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Legal Dilemma of Legality Aspect Blockchain and Cryptocurrency Transaction in Indonesia

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Abstract: Cryptocurrency regulation in Indonesia faces complexity due to differences in approach between Bank Indonesia (BI), the Commodity Futures Trading Supervisory Agency (Bappebti), and the Financial Services Authority (OJK), which creates legal uncertainty for the public and business actors. BI prohibits cryptocurrency as a means of payment, Bappebti classifies it as a tradable commodity, while OJK limits the involvement of financial institutions in crypto-asset transactions. This disharmony impacts legal certainty, consumer protection, and supervision of the potential misuse of cryptocurrency in criminal acts such as money laundering and terrorism financing. Although the government has regulated taxes on cryptocurrency transactions through the Minister of Finance Regulation, regulations related to investor protection and supervision mechanisms still need to be clarified. Therefore, policy harmonization is needed between BI, Bappebti, OJK, and other relevant authorities to create clear regulations, balance between supervision and innovation, and provide legal certainty for the cryptocurrency ecosystem in Indonesia to encourage sustainable digital economic growth.

Keywords: Cryptocurrency, Legality, Blockchain

INTRODUCTION

The development of digital technology has brought about major transformations in various sectors, including finance. One of the most prominent innovations is the emergence of cryptocurrency and blockchain technology, which has changed the way individuals and institutions conduct transactions (Kusnanto, 2024). Cryptocurrencies, such as Bitcoin, Ethereum, and other digital assets, offer an alternative to traditional payment systems that previously relied on financial intermediaries such as banks and financial institutions (Hasani, 2022). With increasingly widespread adoption, this digital currency is not only used as an investment tool but also as a payment instrument in various economic sectors, both at the individual and corporate levels.

Blockchain technology, which is the cryptocurrency basic system, offers various advantages, including transparency, decentralization, and efficiency in transactions (Arwani, 2024). Unlike conventional financial systems that rely on central authorities, blockchain works with a distributed ledger system that allows transactions to be recorded permanently, securely, and irreversibly (Handoko, 2024). With this mechanism, blockchain can increase trust in digital transactions, reduce the risk of data manipulation, and eliminate dependence on third parties such as banks or clearing houses.

Despite its great potential, the presence of cryptocurrency and blockchain also poses new challenges for the legal and financial systems (Mufrihah, 2024). On the one hand, the traditional financial system has long operated within a strict regulatory framework to ensure stability and consumer protection (Siregar, 2024). On the other hand, the anonymous and decentralized nature of cryptocurrency raises concerns regarding money laundering, terrorism financing, and other cybercrimes (Haris, 2023). The inconsistency between existing regulations and the development of this new technology has led to legal uncertainty in digital transactions.

With the increasing use of cryptocurrency and blockchain technology, various countries have begun to formulate more comprehensive regulations to accommodate these developments. Indonesia itself has issued several related regulations, such as Government Regulation Number 5 of 2021 concerning the Implementation of Risk-Based Business Licensing and Bappebti Regulation No. 8 of 2021 concerning Guidelines for Organizing Physical Crypto Asset Market Trading on Futures Exchanges, which regulates crypto asset trading. However, there are still differences in approach between various institutions, such as Bank Indonesia and the Ministry of Trade, which shows that regulation of the cryptocurrency ecosystem is still in the development stage. Therefore, further studies are needed to develop a legal framework that is responsive, adaptive, and able to provide legal certainty in blockchain and cryptocurrency-based transactions.

Cryptocurrency regulations in various countries still vary significantly, reflecting differences in approaches to regulating these digital assets (Pamungkas, 2021). Several countries, such as Japan and the United States, have adopted more progressive regulations by recognizing cryptocurrencies as commodities or digital assets that can be legally traded (Umar, 2024). Meanwhile, in Indonesia, regulations related to crypto assets are still developing, with a legal basis regulated through various regulations, such as Regulation of the Commodity Futures Trading Supervisory Agency No. 5 of 2019 which regulates the technical implementation of the physical market for crypto assets on the Futures Exchange. This regulation emphasizes the principles of good governance, legal certainty, and protection of customers in crypto-asset transactions.

Although there are regulations related to crypto asset trading, there is overlapping policy between authorized institutions, such as Bank Indonesia (BI) and the Ministry of Trade. Bank Indonesia, through BI Regulation No. 23/6/PBI/2021 concerning Payment Service Providers, expressly prohibits payment service providers from facilitating transactions using virtual currency as a means of payment, except as regulated by statutory provisions (Widyarani, 2022). This is based on Law No. 7 of 2011 concerning Currency, which stipulates the Rupiah as the only legal means of payment in Indonesia (Widyarani, Juridical Study of the Use of Crypto Coins as a Means of Payment in Indonesia, 2022). Therefore, although cryptocurrency can be traded as a commodity, its use as a means of transaction is still prohibited in Indonesia, creating disagreements in regulations implementation. Legal challenges in blockchain-based transactions include consumer protection, legal certainty, transaction security and privacy (Kawengian, 2024).

The security of these digital assets is still a major concern due to the anonymous and difficult-to-trace nature of the transactions, which can open up opportunities for misuse, such

as money laundering, terrorism financing, and other cybercrime activities (Maulana, 2024). Therefore, Bappebti regulations emphasize that the implementation of the physical market for crypto assets must ensure a price transparency mechanism and customer protection to prevent misuse in these digital transactions (Guntoro, 2024).

The complexity of the law in crypto asset regulation is also influenced by rapid technological advances, while legal regulations are often reactive. Therefore, Indonesia needs to develop a more adaptive and harmonious legal framework between various institutions, such as Bappebti, Bank Indonesia, and the Financial Services Authority (OJK), to ensure more cohesive and non-conflicting regulations. In addition, stricter supervision and the application of technology in the supervisory mechanism can help minimize the risk of financial crimes that use cryptocurrency as a transaction medium. With clearer regulations and better coordination between institutions, Indonesia can create a conducive environment for digital asset innovation without ignoring aspects of security and economic stability.

Current regulations still face challenges in accommodating the rapid development of cryptocurrency and blockchain technology. Although several regulations have been issued, such as Bappebti Regulation No. 5 of 2019 and related policies from Bank Indonesia and the Financial Services Authority (OJK), these regulations do not fully reflect flexibility and responsiveness to the dynamics of digital assets. Rapid technological change demands a more adaptive and dynamic legal framework to create a balance between technological innovation and the protection of public interests (Yulianingrum, 2024). Without comprehensive regulations, risks such as money laundering, terrorism financing, and wild speculation that can disrupt economic stability are increasingly difficult to control. Therefore, policy reforms are needed that not only supervise and limit but also provide space for the growth of the digital asset ecosystem safely and sustainably.

In its formulation, cryptocurrency regulations must adopt a multidisciplinary approach that includes legal, economic, and technological aspects to answer the existed challenges (Tuna, 2024). The role of the government and regulators needs to be strengthened in setting clear legal standards, while the private sector and technology community must also be involved in creating inclusive and implementable policies. With good integration between all stakeholders, the resulting regulations will not only provide legal certainty but also encourage innovation and wider adoption of blockchain technology in Indonesia. This can also increase the competitiveness of the national digital economy, and open up new investment opportunities in the technology-based financial sector.

METHOD

This study uses a normative and empirical legal approach to analyze regulations related to cryptocurrency and blockchain in the Indonesian legal system. The normative legal approach is performed by examining relevant laws and regulations, legal doctrines, and jurisprudential studies to understand aspects of legal certainty and regulatory implementation. Meanwhile, an empirical approach is used to identify legal practices in the field through case studies, interviews with regulators, and analysis of the impact of policies on the digital asset industry. Data collection methods involve literature studies, which include academic studies and legal documents, as well as regulatory analysis to evaluate the effectiveness and gaps in existing regulations. In addition, a jurisprudential analysis is conducted to examine court decisions related to digital transactions and legal disputes involving cryptocurrency. A multidisciplinary approach, which integrates law, economics, and information technology, is used to understand the economic implications and technical challenges in regulating digital assets so that it can provide a more comprehensive picture in formulating policies that are adaptive and responsive to technological developments.

RESULT AND DISCUSSION

Complexity of Legality Aspects in Blockchain and Cryptocurrency Transactions in Indonesia

Cryptocurrency regulation in Indonesia faces quite high complexity due to differences of opinion between Bank Indonesia (BI) and the Ministry of Trade (Kemendag) through the Commodity Futures Trading Supervisory Agency (Bappebti). Bank Indonesia, as the monetary authority, emphasizes that cryptocurrency is not a legal tender in Indonesia as stipulated in Law Number 7 of 2011 concerning Currency, which in Article 1 number 1 states that the legal tender in Indonesia is the Rupiah (Kivan, 2021). In line with this, Bank Indonesia Regulation Number 23/6/PBI/2021 also prohibits Payment Service Providers (PJP) from facilitating transactions using virtual currency. Article 203 of this regulation states that PJP is prohibited from facilitating virtual currency trading except as regulated by statutory provisions, which further emphasizes that BI rejects cryptocurrency as a medium of exchange in Indonesia.

The Ministry of Trade through Bappebti has a different view by recognizing cryptocurrency as a tradable commodity. This is regulated in Bappebti Regulation Number 5 of 2019, which in Article 2 states that crypto asset trading must pay attention to legal certainty, and customer protection, and facilitate innovation, growth, and development of physical crypto asset trading business activities (Pratama, 2024). This regulation makes cryptocurrency a trading instrument on a futures exchange, but not as a means of payment. Thus, although cryptocurrency is recognized as a legal commodity to be traded under the supervision of Bappebti, its use as a means of payment is still prohibited by BI (Tomia, 2024). The disagreement between the two institutions creates regulatory uncertainty, especially for investors and business actors who want to use cryptocurrency in their economic activities.

This regulatory ambiguity has an impact on the adoption of cryptocurrency in Indonesia. Bank Indonesia's ban limits the use of cryptocurrency in daily transactions, while Bappebti's regulation allows the public to trade this digital asset as a commodity. This difference creates legal ambiguity that can hinder the development of the digital asset industry and blockchain technology in Indonesia. In addition, Article 204 of Bank Indonesia Regulation Number 23/6/PBI/2021 emphasizes that digitally represented values, such as cryptocurrencies, cannot be claimed from the issuer, cannot be exchanged for rupiah, and have usage restrictions. Therefore, regulatory harmonization is needed between Bank Indonesia, Bappebti, and other relevant authorities to create clearer policies and provide legal certainty for all stakeholders in the cryptocurrency ecosystem in Indonesia.

Cryptocurrency regulation in Indonesia still faces significant legal challenges due to the lack of regulatory certainty and overlapping policies among various authorities such as Bank Indonesia (BI), the Financial Services Authority (OJK), and the Commodity Futures Trading Supervisory Agency (Bappebti) (Disemadi, 2022). Bank Indonesia regulates cryptocurrencies as not legal tender, while Bappebti classifies them as tradable commodities. Meanwhile, OJK as the supervisor of the financial services sector does not yet have specific regulations regarding cryptocurrencies but emphasizes that financial institutions should not be involved in crypto asset transactions. This difference in approach creates uncertainty for the public and business actors, especially in determining how cryptocurrencies can be used legally in Indonesia.

The lack of clarity in regulations has an impact on various important legal aspects such as taxes, consumer protection, and oversight mechanisms. Currently, the Government through the Directorate General of Taxes has set a tax on cryptocurrency transactions based on the Regulation of the Minister of Finance (PMK) Number 68/PMK.03/2022, which regulates the Value Added Tax (VAT) rate of 0.11% for crypto asset transactions. However, regulations

related to consumer protection and supervision of cryptocurrency trading practices are still unclear. Investors face high risks due to price volatility, potential fraud, and the lack of effective dispute resolution mechanisms. If there is a violation or loss due to crypto asset transactions, there are no clear rules regarding legal protection for users, which can increase the risk to the community.

Another legal challenge is the potential for misuse of cryptocurrency for criminal acts such as money laundering and terrorism financing. Cryptocurrency allows anonymous and difficult-to-trace transactions, which can be exploited by irresponsible individuals to conduct illegal transactions. The government has anticipated this by issuing Bank Indonesia Regulation Number 19/12/PBI/2017 concerning the Prevention of Terrorism Funding and Money Laundering, as well as related regulations by the Financial Transaction Reports and Analysis Center (PPATK). However, without more comprehensive and integrated regulations, supervision of cryptocurrency transactions still has loopholes that can be exploited for illegal activities. Therefore, harmonization of policies between institutions is needed to create clear, integrated, and effective laws to regulate the cryptocurrency ecosystem in Indonesia.

The unrealized regulations in Indonesia create legal uncertainty for the public and business actors in adopting cryptocurrency. Bank Indonesia (BI) prohibits cryptocurrency as a payment method, while Bappebti recognizes it as a tradable commodity. In addition, the Financial Services Authority (OJK) also limits the role of financial institutions in crypto asset transactions, which further complicates the ecosystem. As a result, individuals and business actors who want to take advantage of blockchain technology and digital assets often face regulatory constraints and the risk of changing policies. Without legal certainty, many investors and companies choose to be careful or even avoid using cryptocurrency widely, thus hampering the growth of the digital asset ecosystem in Indonesia.

However, clear and consistent regulations can have a positive impact on cryptocurrency adoption. If regulations can accommodate the needs of technological innovation while still providing legal protection for consumers and businesses, Indonesia has the potential to attract more investment in the digital asset and blockchain sectors. Adequate legal protection can also increase public trust in cryptocurrency, which will ultimately encourage the development of this industry more broadly. Therefore, a balanced policy is needed between supervision and innovation, so that cryptocurrency can develop while maintaining the stability of the financial system and protection for users.

Legal Implications Related to Security, Privacy, and Consumer Protection and the Role of Government Institutions and the Private Sector in Creating Effective Regulations

Consumer protection in blockchain-based transactions is an important issue considering the increasing risk of cyber attacks and theft of digital assets. One of the biggest threats is hacking of digital wallets to store crypto assets. Attacks such as phishing, malware, and exploiting security holes can result in the loss of assets without a obvious recovery mechanism. Therefore, the implementation of security standards such as advanced cryptography, two-factor authentication (2FA), and cold storage usage (storing assets on offline devices) are crucial steps to protect consumers from cyber threats.

In Indonesia, consumer protection regulations in blockchain transactions are still in the development stage and do not specifically regulate dispute resolution mechanisms in the event of asset loss due to cyberattacks. Although the Commodity Futures Trading Regulatory Agency (Bappebti) has set regulations regarding crypto asset trading, the user security against cybercrime is still a challenge. Crypto exchange service providers are expected to be responsible for maintaining the security of user assets and providing compensation or insurance schemes for users who suffer losses due to hacking or system failures.

In addition to protection against cyber attacks, the legal security aspect of blockchain also needs to be considered. Blockchain technology, which is decentralized and uses an encryption mechanism, allows for more transparent and difficult-to-manipulate transactions. However, the absence of a single authority that regulates these transactions creates a dilemma in resolving legal disputes. Therefore, clear regulations need to be made to ensure that the privacy and transparency mechanisms provided by blockchain remain in line with applicable laws in Indonesia, as well as provide protection for consumers who transact using digital assets.

Smart contracts are programming code-based contracts that automatically execute the terms of the agreement when certain conditions are met. In digital transactions, smart contracts are used in various sectors, such as trade, finance, and real estate, to automate payment processes, asset transfers, or agreement validation without the need for intermediaries. The main advantages of smart contracts are efficiency and transparency, because all transactions are recorded on the blockchain and are difficult to manipulate. However, from a legal perspective, the existence of smart contracts poses a challenge because contract law in Indonesia still relies on written forms and conventional signatures as valid evidence of an agreement.

The legality and enforceability of smart contracts in Indonesia are still being debated, considering that there are no regulations that explicitly recognize this code-based contract as a valid and legally binding tool. In traditional contract law, an agreement must meet the elements of agreement between the parties, legal capacity, certain objects, and lawful causes. Challenges arise when smart contracts operate automatically without human intervention, raising questions about how Indonesian law can accommodate or adjust to this concept. For this reason, regulatory updates are needed that recognize smart contracts as a valid form of electronic contract, as well as ensuring a dispute resolution mechanism in the event of failure or error in contract execution.

In addition to smart contracts, asset tokenization also has significant legal implications. Tokenization allows physical or financial assets such as property, stocks, or works of art to be converted into digital representations on the blockchain that can be traded more flexibly. Although it provides opportunities for financial inclusion and wider market access, the ownership and protection of token holder rights is still a major challenge. In Indonesia, laws regarding asset ownership and investor protection are still based on traditional instruments that rely on physical certificates or recording in a centralized financial system. Therefore, regulations are needed that provide legal certainty regarding the status of token ownership, the rights of token holders in transactions, and dispute resolution mechanisms involving tokenized assets.

The government has a crucial role in developing regulations that balance consumer protection and the growth of innovation in the cryptocurrency and blockchain sector. As a policy maker, the government must ensure that the laws implemented can create legal certainty for investors and industry players, while protecting the public from potential risks such as money laundering, terrorism financing, and cybercrime. Strict yet flexible regulations are needed to keep the industry growing without causing negative impacts that are detrimental. In addition, the government also needs to strengthen coordination between various regulatory institutions to avoid overlapping regulations that can confuse business actors and the public.

Several major regulators in Indonesia, such as Bank Indonesia (BI), the Financial Services Authority (OJK), and the Commodity Futures Trading Supervisory Agency (Bappebti), have different roles in overseeing crypto assets and blockchain technology. BI and OJK generally prohibit the use of cryptocurrency as a means of payment, while Bappebti regulates the trading of crypto assets as digital commodities. These different approaches often

create uncertainty in the market, so more harmonious regulations are needed to ensure policy alignment between authorities. The preparation of clearer regulations regarding trading mechanisms, taxation, and crypto transaction security standards will provide better legal certainty for industry players and investors.

In addition to the role of the government, the private sector also has a major contribution in building a healthy and innovative blockchain ecosystem. Technology companies and blockchain startups can help create industry standards and best practices that support regulations that are more adaptive to technological developments. For example, companies can develop stronger blockchain-based security systems, provide educational services related to digital assets for the public, and collaborate with regulators in designing realistic and applicable policies. With the collaboration between the government and the private sector, the regulations implemented can be more in line with market needs, not only limiting but also encouraging the growth of blockchain-based industries in Indonesia.

CONCLUSION

Cryptocurrency regulation in Indonesia still faces challenges due to differences in approach between Bank Indonesia (BI), the Commodity Futures Trading Supervisory Agency (Bappebti), and the Financial Services Authority (OJK), which creates legal uncertainty for the public and business actors. BI prohibits cryptocurrency as a means of payment, while Bappebti recognizes it as a tradable commodity, and OJK limits the involvement of financial institutions in crypto-asset transactions. This ambiguity affects consumer protection, oversight mechanisms, and the potential for misuse of digital assets in criminal acts. Although the government has imposed taxes on cryptocurrency transactions and implemented money laundering prevention policies, more comprehensive regulatory harmonization is still needed so that the digital asset ecosystem can develop with clear legal certainty. With a balanced policy between supervision and innovation, Indonesia can optimize the potential of cryptocurrency to drive digital economic growth while maintaining financial system stability and consumer protection.

Consumer protection in blockchain-based transactions is a crucial aspect that requires a balance between security, innovation, and legal certainty. The risk of cyber attacks, the legality of smart contracts, and ownership status in asset tokenization require clearer and more adaptive regulations to technological developments. The government, through coordination between authorities such as BI, OJK, and Bappebti, needs to formulate policies that protect consumers and encourage industry innovation. On the other hand, the private sector plays a role in creating security standards and best practices to strengthen the blockchain ecosystem in Indonesia. With harmonious regulations and close collaboration between the government and the private sector, it is foreseen to run blockchain technology safely and transparently to supply benefits for stakeholders.

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