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Conceptualization of Crypto Asset As A Collateral Object In Indonesian Positive Law

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ABSTRACT

The development of digital technology has given rise to crypto assets as a new form of digital wealth with economic value and can be legally traded in Indonesia, based on Bappebti regulations. However, their legal status as fiduciary collateral remains controversial because Indonesian property law does not fully accommodate intangible assets such as crypto assets. This study aims to analyze the feasibility of crypto assets as fiduciary collateral from the perspective of Indonesian positive law, using normative juridical research methods through legislative and conceptual approaches. The results show that functionally, crypto assets fulfill the characteristics of objects in collateral law, as they have economic value, can be legally transferred, and can be used as a basis for debt repayment. However, the lack of a mechanism for registration, assessment, and execution of digital collateral creates legal uncertainty in financing practices. Comparisons with other countries such as Switzerland, the United States, and Singapore indicate that the successful recognition of crypto assets as collateral depends heavily on a clear legal framework governing ownership protection and oversight mechanisms. In the Indonesian context, Law Number 4 of 2023 concerning the Development and Strengthening of the Financial Sector (P2SK) provides an opportunity for reform by expanding the authority of the Financial Services Authority (OJK) in regulating digital financial assets. Therefore, harmonization of the Civil Code, the Fiduciary Guarantee Law, the P2SK Law, and Bappebti regulations is necessary to ensure that crypto assets can be legally and effectively accommodated as collateral. With appropriate regulations, national law will be able to adapt to digital innovation without sacrificing the principles of legal certainty, justice, and expediency.

Keywords: Crypto Assets, Collateral Objects, Fiduciary, Legal Certainty.

1. INTRODUCTION

The development of digital technology has given rise to various innovations in the financial and wealth systems, one of which is crypto assets. These digital assets represent value stored in a blockchain system and have been legally recognized in Indonesia as digital commodities through Bappebti Regulation No. 8 of 2021 and Bappebti Regulation No. 11 of 2022. Both regulations allow crypto assets to be legally traded on the physical crypto asset market through futures exchanges. (Marzuki, 2017)

Several countries have taken progressive steps by formulating and implementing regulations that explicitly recognize and regulate the use of crypto assets as collateral. The United States, through the Uniform Commercial Code (UCC), specifically Article 9, has opened legal space for the use of digital assets as collateral in financing transactions. Japan, under the regulations of the Financial Services Agency (FSA), recognizes crypto as property with economic

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value and can be used as collateral under strict supervision. Switzerland, through its digital property-based legal approach, has even allowed banks like SEBA and Sygnum to legally provide loans secured by crypto. Meanwhile, Singapore regulates crypto through the Payment Services Act 2019 and permits crypto-backed lending practices under the supervision of the Monetary Authority of Singapore (MAS). In other European regions, such as Liechtenstein and Estonia, national laws have established crypto assets as legal digital property to be used as collateral, even with legal support for tokenization and smart contracts in digital fiduciary transactions. However, the legal status of crypto assets as collateral in the financing system still lacks clear legal certainty in Indonesian legislation. (Kusumaatmadja, 2002)

One relevant case study that aligns with Indonesia's civil law system is Sygnum Bank in Switzerland's crypto asset guarantee practice. Sygnum is the world's first digital bank fully supervised by the Financial Market Supervisory Authority (FINMA). Since 2019, Sygnum has provided crypto asset-based lending services to both institutional and individual clients. In practice, customers can pledge crypto assets such as Bitcoin (BTC) or Ethereum (ETH) to obtain loans in fiat currencies like Swiss Francs or Euros. The pledged assets are stored in the bank's custodial wallet and secured by a robust digital security system. In 2025, Sygnum plans to expand its collateral offerings by accepting staked crypto assets like Solana (SOL) as collateral, while still providing staking returns to holders. (Rahardjo, 2014)

The success of this practice is inseparable from the support of Switzerland's robust and progressive legal framework. Through the Distributed Ledger Technology (DLT) Framework, which came into effect in 2021, Switzerland revised several key regulations, such as the Swiss Code of Obligations and the Federal Intermediated Securities Act. This revision allows for legal recognition of asset tokenization and the use of crypto assets as legitimate digital property. Thus, crypto assets are recognized as transferable property rights, possessing economic value, and can be used in contractual agreements, including as collateral for financing. Furthermore, FINMA plays an active role in overseeing the operations of banks like Sygnum, ensuring that crypto-backed lending activities adhere to prudential principles, risk management, compliance with anti-money laundering regulations, and consumer protection. (Dworkin, 1986)

This Swiss practice demonstrates that with clear and integrated regulations, digital-based financial innovation can develop safely and legally within a civil law-based legal system. Therefore, the Sygnum Bank case serves as an important reference for Indonesia in formulating specific regulations that can accommodate crypto assets as legitimate collateral, while also providing legal certainty for industry players, financial institutions, and deed-making officials,

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such as notaries, involved in the legalization of collateral agreements. This raises a fundamental question for the author: can crypto assets be used as legitimate collateral in Indonesia, like other movable objects? (Posner, 1990)

From the perspective of collateral law in Indonesia, collateral objects are strictly and specifically regulated through various regulations, such as the Civil Code (KUHPerdata), Law No. 4 of 1996 concerning Mortgage Rights, Law No. 42 of 1999 concerning Fiduciary Guarantees, and Law No. 17 of 2008 concerning Shipping for ship mortgages. All of these regulations stipulate that collateral objects must be assessable, transferable, and have economic value. Crypto assets, although not in physical form, have value and can be transferred electronically, and fulfill the elements of a commodity as stipulated in Law No. 32 of 1997 concerning Commodity Futures Trading (jo. Law No. 10 of 2011). However, because crypto assets are not tangible objects as recognized in Article 503 of the Civil Code, the approach requires new legal interpretations and the possibility of conceptualizing the types of objects in collateral law. (Lessig, 1999)

The comparison between crypto assets and conventional collateral requires in-depth examination. For example, in fiduciary collateral, the collateralized object is a tangible or intangible movable object, and it can be registered electronically under Minister of Law and Human Rights Regulation No. 10 of 2013. This opens up the possibility that crypto assets, as intangible objects with economic value and transferability, could potentially qualify as fiduciary collateral. However, to date, there is no official collateral registration mechanism for crypto assets in Indonesia. This poses challenges in ensuring legal certainty, particularly for financial institutions wishing to accept crypto assets as collateral for lending. (De Filippi & Wright, 2018)

In this context, the role of notaries is crucial for further study. Under Law No. 2 of 2014 concerning the Position of Notaries (UUJN), notaries are authorized to draft authentic deeds as evidence in guarantee agreements. In carrying out their duties, notaries are also responsible for ensuring that the contents of the agreement do not conflict with the law and consumer protection principles as stipulated in Law No. 8 of 1999 concerning Consumer Protection. Therefore, in the absence of explicit regulations governing crypto assets as collateral, notaries face a dilemma when asked to draft guarantee deeds involving crypto assets. (Arikunto, 2011)

2. RESEARCH METHODS

The research method used is Normative Juridical Research (Legal Research). The approach used in this study is carried out using a qualitative descriptive approach based on legislation with an analytical approach, a legislative approach, and a conceptual approach. The

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types and sources of legal materials are Primary Legal Materials, Secondary Legal Materials, and Tertiary Legal Materials. In collecting legal materials in this study, it is done by means of a library study. The researcher will conduct an assessment of various problems relevant to this research by using legal sources in this research. By using qualitative descriptive analysis, namely presenting the data and information, then analyzing it using several conclusions as findings from the research results. (Moleong, 2004)

3. RESULTS AND DISCUSSION

Characteristics of Crypto Assets From The Perspective of Indonesian Positive Law

1) Definition and Legal Status of Crypto Assets in Indonesia

The development of global financial technology has given rise to a new form of digital asset known as crypto assets. Generally, crypto assets can be defined as digital representations of value that can be traded, transferred, and used as investment instruments using cryptographic technology and blockchain-based networks. The value of crypto assets is not determined by formal financial institutions, but rather by market mechanisms and the trust of their users. This characteristic distinguishes crypto assets from electronic money or central bank digital currencies, as they lack an issuing authority that guarantees their value. (Miles & Huberman, 1994)

In the context of Indonesian law, regulations regarding crypto assets were first accommodated through the authority of the Commodity Futures Trading Regulatory Agency (Bappebti). Based on Bappebti Regulation Number 5 of 2019 concerning Technical Provisions for the Implementation of Physical Crypto Asset Markets on Futures Exchanges, crypto assets are classified as digital commodities that can be traded on futures markets, not as legal tender. This assertion is reinforced by Minister of Trade Regulation Number 99 of 2018, which states that crypto assets are included in the category of commodities that can be subject to futures contracts on Indonesian futures exchanges. Thus, from a positive legal perspective, crypto assets currently function as investment commodities in Indonesia, not as a means of exchange. (Harsono, 2008)

This legal status is also affirmed through policies of Bank Indonesia (BI) and the Financial Services Authority (OJK). BI, through Bank Indonesia Regulation No. 17/3/PBI/2015 concerning the Obligation to Use the Rupiah in the Territory of the Unitary State of the Republic of Indonesia (NKRI), asserts that the Rupiah is the only legal tender in Indonesia, therefore, crypto assets cannot be used as a means of payment. Meanwhile, the OJK maintains a supervisory position regarding investment-related activities and consumer protection in the digital financial sector, but does not designate crypto assets as financial products under its supervision. This inter-institutional policy

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synergy places crypto assets clearly within the realm of digital commodity trading, rather than monetary or banking. (Sumardjono, 2008)

However, the classification of crypto assets as commodities still raises a number of legal issues, particularly regarding the object of property under the Indonesian civil law system. The Indonesian Civil Code does not explicitly regulate digital objects or intangible assets, while the concept of "object" in Article 499 of the Civil Code still focuses on material form. Consequently, debate has arisen over whether crypto assets can be considered "objects" with economic value and subject to property rights. This debate is important because it concerns legal implications regarding ownership, legal protection, and the possibility of being used as collateral in contracts. (Harahap, 2012)

Thus, based on Indonesia's positive legal framework, crypto assets currently have a legitimate status as digital commodities recognized and regulated by the state, but they have not yet been fully integrated into the classical property law regime as stipulated in the Civil Code. This sectoral legal position indicates that the regulation of crypto assets in Indonesia is in a transitional stage—between the conventional legal system based on tangible objects and modern legal requirements that require recognition of digital assets. Therefore, further analysis of the characteristics and legal implications of crypto assets is necessary to understand their potential status as objects of fiduciary guarantee in the future. (Soekanto & Mamudji, 2001)

***2) Crypto Assets*in the Perspective of Islamic Law and Civil Law**

From an Islamic legal perspective, the discussion of crypto assets begins with the fundamental question of their status as māl (property). In Islamic jurisprudence, an object can be categorized as māl if it has economic value, can be owned (mil), and provides lawful benefits to its owner. Based on these criteria, many contemporary scholars argue that crypto assets can be considered property as long as they meet these three elements—namely, they have value, can be exchanged, and do not conflict with sharia principles. However, differing views arise when discussing the stability of the value and function of crypto assets as a medium of exchange, as high price fluctuations and the lack of issuing authority are often considered to contain elements of gharar (uncertainty).

Several Islamic fatwa institutions have offered their views on this matter. For example, the Majma' al-Fiqh al-Islami and Dar al-Ifta' (Islamic Fiqh Council) in Egypt consider cryptocurrencies to be highly speculative, necessitating caution in their use. Meanwhile, in Indonesia, the Indonesian Ulema Council (MUI), through Fatwa No. 140/DSN-MUI/VIII/2021, stated that cryptocurrencies are haram as a medium of exchange. However, as commodities or

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digital assets, they can be traded as long as they meet requirements such as having underlying assets, being registered with Bappebti (Trading Commodity Futures Trading Regulatory Agency), and not being used for transactions contrary to Sharia law. Therefore, according to Islamic law, crypto assets have limited legality: they are not valid as a means of payment, but they are permissible as investment instruments that comply with the principles of halal trading. (Marzuki, 2017)

From an Indonesian civil law perspective, the status of crypto assets is linked to the concept of "objects" as stipulated in Article 499 of the Civil Code, which states that objects are anything that can become the object of ownership rights. The Civil Code distinguishes between tangible and intangible, movable and immovable objects. Although not explicitly stated, crypto assets can be classified as movable and immovable objects, on a par with intellectual property rights or shares. This is because crypto assets have economic value, can be individually owned, and can be transferred through legal digital mechanisms. This interpretive approach demonstrates the flexibility of civil law in adapting to developments in modern forms of property. (Kusumaatmadja, 2002)

However, the distinction between tangible and intangible assets presents challenges in terms of legal protection. Crypto assets lack a physical form, so proving their ownership or transfer of rights depends on digital evidence and transaction records within the blockchain network. This raises a new legal question: whether ownership of crypto assets can enjoy the same legal protection as conventional assets. In the Indonesian legal context, this still requires progressive interpretation, as the Civil Code does not explicitly include digital entities as objects of property rights. (Rahardjo, 2014)

Thus, both Islamic law and Indonesian civil law recognize crypto assets as having economic value and can be owned, albeit with certain limitations. Islamic law emphasizes the halal (permissible) aspect and clarity of benefits, while civil law emphasizes ownership and economic value. Both are based on the same principle: recognition of an asset is determined by its usefulness and the legitimacy of its acquisition. Therefore, it can be concluded that crypto assets have the potential to be legally recognized as property or objects, but their implementation still requires normative adaptations to align with the principles of justice and legal certainty. (Dworkin, 1986)

3) Characteristics and Challenges of Crypto Assets as Collateral in Other Countries

In the civil law system, the concept of property rights is codified and closed, so that objects that can be qualified as goods must have a clear regulatory basis in the law. The most relevant example to analyze is the Netherlands, as a jurisdiction that also influenced the formation of the

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structure of Indonesian civil law. In the Burgerlijk Wetboek (BW) Book 3 Article 2, goods (zaken) are defined as tangible objects that are under human control. However, this interpretation does not stop at physical objects, because Article 3:6 of the BW recognizes property rights (vermogensrechten) as objects of property rights that can be transferred and have economic value. The expansion of this understanding was later strengthened through the Electriciteits Arrest (Hoge Raad, May 23, 1921), which stated that electricity, although intangible, can be qualified as good because it has economic value and is under the legal control of a person. In line with the development of digital technology, the legal doctrine of property rights in the Netherlands has evolved towards the concept of digital vermogensrechten, namely digital property rights that can be considered property rights if they fulfill the elements of being transferable, having economic value, and being legally controllable, as explained by Van Erp (2021) and Van der Merwe (2020). Thus, civil law countries can accommodate crypto assets as property objects by expanding the meaning of property rights, although their formal recognition still requires an explicit normative basis in legislation. (Posner, 1990)

Unlike civil law, the common law system does not base the recognition of property rights on closed statutory definitions, but rather on property law doctrine and court precedent. In this context, the assessment of an asset as an object of property rights rests on the question of whether the asset can be controlled and has economic value. If both elements are met, the asset can be considered property that can be owned, transferred, and used as collateral. In the UK, the recognition of crypto assets as property was affirmed through the UK Jurisdiction Taskforce's Legal Statement on Cryptoassets and Smart Contracts (2019), which stated that crypto assets fall into the category of chose in action, namely intangible rights that can be transferred, inherited, frozen, and used as collateral. This recognition did not arise from changes to the law, but rather through the interpretation of established property law doctrine. Meanwhile, in Australia, the recognition of crypto assets as collateral was facilitated through the Personal Property Securities Act (PPSA) 2009, which stipulates that intangible assets can be used as collateral as long as they are registered in the Public Personal Securities Register (PPSR) to confirm the creditor's priority. Thus, the recognition of crypto assets in common law jurisdictions has developed more flexibly and responsively, relying on precedent, property theory, and commercial practice, thus avoiding the need for direct legislative changes. (Lessig, 1999)

In the civil law system, the recognition of crypto assets as collateral still faces conceptual obstacles because property law adheres to the numerus clausus principle, which states that property rights are only recognized if expressly stipulated by law. In the Netherlands, the recognition of

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crypto assets has developed through a conceptual approach to digital property rights (digital vermogensrechten) derived from Article 3:6 of the Burgerlijk Wetboek (BW) concerning vermogensrechten. Although their application as collateral still requires a verifiable digital proof and control mechanism, for example through a digital custodian or blockchain-based registry recognized by legal authorities. Meanwhile, Switzerland, as a more progressive civil law country, has provided an explicit legal basis for making crypto assets collateral through the Swiss DLT Framework (Federal Act on the Adaptation of Federal Law to Developments in Distributed Ledger Technology, 2021). Through this regulation, Sygnum Bank AG became the first bank in the world to obtain a license as a Digital Asset Bank, and provides secured lending services based on crypto assets, where digital assets are placed in custody and can then be used as collateral in legitimate financing relationships. Thus, it can be seen that the recognition of crypto assets as collateral objects in the civil law system requires two main prerequisites, namely: (1) an explicit legal basis in sectoral laws or regulations, and (2) a digital control mechanism that can be verified by the legal evidence system. (De Filippi & Wright, 2018)

In contrast, common law countries like the UK and Australia recognize crypto assets as property that can be used as collateral without requiring prior legislative revision. In the UK, this recognition was affirmed through the UK Jurisdiction Taskforce Legal Statement on Cryptoassets and Smart Contracts (2019), which stated that crypto assets constitute a chose in action, namely an intangible right that can be owned, transferred, frozen, and used as collateral through a security interest mechanism in a private agreement. The UK courts then reinforced this in the case of AA v Persons Unknown [2019] EWHC 3556 (Comm), which stated that crypto assets are legally protected property. Meanwhile, Australia implemented a centralized registration approach through the Personal Property Securities Act (PPSA) 2009, which allows crypto assets to be recorded as collateral in the Personal Property Securities Register (PPSR) to determine creditor priority in financing relationships. Therefore, the common law system tends to be more adaptive and progressive in accepting crypto assets as collateral, because property recognition is not determined by the physical form of an asset, but by its ability to be legally controlled, transferred, and possessed. Thus, the fundamental difference between civil law and common law lies not in the possibility of recognition, but in the way and speed with which the law responds to innovation, where civil law requires new written regulations, while common law is sufficient with doctrinal interpretation and judicial precedent. (Arikunto, 2011)

Furthermore, the fundamental differences between civil law and common law systems also influence how each country responds to the emergence of crypto assets in the realm of property

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law. In civil law systems such as Indonesia, Germany, and France, the law is codified, so recognizing an object as collateral requires a clear and written regulatory basis in law. This results in a slower but more systematic and structured legal adaptation process. Conversely, in common law systems, legal development can be achieved through doctrinal interpretation and court precedent, allowing for faster implementation of crypto assets as property through judicial practice and private contracts without waiting for legislative revisions. This difference in character explains why civil law countries tend to be cautious in placing crypto assets as collateral, while common law countries are quicker to adapt to developments in the digital economy. (Moleong, 2004)

Analysis of The Possibility of Crypto Assets As Collateral Objects

1. Basic Concept of Guarantee in Indonesian Law

In the Indonesian legal system, collateral is understood as a legal instrument that provides certainty to creditors regarding the repayment of debts if the debtor defaults on their obligations. This concept is based on the principle of pacta sunt servanda, which states that every legally entered into agreement binds the parties like law. Collateral under Indonesian law is classified into two main forms: personal collateral and material collateral. (Miles & Huberman, 1994)

Personal guarantee (borgtocht) is an additional legal relationship involving a third party who is responsible for fulfilling the debtor's performance if the debtor defaults, as regulated in Article 1820 of the Civil Code, which states that guarantee is an agreement in which a party binds himself to the creditor to fulfill the debtor's obligations if the debtor is negligent. It reads as follows: (Harsono, 2008)

"Guarantee is an agreement in which a third party, for the benefit of the creditor, binds himself to fulfill the debtor's obligations, if the debtor does not fulfill his obligations." (Sumardjono, 2008)

In contrast, material collateral provides a stronger position to the creditor because it is a droit de préférence (right of priority) and droit de suite (right that follows the object in the hands of whoever the object is). Types of material collateral in Indonesia include pawns for movable objects based on Article 1150 of the Civil Code, mortgages for certain immovable objects based on Article 1162 of the Civil Code, Mortgage Rights on land and objects related to land based on Law Number 4 of 1996, and fiduciary rights on movable objects, both tangible and intangible, based on Law Number 42 of 1999. (Harahap, 2012)

Doctrinally, property security can only be imposed on objects within the legal meaning of property. This refers to Article 499 of the Civil Code, which states that property is anything that can become the object of property rights. (Soekanto & Mamudji, 2001)

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Each type of collateral has different characteristics related to physical and legal control over the collateral object, which has implications for the executorial power and protection of the creditor. To easily understand the differences, the author studies them by analyzing how the transfer of control of the collateral object occurs. In a pawn, physical control of the collateral object is transferred from the debtor to the creditor or an agreed third party, as regulated in Article 1152 of the Civil Code which requires actual delivery (bezit) as a condition for the birth of a pledge. (Marzuki, 2017)

In Mortgage Rights, the collateral object in the form of land remains in the control of the owner (debtor), but the creditor has material rights attached to the Mortgage Rights certificate which contains the executorial title as per Article 14 paragraph (3) of Law 4/1996. Meanwhile in the case of a mortgage, namely a guarantee of immovable objects for example a ship with a certain gross tonnage. Physical control remains with the debtor, while the creditor has legal control through recording the mortgage in the general register in accordance with Article 1162 of the Civil Code and special provisions in the Shipping Law. (Kusumaatmadja, 2002)

This difference between physical control and legal control confirms that each guarantee institution has a legal structure designed to balance the interests of creditors in guarantees of repayment with the interests of debtors to continue to utilize the collateral object in their economic activities. (Rahardjo, 2014)

Thus, an asset can be used as collateral if it meets three main elements: (1) it can be owned, (2) it can be transferred, and (3) it has a legally justifiable economic value. This framework is important in analyzing whether crypto assets can be qualified as intangible movable objects in the context of Indonesian law, and therefore suitable as collateral objects in modern financing mechanisms. In other words, before determining the appropriate form of collateral for crypto assets, it is first necessary to determine whether the digital asset meets the requirements as an object of property rights in the Indonesian positive legal system. (Dworkin, 1986)

2. Theoretical Analysis of Crypto Assets as Collateral Objects

In examining the possibility of crypto assets being used as collateral, a theoretical approach is crucial for understanding the conceptual foundations supporting the legal recognition of an object as collateral. In civil law, the relationship between a legal subject and an object is not solely determined by an object's physical form, but rather by its economic value and ability to be legally transferred. Therefore, the recognition of crypto assets as collateral requires examination through legal theories that highlight aspects of efficiency, development, and the role of the state in addressing technological innovation. (Posner, 1990)

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One relevant theory is the Economic Analysis of Law proposed by Chad Bolster, which examines law from the perspective of economic efficiency. This theory holds that the ideal legal rule is the one that generates the greatest economic benefit for society. In the context of crypto assets, this theory encourages an evaluation of whether the use of crypto as collateral will create economic efficiency or, conversely, increase systemic risk and legal costs. If the legal system can effectively establish mechanisms for recognizing and protecting crypto as collateral, such regulations can expand access to financing and accelerate the growth of the digital financial sector in Indonesia. (Lessig, 1999)

Furthermore, Prof. Mochtar Kusumaatmadja's Legal Development theory also provides an important perspective. This theory emphasizes that law should not be static but rather a tool for societal renewal (law as a tool of social engineering). In this regard, the emergence of crypto assets is part of the socio-economic changes resulting from digital technological innovation. Law, as a dynamic system, should be able to accommodate this new phenomenon while maintaining a balance between legal certainty, justice, and utility. Therefore, the establishment of norms regarding crypto assets as collateral must be seen as a form of legal adaptation to the needs of the evolving digital economy. (De Filippi & Wright, 2018)

The Welfare State theory also plays a role in analyzing the state's responsibility in regulating the use of crypto assets. Within this paradigm, the state has an obligation to ensure that the use of digital assets not only benefits individuals or corporations but also contributes to societal welfare. This means that if crypto assets are recognized as collateral, the state must ensure a system of oversight and legal protection that prevents misuse, such as money laundering or extreme volatility. Therefore, the resulting regulations must be oriented toward distributive justice, not solely market freedom. (Arikunto, 2011)

From the perspective of classical property law theory, crypto assets pose challenges due to their intangible nature. In civil law systems, collateral is generally a physical object or at least something that can be concretely identified. However, technological developments have broadened the definition of "object" to include anything with economic value and legally transferable, even in digital form. This principle aligns with the notion that property rights are absolute and can be asserted against anyone, as long as they have a legal basis and legal recognition. Therefore, the main challenge in making crypto assets fiduciary objects lies in proving ownership and the mechanism for publishing rights to these assets. (Moleong, 2004)

This theoretical analysis also needs to consider legal system factors that influence the regulation of digital assets. In a civil law system, such as Indonesia, recognition of a legal object

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depends on the codification and legitimacy of the law. Conversely, in a common law system, the principles of equity and precedent allow courts to recognize rights to new assets through judicial practice. Because Indonesia adheres to a civil law system, without an explicit normative basis, recognizing crypto as collateral remains difficult. Therefore, this theory strengthens the argument that positive legal regulations are necessary to ensure legal certainty. (Miles & Huberman, 1994)

From the combination of theories above, it is clear that the approach to crypto assets cannot be approached in isolation. Law must integrate economic efficiency (Economic Analysis of Law), social adaptation (Legal Development Theory), and social responsibility (Welfare State). These three theories form a comprehensive conceptual framework for assessing the suitability of crypto as collateral under national law. In this way, legal regulations not only protect the interests of individuals or financial institutions but also support the stability of the economic system and sustainable technological innovation. (Harsono, 2008)

Ultimately, a theoretical analysis of crypto assets as collateral demonstrates that legal transformation is inevitable in the digital age. Indonesian positive law needs to adapt without losing its fundamental principles: certainty, justice, and utility. By understanding this theoretical basis, the development of regulations regarding crypto assets is not merely a technical step but also a reflection of the efforts of a modern rule of law to adapt to the times without sacrificing its fundamental values. (Sumardjono, 2008)

3. Examining the Suitability of Crypto Assets as Fiduciary Collateral Objects Under Indonesian Positive Law (Harahap, 2012)

Examining the suitability of crypto assets as objects of fiduciary collateral requires an approach grounded in Indonesia's positive legal framework, particularly regarding the definition of "object" in Article 499 of the Civil Code (KUHPerdata) and the provisions of Law Number 42 of 1999 concerning Fiduciary Collateral. In civil law, an object is defined as anything that can become an object of ownership and has economic value. However, this definition has historically focused on tangible property. Meanwhile, crypto assets are intangible but possess exchange value and are legally transferable. Thus, crypto partially fulfills the elements of an "object" in the functional economic sense, although it does not fully align with the classical concept of objecthood that underpins fiduciary law. (Soekanto & Mamudji, 2001)

In practice, Indonesia, through the Commodity Futures Trading Regulatory Agency (Bappebti), has designated crypto assets as tradable commodities on the futures market through Bappebti Regulation Number 8 of 2021. This regulation demonstrates legal recognition of crypto as an asset with economic value and transferability. However, this recognition remains limited, as

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crypto is not yet positioned as a means of payment or collateral under civil law. Meanwhile, the Financial Services Authority (OJK) has not permitted financial institutions to use crypto as collateral for loans, citing price volatility and the lack of an adequate legal protection system. This lack of harmony between Bappebti and OJK regulations demonstrates a legal vacuum in recognizing crypto as collateral. (Marzuki, 2017)

In the current context, Law Number 4 of 2023 concerning the Development and Strengthening of the Financial Sector (P2SK) brings significant changes to the direction of national financial legal policy, including in the regulation of digital assets. Through the P2SK Law, supervision of digital financial assets, including crypto assets, is gradually transferred from Bappebti (Commodity Futures Trading Regulatory Agency) to the Financial Services Authority (OJK). This transition is significant because it signifies the expansion of OJK's authority to integrate crypto into the broader financial system, including its potential use as collateral in financing activities. Under OJK supervision, crypto is no longer viewed merely as a speculative commodity but is being directed towards becoming a financial asset regulated prudentially, with due regard for the principles of transparency, risk mitigation, and consumer protection. (Kusumaatmadja, 2002)

The P2SK Law opens up new legal space for the potential recognition of crypto assets as fiduciary collateral in the future. This is because the P2SK Law emphasizes the importance of digital financial innovation and technology-based financing instruments (digital financial innovation). If the Financial Services Authority (OJK) issues derivative regulations governing standards for crypto ownership, registration, and valuation, key fiduciary elements such as publicity and specialization can be met electronically. This way, crypto assets have the potential to have stronger legal status as collateral, as long as the guarantee and oversight mechanisms ensure legal security for creditors and debtors. (Rahardjo, 2014)

From the perspective of Indonesian positive law, it can be concluded that crypto assets have the potential to be recognized as objects of fiduciary collateral if post-P2SK Law policies can create a regulatory system that is integrated and responsive to the characteristics of digital assets. The P2SK Law signals legal reform toward integration between the conventional and digital financial sectors, including in crypto-asset-based financing. However, such recognition still requires technical regulations regarding digital proof of ownership, collateral registration, and enforcement procedures in the event of debtor default. With these steps, Indonesian law will be able to maintain a balance between financial innovation and the basic principles of collateral law: certainty, fairness, and benefit. (Dworkin, 1986)

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4. CONCLUSION

Based on the discussion and analysis of the feasibility of crypto assets as objects of fiduciary collateral from the perspective of Indonesian positive law, it can be concluded that crypto assets have great potential to be recognized as collateral, but still face various legal obstacles. From the perspective of classical property law theory, crypto assets do not fully fulfill the elements of objects as stipulated in Article 499 of the Civil Code, because they have no physical form and their existence depends on a decentralized digital system. However, the development of digital economic law and the application of the principle of *technology neutrality* require a more adaptive interpretation of the concept of objects, so that objects are not only interpreted materially, but also include digital entities that have economic value and can be transferred. Through Law Number 4 of 2023 concerning the Development and Strengthening of the Financial Sector (P2SK), the government has demonstrated a progressive step by introducing regulations regarding digital financial assets, including crypto assets. The P2SK Law recognizes the existence of digital assets as part of the national financial system and provides a legal basis for the implementation of activities related to digital assets in a more structured manner. This indicates that the legal paradigm in Indonesia is starting to shift towards the inclusion of non-conventional assets into the economic legal system, including the possibility of making them objects of fiduciary guarantees. (Posner, 1990)

Thus, crypto assets can, in principle, be considered to fulfill the characteristics of collateral because they have economic value, can be legally transferred, and can be used as a basis for debt repayment. However, to legally qualify as fiduciary collateral, legal certainty is required through the establishment of specific regulations governing the registration, assessment, and enforcement mechanisms for digital asset-based collateral. Without this certainty, the implementation of fiduciary collateral for crypto assets will face significant legal risks, particularly in terms of protection for creditors and certainty of ownership for debtors. Overall, the direction of development of positive law in Indonesia has opened up space for the transformation of the concept of collateral into the digital realm. However, this transformation must be accompanied by a careful legal approach to avoid creating conflicts with existing legal norms regarding collateral. Therefore, harmonization of the Civil Code, the Fiduciary Guarantee Law, the P2SK Law, and digital asset regulations from Bappebti and the Financial Services Authority (OJK) is an urgent need to ensure that crypto assets can be legally and effectively accommodated within the national legal system. (Lessig, 1999)

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REFERENCES

Arikunto, S. (2011). Research procedures: A practical approach. Jakarta: Rineka Cipta.

Dworkin, R. (1986). Law's empire. Cambridge, MA: Harvard University Press.

De Filippi, P., & Wright, A. (2018). Blockchain and the law: The rule of code. Cambridge, MA: Harvard University Press.

Glenn, H. P. (2014). Legal traditions of the world (5th ed.). Oxford: Oxford University Press.

Harahap, Y. (2012). Aspects of contract law. Bandung: Alumni.

Harsono, B. (2008). Indonesian agrarian law: History of the formation of the basic agrarian law, its content and implementation. Jakarta: Djambatan.

Ibrahim, J. (2007). Theory and methodology of normative legal research (3rd ed.). Malang: Bayu Media Publishing.

Kusumaatmadja, M. (2002). Legal concepts in development. Bandung: Alumni.

Lessig, L. (1999). Code and other laws of cyberspace. New York, NY: Basic Books.

Marzuki, P. M. (2017). Legal research. Jakarta: Kencana.

Miles, M. B., & Huberman, A. M. (1994). Qualitative data analysis (2nd ed.). London: Sage.

Moleong, L. J. (2004). Qualitative research methodology. Bandung: Remaja Rosdakarya.

Posner, R. (1990). The problem of jurisprudence. Cambridge, MA: Harvard University Press.

Rahardjo, S. (2014). Legal science (8th ed.). Bandung: Citra Aditya Bakti.

Salim, H. S. (2014). Development of guarantee law in Indonesia. Jakarta: RajaGrafindo Persada.

Sidharta, B. A. (2009). Reflections on the structure of legal science. Bandung: Mandar Maju.

Soekanto, S., & Mamudji, S. (2001). Normative legal research: A brief review. Jakarta: Rajawali Pers.

Subekti, R. (2005). Principles of civil law. Jakarta: Intermasa.

Sumardjono, M. S. W. (2008). Land in the perspective of economic, social, and cultural rights. Jakarta: Kompas.

Sunarto. (1990). Descriptive research methods. Surabaya: National Business. Wahbah az-Zuḥaylī. (1989). Al-fiqh al-Islāmī wa adillatuhu (Vol. IV). Damascus: Dār al-Fikr. (Moleong, 2004)