

Juridical Analysis on Crypto Assets: A Study of Collateral Institutions in the Indonesian Context

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Abstract

This research aims to analyze crypto assets in the global aspects that have developed very rapidly, and the economic value of some cryptos has been widely recognized and factual at present; furthermore, with its value, it is treated as a virtual asset. As an asset, crypto may face the possibility of potential utilization as collateral in society and raises the issue of whether regulations and laws provide adequate regulation and protection against such utilization. This legal research aims at the development of law in such context which is considered crucial to provide legal protection for the public from opaque practices related to crypto and its risks that may affect the legal and economic interests of the parties concerned within the Indonesian jurisdiction. The method used is normative legal analysis with a statutory approach and secondary data sources, particularly literature review, Indonesian laws and regulations have been used in this research.

The main result of this research is that the legal norms in Indonesian security law and the parties' freedom of contract may generally cover the utilization of assets of a legal entity as collateral, but it lacks legal norms and functions to protect the rights and economic interests of creditors against the potential risks of crypto assets, which may lead to unclear practices in society. Therefore, the need for legal development regarding security law in Indonesia needs to include and determine when crypto assets can or cannot be utilized as legal collateral in Indonesia's future, as well as legal functions and remedies to support the protection and legal certainty of current issues related to crypto asset risks.

I. Introduction

"Cryptocurrencies" are digital currencies in which transactions are verified by the transacting parties and the records are maintained by a decentralized system using cryptography in addition to or independent of any central authority so as not to require any intermediary medium, some examples of cryptocurrencies from the thousands of different cryptocurrencies in the world are Bitcoin, Ethereum (Shynkevich, 2023).

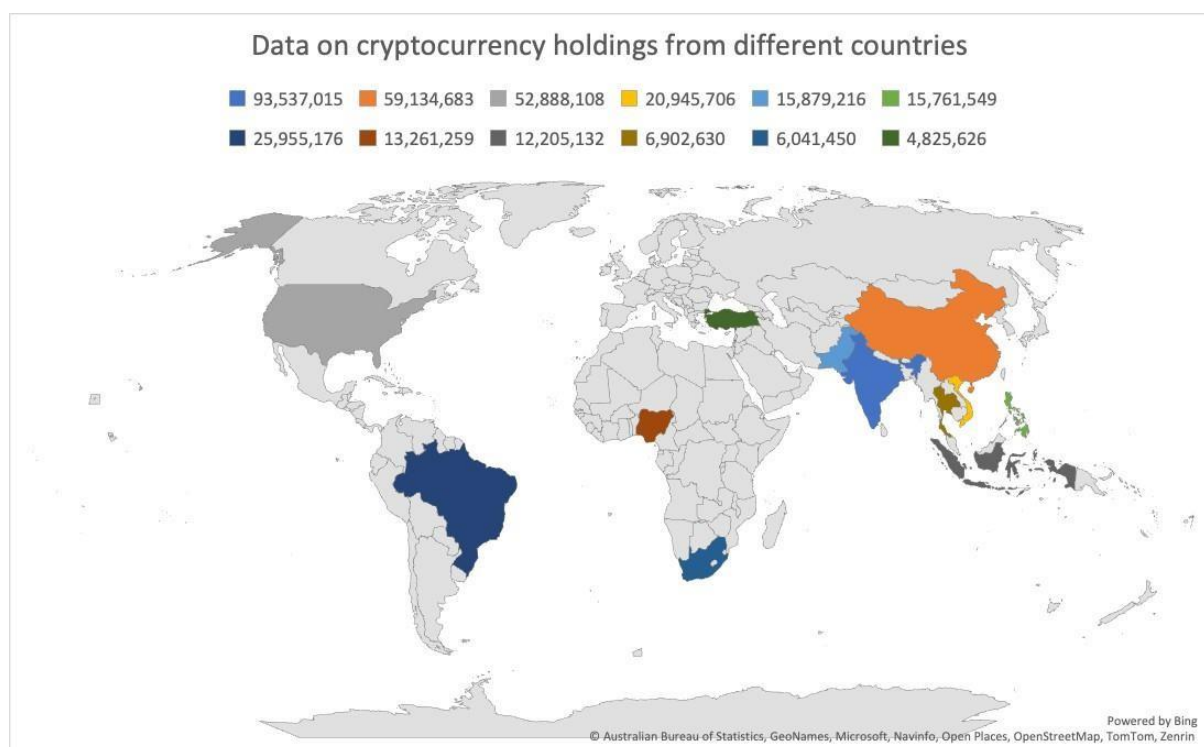
Law seeks to go hand in hand with actual developments in society and law is never separated from society as the proposition of Roman philosophy, Cicero that where there is society, there is law (*ubi societas ibi ius*). Furthermore, related to this, cryptocurrencies, which are also called crypto assets, are increasingly developing in society, especially in Indonesia.

The last few years have seen significant growth in crypto asset ownership. Although cryptocurrencies have been around for some time, public interest in them has increased rapidly, especially since the peak of the Bitcoin price in 2017. More and more individuals, companies, and financial institutions have started to adopt cryptocurrencies as part of their investment or operational strategies. This includes large investment funds, such as pension funds and hedge funds, which have begun to allocate a portion of their portfolios into cryptocurrencies, and Cryptocurrency holdings are often considered a form of portfolio diversification that can reduce risk and increase potential returns. Many investors who previously focused on traditional assets, such as stocks and bonds, are now also incorporating cryptocurrencies into their portfolios (Bonaparte, 2024; Boubaker et al., 2024).

Table 1. Data on cryptocurrency holdings in several countries

Country	Population	Crypto asset ownership	Persentase
India	1,428,627,663	93,537,015	6.55%
China	1,425,671,352	59,134,683	4.15%
United States	339,996,563	52,888,108	15.56%
Vietnam	98,858,950	20,945,706	21.19%
Pakistan	240,485,658	15,879,216	6.60%
Philippines	117,337,368	15,761,549	13.43%
Brazil	216,422,446	25,955,176	11.99%
Nigeria	223,804,632	13,261,259	5.93%
Indonesia	277,534,122	12,205,132	4.40%
Thailand	71,801,279	6,902,630	9.61%
South Africa	60,414,495	6,041,450	10.00%
Turkey	85,816,199	4,825,626	5.62%

From table 1, it can be seen that Asia has the most crypto asset ownership of 631 M compared to America and Europe, this will cause problems where regulatory uncertainty will arise because cryptocurrencies are still relatively new, regulations related to cryptocurrency guarantee institutions are still not established in many jurisdictions (Stringham, 2023). This can create legal and operational uncertainty for guarantor institutions, Digital security risks are particularly high in the cryptocurrency ecosystem. Guarantor institutions face the challenge of ensuring the security of stored and guaranteed crypto assets, Due to their often anonymous and decentralized nature, it is difficult to determine who should be held responsible in the event of a problem or loss within a cryptocurrency guarantor institution, Guarantor institutions must comply with applicable regulations and policies, including in terms of anti-money laundering (Copestake et al., 2023).



Source : (“Asia-Pacific Developments,” 2023)

With the data on cryptocurrency ownership, there is a correlation between actual developments related to crypto assets in the world and in society with existing (positive) laws related to crypto assets, it can be assessed that there is still a very large gap or gap which requires further legal formation/development or more technical,

specific legal instruments accompanied by further analytical rationale/argumentation as far as relevant to the context of cryptocurrency or crypto assets which, if potential, can be used as an object of a security institution (Dwivedi et al., 2022; Grobys, 2024).

In Indonesia, the law of guarantee at the time of completing the preparation of this legal research has not included and regulated crypto assets as objects of security institutions, in other words, the law of guarantee in Indonesia does not/has not included and regulated explicitly/explicitly and specifically regarding crypto assets for/which can be pledged as collateral for the repayment of certain obligations (Zakaria et al., 2022).

The context of the gap between the law related to cryptocurrency or what is interpreted as "crypto assets" according to Indonesian law, and the law of collateral and the actualization of crypto assets that have high potential to grow in Indonesian society, which has the potential value as an asset to be used as an object of a security institution.

Cryptocurrencies, such as Bitcoin, Ethereum, and others, operate outside of the traditional financial system that is guaranteed by institutions such as the Federal Deposit Insurance Corporation (FDIC) in the United States. (Shynkevich, 2023). Therefore, the safety and security of a crypto asset depends entirely on the security implemented by the owner of the asset, such as the use of secure digital wallets and good security practices. (Atmojo& Fuad, 2023). However, some crypto asset exchange or storage services may offer certain protections or guarantees against certain risks, such as losing access to a digital wallet. It is important to understand the risks and protections provided by such services before using them to store or transact with cryptocurrencies. (Boubaker et al., 2024; Yousaf et al., 2024).

With the problems that have been found, there are **research questions** in this study as follows:

1. How does Indonesian law regulate crypto assets as objects of collateral institutions?
2. How does Indonesian law provide legal protection for creditors and debtors in the binding of crypto assets with security institutions in Indonesia?

This research is expected to enrich the conception and material, perspectives and studies on laws related to crypto assets and collateral institutions in Indonesia which will inevitably develop and pursue the carrying capacity of positive law towards the development of crypto assets in society and reference ideas and legal views as well as legal context frameworks for efforts to form develop national law regarding crypto assets and collateral institutions, both in academic scopes such as further legal research, as well as in legislative scopes, the formation of positive law in Indonesia.

II. Literature Review

a. Legal Certainty Theory

Legal protection and legal certainty are covered in the provisions of Article 28D Paragraph 1 of the 1945 Constitution: "Every person shall have the right to recognition, guarantees, protection and certainty of a just law and equal treatment before the law." Legal certainty is one of the objectives of law and can be said an effort to realize justice. Normative legal certainty is when a regulation is made and

promulgated with certainty because it regulates definitively and logically. (Krisnawangsa et al., 2021).

To achieve order in society, legal certainty is sought in human relations in society where the conception of legal positivism understands that the process of argumentation precedes, and if it takes place constructively, will culminate in a consensus to enact a provision that regulates human behavior. Such a conception is also called analytical jurisprudence promoted by John Austin, where this theory can be understood as order in carrying out the exercise of power and legal certainty (Andrianto, 2020; Siregar et al., 2023).

The element of legal certainty is included as one of the principles of law in the preposition put forward by Joseph Raz relating to the principles of law, namely as follows (Disantara et al., 2023), When the law needs to struggle to balance certainty and reliability against flexibility (Taufiq & Disantara, 2023), it is in the overall wise legal policy as much as possible to regulate human action because they are more certain than principles and lend themselves more easily to uniform and predictable application (Sahamad et al., 2020.).

Prepositions relating to the rule of law have a juridical dimension, address the needs or interests of the state and citizens, and are characterized by the following specific situational requirements: that there are clear or unambiguous, consistent and easily obtainable legal rules issued by the state power; that government agencies apply these legal rules consistently and are also subject to and obedient to them; that the majority of citizens agree in principle to the content and therefore conform their behavior to these rules; that independent and impartial judges apply these legal rules consistently when they resolve legal disputes; and that judicial decisions are independent and impartial; that a majority of citizens approve in principle of the content and therefore conform their behavior to them; that independent and impartial judges apply the rules consistently as they resolve legal disputes; and that judicial decisions are concretely implemented (Jan Michiel Otto, 2008).

b. Legal Protection Theory (for Creditors)

The Concept of Legal System incorporates the element of protection in law in the battle between obligations arising under the law, The battle does not require the involvement of the existence of obligations. They simply authorize and direct the courts to act for their protection provided that they adjudicate the action in the best possible manner with due regard to all legitimate moral considerations (Raz, 1979). Legal battles in general have two dimensions. On the one hand, rights governed by existing regulations are empowering, have a function or influence, and have the power to establish an organized existence in relation to a matter. On the other hand, they form a potential source of new laws, authorizing the courts to create new rules for the protection of the people (Raz, 1979).

Although the preposition has the nuance of a common law legal system where the courts form the rules or laws, his idea of law to encompass/generate the context of legal protection theory/principle is still very relevant for any legal system.

(Raz, 1979).

In the preposition of H.L.A. Hart in connection with his work "The Concept of Law" (The Concept of Law) Law is needed to adjudicate competing claims. It is also needed to uphold the concept of property rights and provide protection for them", the element of protection in law is stated as one of the conceptions needed in law, in this example it is also relevant in relation to property rights (Kurniawan et al., 2023), which in this legal research cannot be separated from the context of the existence/existence of an asset which, if it can be utilized/has value as collateral, in this case crypto assets in juridical analysis as an object of a security institution (Neil maccormick, 2010).

In the sense of preventive and repressive legal protection preventively, the state, in this case the government, in making regulations must guarantee legal protection for all parties, and repressively, (by) providing opportunities for all parties to take legal remedies for any problems that arise (Cartwright, 2001).

Legal protection based on its source, where internal legal protection has been carried out by the parties at the time of entering into a credit agreement between the debtor and the creditor, which starts from the credit application until the credit is disbursed, by making an agreement between the parties, which is followed by a fiduciary agreement; while external legal protection, the state must ensure that there are adequate statutory provisions and can provide protection for the parties (Geovani et al., 2021; Raz, 1979).

c. Legal Theory of Development

All developing societies are characterized by change and the law serves to ensure that change occurs in an orderly manner. Such orderly change can be aided by legislation or court decisions or a combination of both. Both change and order (or regularity) are the initial goals of a developing society, The function of law in society is to maintain order through legal certainty and also the law must be able to regulate the process of change in society (Wacks, n.d.2020).

A good law is a law that is in accordance with the laws that live in society, which of course also corresponds to or is a reflection of the values that apply in that society. The implementation of the legal function can only be realized if the law is carried out by a power, but the power itself must run within the limits of the signs specified in the law. (Dávila, 2015).

Legal certainty is also included in Development Law Theory (Kurniawan, 2022), which further emphasizes that in the character of the development of Indonesian national law, legal certainty should be an inseparable part of every positive legal product issued by lawmakers in Indonesia, where the imperative function of a law needs to be able to realize a legal certainty for stakeholders who are regulated according to the context of the law, which in the context of this legal research is the need and importance of legal development regarding crypto assets as objects of collateral institutions in order to realize legal certainty in a society that is increasingly interacting with crypto assets and their potential value as collateral. (Hodgson, 2013; Painter, 2015).

III. Methodology

"Blockchain" technology is a decentralized, transparent immutable financial bookkeeping for digital asset transactions with various cryptographic methods for digital security to reduce risk and fraud. A "whitepaper" or "cryptocurrency whitepaper" is a comprehensive document that outlines the technical and economic aspects of a specific cryptocurrency (Crypto Note-Whitepaper-Review, n.d.; Liu et al., 2020). It is usually written by the core team or developers of the cryptocurrency and presented as a guide for potential investors, miners, and users, and in the case of the Bitcoin cryptocurrency, the whitepaper is published when the cryptocurrency is first published or created. (Liu et al., 2020).

Cryptocurrency Exchange-Traded Fund (ETF)" or also called generally "Exchange-Traded Product" (ETP) are investment companies registered with the authorities, which offer investors a way (or channel) to raise money in a form of a fund for a specific purpose (mutual fund) invested in stocks, bonds, or other assets, ETFs are basically mutual funds, these products are traded like stocks on the stock exchange. (Karim et al., 2023).

This legal research is a type of normative juridical research which is also called normative legal research or doctrinal research because this legal research is only carried out on laws and regulations or other related legal materials including library research because it is carried out with secondary data sources, including legal concepts (which) are based on legalistic-positivistic concepts, judge decisions in legal norms and legal principles and concepts between one law and another law, supported/assisted by research approaches described in the next section.(Balkin, 1987).

Data Collection Technique

Data collection used for this legal research is carried out by secondary data collection techniques, literature studies and dogmatic, normative literature. The data is collected contextually to the relevance of the topic of this legal research, and has a relationship and support for the basics of ratio legis or legal thinking according to reason or common sense and construction of arguments for the flow of preparation, analysis to completion. (Huarng et al., 2018).

Secondary data sources for this normative juridical research include relevant laws and regulations that apply in Indonesia, relevant legal propositions related to the context of this research, namely crypto assets and their relation as objects of collateral institutions, which can come from books, press releases, news articles and journals, dictionaries, papers, scientific papers or research results and legal views or opinions from legal experts, judges, officials or relevant authorities (Graedel et al., 2012; Uma Sekaran, 2016).

Data Presentation Technique

The presentation of data in this legal research was carried out using narrative

and descriptive techniques. The related data is described in a narrative flow that is integrated with the views, propositions, and arguments of the author, including descriptions in connection with the analysis arranged according to the flow of reasoning in the preparation of research.

The presentation of data in this legal research is pursued in such a way as to pay attention to the flow of presentation or giving good prescriptions on each point of conception or hypothesis, argumentation, analysis and discussion to conclusions including suggestions. Because, giving prescriptions about what should be is essential to legal research, because that is what the research is for, both for the purposes of legal practice and for academic writing, the prescriptions given determine the value of the research, by adhering to the characteristics of legal science as an applied science, the prescriptions given in legal research activities must be able and possible to be applied. (Huarng et al., 2018).

Data Analysis Technique

Analysis of information, facts and data in legal research and the preparation of this legal research is carried out with a juridical-normative analysis technique approach supported by legal development analysis of situations and activities for which there is no legal regulation but which have actually occurred in society, accompanied by legal views, dogmatics or legal theories, towards the final analysis and conclusion of the preparation of this legal research. The normative legal approach is used as a basis for analysis to explain phenomena that require desired community behavior based on legal ideals contained in legal norms, principles and legal concepts. This basis is used as a major premise. Furthermore, the facts found through the types and sources of research data as minor premises are analyzed and compared with their implementation and conceptions of further development in the legal context related to the object of collateral institutions and crypto assets. (Huarng et al., 2018; Silvola& Landau, 2021).

Results and Discussion

Cryptocurrencies in relation to the establishment and development of positive law of a governmental system or authority that manages and regulates its interests and the interests of the society it manages and regulates, inter alia, the knowledge gaps (unknowns) regarding cryptocurrencies will result in the absence of regulation (null norms), and how governments can predict and prepare regulatory instruments regarding cryptocurrencies that can be used clearly for the long term in the future and avoid regulatory ambiguity (or vagueness) (vague norm).

The movement or development of these mainstream issues has the impression that it does not affect the existence and development of cryptocurrencies anywhere, as if the legal system and government or authority in a country and cryptocurrencies with their cryptographic and decentralized systems do not go hand in hand with each other, where the development of cryptocurrencies is so fast and rapid. In this situation, there is the possibility or potential for the phenomenon of legal gaps (gaps) which are very feasible and interesting.

Indonesian legal rules on crypto assets as objects of collateral institutions.

This normative juridical research adheres to several approaches, namely the statutory approach by examining all laws and regulations related to the legal issues being addressed. In addition, this normative juridical research adopts a perspective approach to legal events that develop in legal science (conceptual approach) which is relevant with regard to cryptocurrencies and laws related to the object of collateral institutions, and a philosophical approach to the rule of law from time to time (historical approach), this historical approach is carried out in the framework of tracking the history of legal institutions from time to time, further, including legal synchronization (which) is based on harmonization between one legal regulation and other legal regulations in horizontal hierarchy and vertical hierarchy.

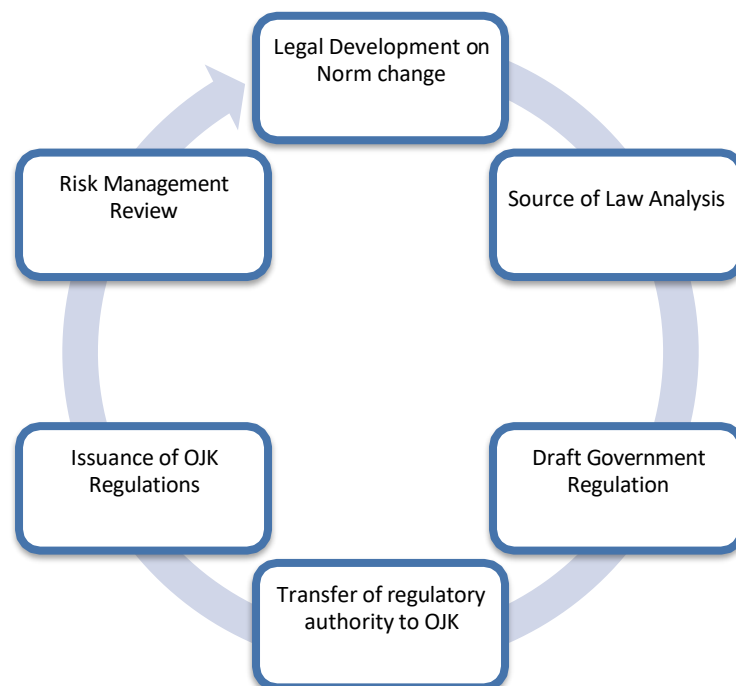


Figure 1. Mapping the results of the analysis of legal rules in Indonesia on crypto assets

Source : Author 2024

Figure 1 shows that there are analyzes that can be raised in this legal research, including (1) related to the need and importance of legal formation/development on pawn collateral (adding norms) or fiduciary (changing norms), (2) analysis of legal sources related to crypto assets, (2) analysis of the source of law related to crypto assets, namely the P2SK Law which was only published in 2023 so that the thesis library published in 2020 also does not cover (3) analysis of the Draft Government Regulation which was in the process of drafting and discussing at the time this legal research was completed, which is the mandate and derivative of the P2SK Law, and (4) analysis of the transfer of regulatory and

supervisory authority from Bappebti to OJK which is the mandate of the P2SK Law, (5) the need and importance of issuing relevant OJK Regulations related to (matters related to) the law-forming approach in this case the OJK and the approach to legal norms that are necessary and important to support the principles of public order, certainty and legal protection that are just and useful in facilitating / bridging between crypto assets and / (when utilized) as objects of pawn or fiduciary security institutions, and (6) various risk management studies that need and are important to be included in line with these principles, in interpreting the formation/development of (positive) law for crypto asset guarantees, (LN.2023/No.4, 2023).

The novelty in this research lies in the potential of digital assets as objects of debt collateral to the extent of analyzing issues related to the validity of digital assets as objects of debt collateral in Indonesia in connection with (how the application of digital assets in) PP No. 24 of 2022 (on Creative Economy) and the validity of digital assets as a whole as objects of debt collateral in Indonesia until it is achieved (that) not all digital assets are categorized as Rights assets that can be carried out funding schemes based on PP No. 24 of 2022, only digital assets that have copyright protection can receive it. (Peraturan Pelaksanaan Undang-Undang Nomor 24 Tahun 2019 Tentang Ekonomi Kreatif, 2022).

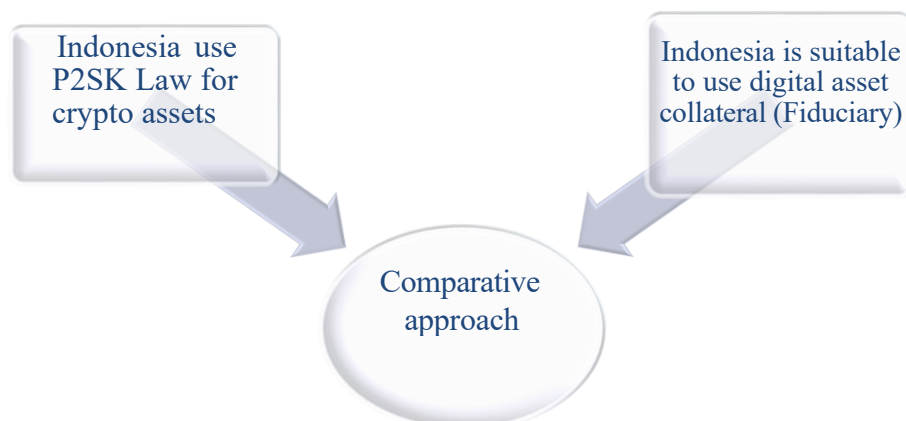


Figure 2. Comparative approach to cryptocurrency law
Source : Author 2024

A comparative approach even though both are digital assets, IPR assets are very different from crypto assets. In addition to this, in the literature published in 2023, (1) there is no analysis related to the P2SK Law until the transfer of regulatory and supervisory authority from Bappebti to OJK and (Draft) PP and OJK Regulations with relevant authorities are necessary and important to regulate crypto assets, which are covered in this legal research analysis, and (2) the literature published in 2023 reached the result that in Indonesia, the most appropriate guarantee for digital assets is fiduciary (but it seems inconsistent with its statement in another section regarding "not all digital assets are categorized as IPR assets that can be funded

under PP No. 24 of 2022", In addition, the literature analysis is very different from the analysis of this legal research, because taking into account that not all digital assets are not necessarily the same as crypto assets, and IPR digital assets are not necessarily the same as crypto assets.

Based on Law Number 4 of 2023 concerning Financial Sector Development and Strengthening (UU P2SK) which is (one of them) an amendment to Law Number 21 of 2011 concerning the Financial Services Authority that as mandated by the P2SK Law, matters related to cryptocurrencies or crypto assets which are the scope of Bappebti's authority then become the scope of OJK's authority, are confirmed in the P2SK Law in Article 6 which is related to regulatory and supervisory duties by OJK, one of which is on activities in the ITSK sector as well as digital financial assets and crypto assets and in Article 10 it is confirmed that one of the OJK Board of Commissioners consists of a Chief Executive Supervisor of Financial Sector Technology Innovation (ITSK), Digital Financial Assets and Crypto Assets (IAKD) concurrently a member which for the first time the appointment and determination is made no later than seven months from the enactment of the P2SK Law and the official which until the appointment and determination of the definitive official, his duties and authority are carried out by the Chief Executive Supervisor of Insurance, Guarantee and Pension Funds..

Departing from this legal basis (P2SK Law), the formation, regulation and coverage of laws related to cryptocurrencies or crypto assets included in the scope of ITSK (Financial Sector Technology Innovation) in Indonesia are under the authority of the OJK. However, before the establishment, regulation and legal coverage can be carried out by the OJK in the form of issuing OJK decisions related to cryptocurrencies or crypto assets, a Government Regulation is required based on Article 312 Paragraph 2 of the P2SK Law that: "Further provisions regarding the transition of regulatory and supervisory duties as referred to in paragraph 1, are regulated in a Government Regulation which must be stipulated no later than 6 (six) months from the enactment of this Law.

The Government Regulation as referred to has not yet been issued, but is still at the stage (maturation, preparation) of the Draft Government Regulation by the Ministry of Trade and the Ministry of Finance cq. Financial Services Authority. In addition, the transfer of regulatory and supervisory duties over crypto currency or crypto assets from Bappebti to OJK must be completed within two years of the promulgation of the P2SK Law, based on Article 312 Paragraph 1 of the P2SK Law that: "When this Law comes into force, the transition duties of regulation and supervision of activities:

1. *Digital financial assets as intended in Article 6 paragraph (1) letter b and letter e in Article 8 Number 4 of this Law*
2. *Commodities which include financial instruments which are the subject, futures contracts, sharia derivative contracts, and/or other derivative contracts as intended in Article 3A in Article 20 of this Law, from the commodity futures trading supervisory body to the financial sector authority must be completed in full no later than no later than 24 (twenty four) months.*

Indonesian law provides legal protection for creditors and debtors when binding crypto assets with collateral institutions in Indonesia

The Law on the Development and Strengthening of the Financial Sector explains that crypto assets are included in digital financial assets which are included in the activities of issuing and trading derivative financial instruments in the financial services sector. Digital financial assets are financial assets that are stored or represented digitally, including crypto assets. However, related to the context of crypto assets and the objects of collateral institutions, as far as the normative juridical analysis that has been carried out, the latest legal regulations, at the time of completion of the preparation of this legal research, relating to crypto assets, namely the P2SK Law does not cover or at least does not yet cover and does not regulate or at least does not regulate crypto assets (including their potential) as objects of collateral institutions.

Furthermore, the aspect of legal protection for security holders in the general context is basically covered according to the provisions of Article 1131 and Article 1132 of the Civil Code, namely "All movable and immovable property belonging to the debtor, whether existing or future, becomes collateral for the agreement- the debtor's individual engagement." And "The goods become joint collateral for all creditors against whom the proceeds from the sale of the goods are divided according to the proportion of their respective receivables unless there are valid reasons for priority among the creditors."

Where all assets belonging to the debtor can be used as collateral for the debtor's obligations to the creditor; This context is also called general guarantee. However, the aspect of legal protection in general, the general guarantee, is considered too general when faced with demands/needs for aspects of legal certainty in a specific transaction regarding the fulfillment of obligations between the relevant parties and arising from agreements including, whether main or additional obligations, which of course requires "certainty" of collateral or certain things from a guarantee to be able to further support the aspect of legal certainty in managing risk to a certain level desired by creditors.

Therefore, the aspects of legal protection and legal certainty basically need to support each other and cannot be separated from each other in order to fulfill the guarantee interests between creditors and debtors, including, among other things, the guarantee (implementation, achievement) of the debtor's obligations to the creditor and guarantees (implementation, achievement) of economic transactions for certain purposes from creditors to debtors . Further regarding this matter, norms and/or legal instruments are needed that are able to cover, support aspects of legal certainty and legal protection simultaneously for all parties, debtors and creditors, in the case of this research, namely crypto assets as objects of collateral institutions.

Referring to Law Number 4 of 2023 concerning Development and Strengthening of the Financial Sector (UU P2SK), especially Article 6 concerning the duties of regulation and supervision of activities in the ITSK sector as well as digital financial assets and crypto assets, the authority or authority for formation, regulation and coverage law, whether it includes legal protection or other matters, which previously

belonged to CoFTRA, then with the promulgation of the P2SK Law when the transition was complete from CoFTRA (which was still ongoing when this research was completed) it then became vested in the Financial Services Authority (OJK), so that the formation, regulation and legal coverage related to cryptocurrencies or crypto assets will then be awaited according to OJK decisions and or regulations (LN.2023/No.4, 2023).

The transition of crypto trading supervision from the Commodity Futures Trading Supervisory Agency, Ministry of Trade to the Financial Services Authority (OJK) will be completed in January 2025. Where in the P2SK Law, the transition must be completed in full no later than 24 (twenty four) months, starting since the P2SK Law was enacted.

Legal protection for crypto currency holders in Indonesia, of course, requires the establishment of a law that can cover, first of all, the legal bases for crypto currency or crypto assets that can be recognized, covered or legitimized by law and law makers. in Indonesia, then the legal basis for ownership or Indonesian legal entities that hold or control crypto currency or crypto assets in Indonesia (Edwards-Jones, 1993; Wacks, n.d.).

The challenge is that ownership or control of cryptocurrency has the potential to be cross-border ownership or not limited to the jurisdiction of a country and the domicile of the party concerned, where so far there are no laws and regulations in Indonesia that can reach or cover currency. crypto or crypto assets which have potential value as objects of collateral institutions as well as within the regulatory corridor limits of the P2SK Law which mandates and still requires the issuance of Government Regulations regarding the transfer of regulatory and supervisory tasksof course including the formation of regulations which previously fell under government then when the transition is complete which was still in progress at the time of completion of this research to being under the OJK, which will include regulating crypto currency or crypto assets which have potential as objects of collateral institutions.

The Civil Code regarding pawn guarantees and the P2SK Law need Government Regulations and OJK Regulations regarding crypto assets as objects of pawn guarantee institutions, or, if not, the Fiduciary Guarantee Law needs to be substantially/massively amended to comply with the OJK's authority regarding crypto assets according to the P2SK Law and to cover legal certainty and protection as well as crypto asset risk management which is not as simple as the norms in the Fiduciary Guarantee Law.

In the context of crypto assets which have potential value as objects of collateral institutions in Indonesia, Law Number 4 of 2023 concerning Development and Strengthening of the Financial Sector (UU P2SK) does not regulate crypto assets as objects of collateral institutions in such a way, and the P2SK Law mandates the formation of regulations. The government regarding the transfer of regulatory and supervisory duties related to crypto assets from previously being under CoFTRA then when the transition was completed from CoFTRA (which was still ongoing at the time of completion of this research) to being in the Financial Services Authority (OJK), as well as regulation and supervision (more on that) in or by the OJK, which of course includes the formation of laws, decisions and/or regulations related to crypto assets, to what extent crypto assets (which have potential (value)) as objects of collateral

institutions can be regulated through further positive legal regulations in Indonesia.

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