for Digital Property Ownership

As previously explained, it can be said that the regulation of digital objects in property law is still ambiguous. This ambiguity itself can occur due to the existence of ambiguities and paradoxes regarding the status of digital objects in property law itself. Although there is no legal certainty in this matter, legal protection is still needed. Since there are no specific rules that can be used by the panel of judges in this case, it can be explained that legal protection can be provided if the panel of judges is able to make a legal finding (rechtsvinding) and recognize eigendom over digital assets. In this case, if legal discovery is carried out, theoretically legal protection will arise based on the following principles of property law:

a. Absolute Rights and Droit de Suite: Property rights are absolute rights that give the owner full power to defend them against anyone who interferes with them. In

property law, this right is not only exclusive, but also has universal binding force. The principle of droit de suite (zaaksgevolg) is inherent in property rights, which means that these rights will always follow the property wherever it changes hands. Thus, the owner retains the right to reclaim ownership even if the property is in the hands of a third party.

This principle forms the legal basis for revindication (a claim for the return of property), whereby the rightful owner can claim the return of property that has been unlawfully transferred, including in the context of stolen or unauthorized digital assets. In practice, the application of this principle emphasizes that ownership rights are not lost simply because of a transfer of control, as long as the owner can prove the legitimacy of their rights to the object.

b. Protection of Bezitter Beritikad Baik: On the other hand, civil law also provides protection for parties who control an object in good faith (bezitter te goeder trouw), as confirmed in Articles 1963 and 1977 of the Civil Code.[13] This provision stems from the principles of fairness and legal certainty in civil traffic, which recognize that not all possession of property occurs with malicious intent or against the law. A bezitter who acquires property through means that appear lawful and without knowledge of any defects in the transfer of rights may obtain certain legal protection against claims by the original owner.

However, this protection often creates complexity in judicial practice, especially when there is a conflict between the rights of the legitimate owner and the rights of third parties acting in good faith in transactions on the secondary market. In such situations, the court must balance the principle of protecting legitimate ownership with legal certainty for parties acting in good faith, so that substantive justice is maintained amid the dynamics of modern transactions, including in the context of digital assets whose origins are difficult to trace.

In addition to what has been explained above, in this case there is also a legal protection measure, which in this case is the opportunity or chance for those who feel aggrieved to file a lawsuit, whether it be a lawsuit for breach of contract or a lawsuit for unlawful acts. The two types of lawsuits can be explained as follows:

a. Breach of contract lawsuit

A breach of contract lawsuit is a lawsuit based on the provisions of Article 1243 in conjunction with Article 1320 of the Civil Code, which can be used when a dispute arises

[13] Gozali, Djoni S., and Noor Hafidah. "Dasar-Dasar Hukum Kebendaan: Hak Kebendaan Memberi Kenikmatan & Jaminan." (2022).

between a user (investor) and a party with whom they have a contractual relationship, namely a trading platform (Physical Crypto Asset Trader). This relationship arises as a result of the existence of an agreement (electronic contract) when the user registers, which is subject to the validity requirements of the agreement (Article 1320). Relevant case examples include: the exchange unilaterally freezing a user's account, a system failure (glitch) on the exchange causing financial losses, or the exchange suddenly delisting coins without a fair and transparent procedure, as alleged in the Vidy/Vidyx case. In the case of a breach of contract lawsuit itself, the main claim is compensation, interest, and costs incurred as a result of the exchange's breach of contract.

b. Lawsuit for Unlawful Acts (PMH)

A lawsuit for unlawful acts (PMH) based on Article 1365 of the Civil Code is the main legal means used in resolving ownership disputes against third parties who have no contractual relationship with the rights holder.[14] In the context of digital assets, PMH is often filed to hold parties accountable for harmful actions without a valid legal basis. The most common cases include digital wallet hacking, fraud or scams, fund diversion by developers (rug pull), private key theft through phishing, and market manipulation by large capital owners (whales).

In order for a PMH lawsuit to be granted, the plaintiff must be able to prove that all elements are cumulatively fulfilled. The first element is the existence of an unlawful act, which is evident, for example, in hacking that clearly violates a person's ownership rights (eigendom) over their digital assets. The second element is fault (schuld), which can take the form of intent (opzet), as in the case of hackers, or negligence (culpa) on the part of others, such as digital wallet providers who fail to maintain their security systems. The next element is damage (schade), which must be real and economically quantifiable, such as the loss of digital assets with a specific market value.

In addition, it must also be proven that there is a causal link (causal verband), namely a direct connection between the unlawful act and the loss incurred. For example, hacking directly causes the loss of the plaintiff's assets. The final element is relativity (relativiteit), which requires that the legal norm that has been violated is indeed intended to protect the interests of the injured party, namely the owner of the digital assets. If these five elements can be proven convincingly, then the perpetrator can be held legally responsible for the losses arising from their actions.

[14] Malau, Masnida, Yuniar Rahmatiar, and Muhamad Abas. "Perbuatan melawan hukum atas penyerobotan tanah milik orang lain dihubungkan dengan pasal 1365 KUH Perdata." *Binamulia Hukum* 12, no. 2 (2023): 299-307.

In the author's opinion, the existence of legal instruments in the form of breach of contract and unlawful acts cannot be said to provide maximum legal protection. This is because even though there are instruments for filing a lawsuit, in practice, both the evidence stage and the execution stage are very difficult to carry out. In terms of evidence, digital transactions, which in this case are always recorded in an immutable blockchain, are indeed perfect evidence. However, in practice, this is not the case because:

a. Pseudonymous Nature: Blockchain is pseudonymous. What is recorded is the wallet address (a series of alphanumeric codes), not the identity card of the perpetrator. So, in this case, it will be difficult to identify and prove the identity of the defendant.
b. Proof of Private Key Ownership: In the event of theft, a new problem arises regarding how to prove ownership of the private key.
c. Legal Competence: The biggest challenge is the knowledge gap. Many judges, prosecutors, and lawyers do not have sufficient technical training to understand how blockchain works and to validate digital forensic evidence.

A crucial issue that often arises in digital asset disputes is the problem of enforcement (executory seizure/attachment), which is a fundamental obstacle to the implementation of court decisions. This stage is often a weak point in Indonesia's positive legal system when dealing with assets based on decentralized technology. For example, a plaintiff has gone through the entire evidentiary process and successfully obtained a final and binding court decision (inkracht van gewijsde), ordering the defendant to return a number of crypto assets, such as 10 Bitcoin. However, when the process continues to the execution stage, the conventional legal system regulated in the HIR/RBg shows its limitations. This mechanism is based on the assumption that the object to be executed has a physical form that can be seized by a bailiff, or is in the possession of a third party such as a bank or the National Land Agency, which can be ordered to block or transfer rights to the asset.

The limitations of the execution system become apparent when the subject matter of the case is crypto assets stored in a non-custodial wallet. In such circumstances, there is no physical form that can be seized, and the bailiff has no ability to physically "take" the Bitcoin. The decentralized nature of crypto assets also means that there is no single authority, such as a central bank or asset registration agency, that can be ordered by the court to carry out enforcement. In addition, the cryptographic system that protects crypto assets through private keys makes it impossible for authorities to access or transfer assets without the consent of the key holder. Its borderless nature adds to the complexity, as these assets can be accessed from any jurisdiction, thus transcending the limits of national courts' executory power. As a result, court decisions that should be enforceable become

non-executable, and law enforcement agencies lose their coercive power over these assets. The only exception is when digital assets are stored in custodial wallets belonging to exchanges that are registered and supervised in Indonesia, such as Indodax or Tokocrypto, where the court still has the authority to order these third parties to freeze or surrender the assets in accordance with the verdict.

CONCLUSION

The regulation of ownership of intangible movable objects such as digital assets in Indonesia currently faces a legal vacuum and fundamental conflicts of norms. The existing legal system is inadequate to accommodate digital assets, requiring comprehensive legal reform in both material and procedural aspects. Substantive reform can be achieved by redefining the concept of property and recognizing digital assets as a new category, as well as regulating appropriate mechanisms for the transfer of rights. Meanwhile, procedural reform can be carried out by establishing specific procedural laws for digital assets, including forensic evidence standards and procedures for the seizure of digital assets. Increased technical capacity for law enforcement officials is also necessary for effective implementation. Thus, it is hoped that this legal reform can provide effective legal certainty and protect the rights of digital asset owners in Indonesia, as well as increase awareness and understanding of the importance of regulating digital assets in today's digital era.

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