



ADDRESSING LEGAL RISKS AND REGULATORY NEEDS FOR THE IMPLEMENTATION OF CENTRAL BANK DIGITAL CURRENCY IN INDONESIA

Sudaryat, Universitas Padjadjaran, Bandung, email: sudaryat@unpad.ac.id

Rafan Darodjat, Universitas Padjadjaran, Bandung, email: rafan@unpad.ac.id

Nun Harrieti, Universitas Padjadjaran, Bandung, email: nun.harrieti@unpad.ac.id

ABSTRAK

Bank Indonesia as the Central Bank has full authority to manage the issuance and distribution of Rupiah in Indonesia. The creation of a digital currency initiated by Bank Indonesia is a contribution to the struggle to maintain the sovereignty of the Rupiah in the digital era. Digital progress requires appropriate and dynamic regulations, considering that its development cannot be predicted, of course this is because of its nature which can be accessed by anyone. The plan to create a digital currency, namely the Central Bank Digital Currency (CBDC) has risks that must be institutionally mitigated which are formulated through appropriate legal products. This study aims to strengthen central banking governance for the implementation of CBDC through legal formulations related to regulations and managing the risk of entering the transformation of conventional to digital currencies. Through normative legal research, it is known that the risk of CBDC has its own challenges because the world of financial inclusion systems with the existence of Artificial Intelligence and bots (robots) can take action automatically, of course it is high risk because there is no legal subject responsible, not to mention the transnational character of digital technology. Currently, the regulatory formulation for CBDC is determined in Law No. 7 of 2011 concerning Currency as amended by Law No. 4 of 2023 concerning the Development and Strengthening of the Financial Sector that in addition to Paper Rupiah and Metal Rupiah, there is also Digital Rupiah as the currency of the Unitary State of the Republic of Indonesia.

Keywords: Digital Rupiah; Legal Risk, Regulatory

INTRODUCTION

Indonesia operates as a legal state guided by the Pancasila philosophy, as explicitly articulated in the Fourth Amendment of Article 1, paragraph 3 of the Constitution of 1945. The Indonesian constitutional political system was fortified as a rule of law nation following the 1945 Constitution amendment. Prior to the amendment, the regulations governing Indonesia as a rule of law state were not explicitly stated in the constitution itself, but rather in the explanation of the 1945 Constitution, which states, "The Indonesian state is founded upon law (*rechtstaat*) rather than mere power (*machtstaat*)".¹ Oemar Seno Adji posits that the Indonesian legal system embodies distinctive Indonesian attributes. Given its reliance on Pancasila as the primary foundation and source of law, the Indonesian legal system may be referred to as the Pancasila Legal Status.²

Indonesia, which regards legislation as its primary source of law for the state, also implements the positivist flow. Legal positivism is renowned for its insistence on the distinction between morality

¹ Imam Subechi, "Mewujudkan Negara Hukum Indonesia," *Jurnal Hukum dan Peradilan*, Volume 1 No. 3, 2022, p. 342.

² Oemar Seno Adji, *Pengadilan Bebas Negara Hukum*, Airlangga, Jakarta: 1980, p. 35.

and the law. There are those who maintain the perspective that the law remains the law.³ How does society position itself by understanding the law in a positivistic legalistic and rule-based way by making Pancasila the ideal basis as the basis for these laws and regulations. Pancasila is the source of all sources of law in Indonesia.

As the central bank, Bank Indonesia is governed by Law No. 23 of 1999, which serves as one of the governing sources of legislation. Law no. 23 of 1999 pertaining to Bank Indonesia has undergone multiple amendments, with the most recent being Law no. 4 of 2023, which addresses the enhancement and fortification of the financial sector. As the sole central bank of the Republic of Indonesia, Bank Indonesia operates as an autonomous governmental establishment, devoid of any external influence or intervention. One approach taken by Bank Indonesia to ensure the stability of the rupiah's value is through the regulation and maintenance of the payment system's efficiency through the assessment of payment instrument usage. The responsibilities of Bank Indonesia are centred on three areas: monetary policy formulation and implementation, bank supervision and regulation, and payment system implementation and regulation. With the signing of the Minutes of Handover (BAST) between Bank Indonesia and the Financial Services Authority on December 31, 2013, the responsibility for banking regulation and supervision was transferred from Bank Indonesia to the Authority, in accordance with the mandate of Law Number 21 of 2011 concerning the Financial Services Authority. Services financial in nature. Microprudential supervision of individual banks has been the responsibility of the Financial Services Authority since December 31, 2013. Nevertheless, Bank Indonesia continues to exercise macroprudential oversight in collaboration with the Financial Services Authority.

As with other central banks around the globe, Bank Indonesia is presently evaluating the feasibility of implementing a Central Bank Digital Currency (CBDC) based on a digital rupiah. The legal foundation is necessary to bolster the Central Bank institution's authority to oversee the phases of planning, producing, issuing, circulating, withdrawing, and destroying the digital rupiah currency that Bank Indonesia is developing. Due to the facilitation of transactions and transnational scope of digital currency, the legal framework governing its management must be adaptable. As the digital currency authority, Bank Indonesia (BI) must have the capacity to formulate lawful products in the shape of policies that safeguard the rupiah's sovereignty and accommodate the nation's interests.

The contemporary era of digitalization has profoundly affected every aspect of existence, including the economic sphere. Financial transactions, which were formerly conducted predominantly in person, are presently becoming more convenient to execute remotely and without time constraints through electronic platforms. The facilitation of transactions has given rise to the evolution of payment instruments, which were formerly recognised solely as physical currency in the form of paper currency or coinage, but are presently also referred to as electronic money due to their ability to enable cashless transactions.

Electronic currency has become a prevalent method of payment in payment transactions, including the payment of toll rates, bills, tickets, and more. It is now extensively recognised in society.

³ Akhmad Khubi Ali, *et.al.*, "Positivisme dan Pengaruhnya Terhadap Penegakan Hukum di Indonesia," *Ma'mal, Jurnal Laboratorium Syariah dan Hukum*, Volume 1 No. 03, 2022, p. 221.

In addition to digital currency, electronic wallets (e-wallets) also exist. Electronic wallet (e-wallet) refers to a digital service that stores payment instrument data, including card and electronic money payment instrument data, in accordance with PBI No. 18/40/PBI/2016 concerning the Implementation of Payment Transaction Processing. E-wallets may also contain funds for making payments. Server-based electronic wallets are applications that enable users to conduct payments online from any location and at any given moment.

Digital currency, in addition to advancements in payment systems such as electronic wallets and electronic money, is also well-known. Upon its initial inception, this digital currency was referred to as cryptocurrency. The majority of central banks globally prohibited the use of this cryptocurrency as a legitimate method of payment due to its lack of issuance by monetary authorities and its classification as a high-risk financial instrument when employed for value storage. In Indonesia, the use of cryptocurrencies as payment methods is strictly prohibited. However, they are classified as commodities that are eligible for trading on futures exchanges. These assets, also referred to as cryptocurrencies, are subject to additional regulations and laws, such as Commodity Futures Trading Supervisory Agency Regulation No. 5 of 2019, which outlines the technical provisions necessary to establish a physical market for crypto assets (Crypto Assets) on the futures exchange.

Cryptocurrencies are experiencing substantial growth in a number of nations as a substitute for cash-based transactions, including international money transfers. Ten nations in 2020 had citizens who possessed substantial quantities of cryptocurrencies. Nigeria, Vietnam, the Philippines, Turkey, Peru, Switzerland, China, the United States, Germany, and Japan comprise the ten nations. Nigeria, comprising 34 percent of the ten countries, exhibits the greatest adoption rate of cryptocurrencies. Consumers in Nigeria conduct cryptocurrency-based online transactions via their mobile devices. As an investment instrument, interest in cryptocurrencies is beginning to increase not only on the international market but also in Indonesia.⁴

Almost all types of cryptocurrencies do not have an underlying asset as a common underlying asset in ordinary investments, which differentiates them from most crypto assets that are primarily used as investment instruments and may derive value from certain technological or economic utilities. While cryptocurrencies are designed mainly as a medium of exchange and are not recognized as legal tender in Indonesia⁵, crypto assets encompass a broader category that includes tokens used for investment, utility, or governance purposes. In response to the legal and monetary risks posed by unregulated cryptocurrencies, CBCD is introduced as a sovereign, regulated digital currency that offers a safer and legally recognized alternative for digital transactions.

Additionally, Bank Indonesia is examining the progress made towards establishing the Digital Rupiah as a CBDC in Indonesia. Digital rupiah refers to rupiah currency that is stored in a digital format and can be utilised similarly to physical money (banknotes and coinage), electronic money (based on chips and servers), and card/APMK payment instruments.⁶ The Digital Rupiah itself is only issued by

⁴ Purwanto, Antonius, Mata Uang Kripto, Dari Sejarah Awal Hingga Regulasi di Indonesia, <https://www.kompas.id/> 7 January 2022.

⁵ Afif Noor, *et.al.*, "Crypto Assets and Regulation: Taxonomy and Framework Regulatory of Crypto Assets in Indonesia," *Journal of Etika Demokrasi*, Vol. 8 No. 3, 2023, hlm. 304.

⁶ Departemen Komunikasi Bank Indonesia, Rupiah Digital, Uang Masa Depan Kita, <https://www.bi.go.id/id/publikasi/ruang-media/cerita-bi/Pages/Rupiah-Digital-Uang-Masa-Depan-Kita.aspx>, accessed 13 March 2023.

Bank Indonesia as the Central Bank of the Republic of Indonesia. Digital Rupiah is also not included in crypto assets or stablecoins.⁷ Legal considerations, including regulatory readiness, legal risk mitigation, data protection, and privacy, indisputably contaminate the development of the Digital Rupiah.

The design process for the Digital Rupiah will be executed in stages and iteratively (repetitively). The process of creating the Digital Rupiah will proceed in three distinct phases. Development will commence with the wholesale of digital rupiah, which will be utilised for the issuance, destruction, and interparty transmission of funds. Additionally, the implementation of wholesale Digital Rupiah will be broadened to facilitate financial market transactions. Thirdly, an evaluation will be conducted on the end-to-end integration (from inception to completion) of digital Rupiah from wholesale to retail.⁸ This approach allows exploring various alternative Digital Rupiah designs to ensure the most optimal added value.

As well as serving as a monetary anchor for other digital currencies in Indonesia, the Digital Rupiah is anticipated to fulfil its roles as a store of value, medium of exchange, and unit of account. Furthermore, Digital Rupiah will facilitate the execution of Bank Indonesia's responsibilities pertaining to the payment system, macroprudential, and monetary domains in the digital age. In conclusion, Digital Rupiah will facilitate the national integration of the digital financial economy and promote the growth of the financial system. The introduction of Digital Rupiah will not eradicate the need for cash or electronic currency. Digital Rupiah will exclusively introduce alternative payment methods besides cash and electronic currency. Similar to electronic currency, Digital Rupiah can only be utilised within a specialised ecosystem. This necessitates the participation of constituents or actors other than Bank Indonesia, which serves as the issuer.

METHODS

This research uses descriptive analytical research specifications⁹ by describing or illustrating existing facts in the form of secondary and primary data using primary, secondary and tertiary legal materials.¹⁰ The approach used in this research is the statutory approach.¹¹ Provisions of national legislation, policies, jurisprudence, and sources of international law constitute primary legal materials. Secondary legal materials consist of expert opinions, including doctrine, in the field of currency. Additionally, tertiary legal materials may be utilised to supplement legal dictionaries. This research specification is employed to identify regulatory formulations for digital currencies and predictive research (Predictive Research) that estimates or forecasts future events or occurrences based on the findings of current analyses and those conducted in other nations. By means of trend and correlation analyses, predictive research examines the relationship between the adoption of

⁷ *Ibid.*

⁸ Bank Indonesia. *Proyek Garuda, Menavigasi Arsitektur Digital Rupiah*. Jakarta: Bank Indonesia, 2022. p. 11.

⁹ Soerjono Soekanto. *Pengantar Penelitian Hukum Edisi Kedua*. Jakarta: UI Press. 1982, p. 2.

¹⁰ Ronny Hanitijo Soemitro, *Metodologi Penelitian Dan Jurimetri*, Ghalia Indonesia, Jakarta: 1990, p. 11.

¹¹ Al-Khansa, Atikah Sanusi and Taruno, Yudho Muryanto. 2022. "Perlindungan Hukum Pemberi Pinjaman Terhadap Klausula Baku Pada Layanan *Peer To Peer Lending*." *Journal: Privat Law* Volume, 10(2), p. 247.

digitalized currency and the risk inclinations that Bank Indonesia may encounter in the event that it issues digital rupiah.

Normative juridical approach method or also known as library research¹² used in this research by interpreting the law grammatically and authentically.¹³ Apart from that, vertical and horizontal synchronization is also carried out,¹⁴ The purpose of these approaches is to analyse and interpret a range of legal provisions and regulations in Indonesia that are applicable to the issuance of digital rupiah.

The employed method of data analysis is qualitative legal. Qualitative analysis is conducted to unveil established realities through explanations derived from research findings that are not amenable to numerical representation, mathematical formulas, or calculation. Qualitative analysis is employed in this study to provide greater precision, encompassing legal principles, legal hierarchy, and legal certainty.

RESULTS AND DISCUSSION

Regulatory Formulation for Central Bank Digital Currency in Indonesia

A country's economy is reflected in the strength of its currency. The rupiah currency as a symbol of the sovereignty of an independent and sovereign country must be respected by all Indonesian citizens.¹⁵ To ensure that all Indonesian citizens enjoy social welfare, the Rupiah is recognised as a legitimate medium of exchange in the country's economic transactions. The regulation of the Rupiah currency implementation is mandated by law.

The one and only legally recognised currency for conducting transactions in Indonesia is the Rupiah. The use of foreign currency, digital currency, or cryptocurrency for transactions within Indonesian territory is deemed invalid. Clearly, imprisonment and a fine will be imposed if foreign currency or cryptocurrency is utilised for the purpose of the payment. Foreign currency may be utilised as an asset, in barter, for the convenience of international travellers, and for transactions conducted beyond Indonesian territory.

In the realm of economics, means of exchange and means of payment are fundamental components that sustain human existence. The emergence of human civilization coincided with the implementation of an economic system in which exchanges were conducted through barter. The expansion of the human population necessitates the development of more streamlined and effective transaction systems; thus, currencies are established to facilitate commerce.

In general, the main function of currency is as a unit of value, medium of exchange, and payment standard¹⁶. Money plays a crucial role in the economic life of a nation due to its multifaceted functions, which include serving as a medium of exchange or payment, as well as a unit of measurement for prices; thus, it can be regarded as one of the primary instruments of the economy.

¹² Soerjono Soekanto and Sri Mamudji. *Penelitian Hukum Normatif suatu Tinjauan Singkat*. Rajawali, Jakarta: 1985, p. 63.

¹³ Bhakti, Yudha. *Penafsiran dan Konstruksi Hukum*. Alumni, Bandung: 2000, p. 25

¹⁴ Ronny Hanitjo Soemitro. *Metodologi Penelitian Hukum dan Jurimetri*. Ghalia, Jakarta: 1990. P. 11.

¹⁵ Arman Nefia and Agus Sardjono. "The Urgent Need To Amend The Indonesian Law On Currencies To Face The Digital Age," *Journal of Central Banking Law and Institutions*, Vol. 1 No. 1, 2022, p. 23.

¹⁶ Nussbaum, "Basic Monetary Conceptions in Law," supra note 2, at 867; see also Nussbaum, Money in the Law, Supra Note. 1

A money-based economy will facilitate the realisation of state objectives, such as the establishment of a prosperous and equitable society. Aside from that, with regard to the monetary sector in particular, the quantity of money in circulation within a nation must be effectively regulated to meet the requirements of the economy.

Due to the critical nature of a nation's currency, effective governance and robust institutions are essential. Good administration requires the presence of an authorised central bank. The Central Bank is an institution charged with overseeing the quantity of currency in circulation to ensure that it is sufficient for precautionary, speculative, and transactional purposes, thereby facilitating the efficient operation of the economy. As an element of monetary authority with the power to implement monetary policy, and as an institution entrusted with the authority to oversee, regulate, and control the monetary system in a nation or society, the Central Bank typically serves two purposes.¹⁷

Bank Indonesia should possess the jurisdiction to develop policies that are dynamic, easily implementable, and responsive to current requirements in order to effectively oversee and implement the currency. The legislative delegation that certifies the pertinent articles in order to issue Bank Indonesia Regulations oversees the authority over Bank Indonesia's operations.

The primary challenge associated with the creation and utilization of digital currency stems from the legal dimension, necessitating meticulous consideration, particularly in the realm of regulation. An effective regulatory formulation must consider three fundamental aspects: the philosophical foundation, the juridical foundation, and the sociological foundation. The philosophical foundation is a rationale or justification that demonstrates that the formulated regulations incorporate the worldview, consciousness, and legal principles that encompass the spiritual ethos and philosophy of the Indonesian nation, derived from Pancasila and the Preamble to the 1945 Constitution. To address legal issues or address legal loopholes, it is necessary to examine current regulations, as well as those that are subject to change or revocation, in order to ensure legal certainty and uphold the community's perception of fairness. The sociological basis refers to the underlying rationale or justification for the creation of regulations, which are designed to address the diverse requirements of society.

The digital Rupiah has been officially governed by Currency Law No.7 of 2011, as modified by Law No.4 of 2023, specifically in Article 2 Paragraph (2). The different forms of Rupiah include paper currency, metallic coins, and digital currency. The explanation of the article provides a definition related to digital rupiah, namely rupiah in digital form issued by Bank Indonesia and is a monetary obligation of Bank Indonesia. Bank Indonesia is the only institution authorized to manage digital rupiah which includes planning, issuing, distributing, and administering digital rupiah. The digital rupiah has the same function as paper rupiah and metal rupiah, namely as legal tender in the territory of the Unitary State of the Republic of Indonesia, a medium of exchange, and a store of value. The aspects that need to be considered in the Management of digital rupiah as mandated in Article 14A Paragraph (3) of the Currency Law, namely:

¹⁷ Rahardja, Prathama. *Uang Dan Perbankan. Edisi Baru*. PT. Rineka Cipta, Jakarta: 1997, p. 98.

- a. Provision of digital rupiah as legal tender in the Unitary State of the Republic of Indonesia;
- b. Effectiveness of Bank Indonesia's implementation of its duties in maintaining monetary stability, payment systems, and financial systems;
- c. Support for technological innovation and digital economic and financial inclusion;
- d. Development of a nationally integrated digital economy and finance; and
- e. Utilization of digital technology that can guarantee the security of data and information systems and the protection of personal data.

Explanation of Article 22 of PBI No. 4 of 2024 concerning the Bank Indonesia Policy Mix determines that the Determination, regulation, implementation, granting of permits, determination of access (access policy), development, supervision, imposition of sanctions, termination of implementation (exit policy), and/or management are carried out, among others, for paper and metal rupiah and digital rupiah. This is done to achieve the targets of the Payment System Policy as mandated in Article 21 of PBI concerning the Bank Indonesia Policy Mix.

Furthermore, Article 1 Number (9) of PBI No. 4 of 2025 concerning the Payment System Policy states that the Management of digital rupiah is an activity that includes planning, issuance, distribution, and administration of digital rupiah. Article 9 Paragraph (4) of the same provisions regulates policies for managing rupiah currency, including digital rupiah currency, which includes regulations, provision of sufficient and quality rupiah currency, strengthening the business process for distributing rupiah currency, establishing standardization and developing rupiah currency management infrastructure, maintaining and supervising the rupiah currency management industry, strengthening education and literacy and other instruments determined by Bank Indonesia.

The evolution of current information technology has led to the establishment of digital currencies worldwide, including in Indonesia. The present development of cryptocurrencies is driven by the necessity for a cost-effective and expeditious method of transferring funds across national boundaries. Decentralised blockchain technology will simplify digital currency transactions by eliminating the need for complex administrative procedures and formal banking system configurations, which can be burdensome for certain individuals. According to a survey conducted by the Bank for International Settlement (BIS) between 2019 and 2020, an increasing number of central banks around the globe are eager to establish a CBDC.¹⁸

In order to proceed with the issuance, Bank Indonesia invariably requires the involvement of a third party, specifically the application proprietor, irrespective of the source being a digital sector entity (e.g., e-wallet, e-commerce, banking). Additionally, Bank Indonesia must be ready for the implementation of AI and bots, as it will be difficult to identify and trace down those responsible should they be used to commit crimes. At present, a number of central banks across the globe are engaged in deliberations regarding the establishment of a digital currency, referred to as Central Bank Digital Currency (CBDC), which would be issued by the monetary authority (Central Bank). Additionally, it was defined that the Central Bank Digital Currency (CBDC) encompasses any digital fiat liability issued by a central bank, serving as both a medium of exchange for transactions and a store

¹⁸ Agung Mulyono, Menuju Era Uang Rupiah Digital, <https://djjpb.kemenkeu.go.id/5/08/2022>

of value (Meaning, 2021). By this definition, a CDBC must be both electronic and a central bank liability (Meaning, 2021). Based on this definition, CDBC includes two aspects, namely electronic aspects and Central Bank obligations.

Digital Rupiah will be issued in two distinct varieties: wholesale Digital Rupiah (w-Digital Rupiah), which will be distributed exclusively for the settlement of wholesale transactions including monetary operations, forex market transactions, and money market transactions; and retail Digital Rupiah (r-Digital Rupiah), which will be issued with access coverage that is publicly available and utilised for a wide range of retail transactions, including transfers and payment transactions (Meaning, 2021). At present, nine countries, including Nigeria, the Bahamas, and seven countries in the Caribbean islands, have completed the full implementation of CDBC. In contrast, several countries, including Russia, the United States, Singapore, and China, are still in the study or piloting phase. as well as various CDBC models (Meaning, 2021). e-CNY (Digital Yuan), an instance of CDBC implementation, is issued by the PBOC (Central Bank of China), managed by authorised operators, and employing a two-tier operational system and centralised management model (Meaning, 2021). The primary alternative to cash in circulation (M0) is electronic Yuan (e-CNY), which will coexist with physical RMB and give precedence to fulfilling domestic retail payment requirements.

Legal Risk as an Implication of the Indonesian Central Bank Digital Currency

Legal risks refer to potential liabilities and vulnerabilities related to legal claims and the legal aspects of a situation. This risk is mostly caused by the lack of supporting legal laws or deficiencies in the agreement, such as failure to meet the requirements for a legitimate contract or incomplete securing of collateral. The primary goal of Legal Risk Management is to guarantee that the risk management process effectively mitigates the potential negative consequences arising from legal vulnerabilities, regulatory gaps, and changes in statutory rules and litigation procedures.¹⁹ (Yulia, 2019). Several parameters on inherent risk which include important indicators of legal risk, namely:

1. Litigation factor, litigation is the process of resolving legal disputes in court.
2. Weakness factors in an engagement, an engagement is a legal relationship in the field of property law between two/more people or two parties, where one party has the right to demand something from another party, and the other party is obliged to fulfill that demand.²⁰
3. Factors such as the absence of legislation, the products owned by the bank or the transactions used by the bank will result in the product being disputed in the future so there is potential legal risk.²¹

Inherent risk refers to the risk that is naturally present in the actions of an organization. This risk is alternatively referred to as inherent risk. Inherent risks can stem from exogenous events beyond the business, such as shifts in laws and regulations, as well as endogenous variables within the organization, such as deficiencies in internal oversight for Indonesian digital rupiah activity.

The process of digitizing the economy and finance also entails potential threats that must be carefully monitored. The hazards encompass shadow banking, cyber risk and fraud, money laundering

¹⁹ Siska Yuli Anita, et.al, *Manajemen Risiko*, Global Eksekutif Teknologi, Padang:2023.

²⁰ Sebekti, *Hukum Perjanjian*, Intermassa, Jakarta:2010

²¹ Bambang Rianto Rustam, *Manajemen Risiko: Perbankan Syariah di Indonesia*, Salemba Empat, Jakarta:2013

and terrorism financing, unfair corporate competition, and exploitation of consumer data.²² Digital currency possesses certain drawbacks, such as its significant volatility, which classifies it as a high-risk financial instrument when utilized as a store of value. Additionally, mining operations necessitate substantial amounts of electrical energy, and there is a risk of it being exploited to facilitate criminal activities due to its decentralized nature, beyond government regulation. Bank Indonesia, in Press Release Number 20/4/DKom, provides an explanation of the risks and disadvantages associated with the utilization of virtual currency. Bank Indonesia provided a detailed explanation outlining three significant dangers associated with the use of digital currency. These risks include the volatility of exchange rates, the potential for facilitating money laundering and terrorism financing, and the susceptibility to cyber assaults.²³

Information technology can significantly facilitate money laundering activities. Money laundering can exploit information technology, namely cryptocurrencies like Bitcoin and Ethereum, which offer anonymity to conceal illicit activities. Electronic transactions, such as cash transfers or online payments, can be utilized by money launderers to conceal laundered money through counterfeit transactions that provide the appearance of legitimacy. Moreover, social networks can also serve as a means to disseminate inaccurate information and deceive individuals into providing funds to individuals involved in money laundering. Information technology facilitates identity theft, enabling money launderers to fraudulently open bank accounts or credit cards using stolen identities. These accounts are subsequently exploited for the purpose of laundering money. Money launderers can employ sophisticated technologies, such as algorithms or artificial intelligence, to evade discovery and carry out money laundering with greater efficiency.²⁴

Money laundering is the process of utilizing conventional business methods to transfer or conceal monies, with the intention of generating additional financial gain or profit. Indeed, in this scenario, it is accurate to state that the gains obtained can be utilized for personal purposes or as a means to commit money laundering. Money laundering patterns aimed at funding criminal groups often involve service providers and do not have a specific location of origin or destination. Furthermore, money laundering has various connections to following patterns of criminal activity. Frequently, money laundering serves as a mechanism for syndicates to shift illicit financial transactions. This transaction constitutes an illicit means of circulating currency within a nation, without the proper authorization and oversight of the government. The Financial Intelligence Unit (FIU) states that conjecture regarding funding for certain criminal organizations might arise as a result of inadequate integrated strategic information management, which is a worldwide occurrence. This issue stems from a deficiency in comprehending the criminal syndicates present in each nation. Furthermore, the acquisition of hazardous merchandise that can be used by criminal enterprises

²² Bank Indonesia. *Op.Cit.*, hlm.10

²³ Agung Rianto Prasetyo. "Tinjauan Yuridis Penggunaan Mata Uang Digital dalam Transaksi Jual Beli di Indonesia." Theses, University of North Sumatra, 2019.

²⁴ Ahmad Zuhudy Bahtiar. "Mencuri Uang Secara Masif dan Terorganisir Melalui Berbantuan Teknologi Informasi," <https://www.iainpare.ac.id/> 2023.

frequently goes undetected. A terrorist organization is one of the criminal organizations that acts as an aggregator in money laundering.²⁵

According to the report from the Financial Intelligence Unit, illegal financial transactions consistently occur within the global financial system, serving as a source of funding for terrorist groups. Typically, these funds are sent to the home countries where the headquarters of these terrorist organizations are located. Terrorist groups are typically involved in illicit activities such as drug trafficking, currency smuggling, illegal cigarette trade, distribution of harmful addictive chemicals, and even people trafficking.²⁶

Detecting the utilization of information technology in money laundering poses significant challenges. Preventing this necessitates a substantial allocation of resources. Money laundering is the illicit act of disguising or concealing money acquired through criminal activities to give the impression that it was obtained legally. Anticipating this, banks institutions jointly allocated almost \$214 billion towards ensuring compliance with financial crime regulations.²⁷

Bank Indonesia has the power to establish regulations as mandated by law in order to facilitate the execution of its responsibilities. Bank Indonesia, being the governing body with complete jurisdiction over the rupiah currency, bears a significant responsibility for overseeing the monetary and payment system in Indonesia. Regulation is a governing principle established to effectively manage and guide a collective, such as a group, institution, or society, with the aim of attaining specific objectives in communal living, societal functioning, and interpersonal interactions.²⁸ In relation to the Rupiah currency, the regulations governing it should only be established by Bank Indonesia, which is an autonomous organization. It is crucial for Bank Indonesia to ensure a favorable regulatory environment that avoids duplication and disharmony.

Effective implementation of Central Bank Digital Currency (CBDC) requires robust regulatory frameworks and meticulous planning. Regulations pertaining to other government agencies must be in accordance with the regulations published by Bank Indonesia. Money holds significant allure for individuals worldwide. Consequently, Bank Indonesia must diligently monitor this phenomenon to mitigate the occurrence of a dysfunctional system that could have profound ramifications on the nation's monetary state. The consideration of security and privacy protection for users is essential while examining cybercrime. An effective financial institution must possess a robust mechanism to safeguard the confidentiality of its clients' funds, which inevitably has implications for law enforcement and extradition treaties with other nations. Bank Indonesia maintains the utmost professionalism in ensuring the confidentiality of assets for money owners. When there is a disagreement with law enforcement situations, it is important to handle the situation with caution and give priority to the idea of presumption of innocence.

²⁵ PPATK, Pola Kejahatan Dalam Pendanaan Terorisme, <https://www.ppatk.go.id/>, 3 Juli 2019.

²⁶ E. Jonathan. *Money Laundering Prevention: Deterring, Detecting, And Resolving Financial Fraud.* New Jersey, John Wiley & Sons Inc., 2011.

²⁷ Mc. Kinsey. *"The fight against money laundering: Machine learning is a game changer,"* 2022.

²⁸ Prawiro, M. "Pengertian Regulasi Secara Umum, Tujuan, Contoh Regulasi," Maxmanroe, 2018, <https://www.maxmanroe.com/vid/bisnis/pengertianregulasi.html>, accessed 15 March 2023

CBDC, or Central Bank Digital Currency, is a legally established and maintained kind of currency by the monetary authority of a country. The purpose of CBDC is to ensure that its value remains steady and does not experience significant fluctuations. In order for the issuance of Central Bank Digital Currency (CBDC) to be seen as a viable alternative to traditional currency, it is essential that CBDC fulfills the requirement of being a practical and cost-effective means of exchange, similar to conventional currency-based accounts. This implies that CBDC accounts can either be directly managed by the Central Bank or accessed by commercial banks through a public-private partnership arrangement.²⁹

CBDC offers returns that mirror the returns on risk-free financial assets, such as Government Securities. This allows CBDC to serve as a reliable asset for storing value. The public can widely access CBDC as a substitute for traditional currency, with predetermined costs for converting/transferring between CBDC and conventional money. The monetary policy framework effectively maintains the stability of the value of the Central Bank Digital Currency (CBDC) over time, while also implementing actions to control inflation.³⁰

Bank Indonesia intends to launch Digital Rupiah in response to the growing global interest in central digital currencies (CBDC). Robust regulations are necessary to provide stability, safeguard consumers, and foster economic expansion in this implementation. The primary objective in developing digital currency is safeguarding user and transaction data. Utilizing modern encryption technology and adhering to stringent security design standards is essential for enhancing system integrity and ensuring security and privacy.

The Digital Rupiah should be readily available to all segments of society, especially those who are not adequately served by traditional financial institutions. This effort aims to promote greater financial inclusion by improving accessibility. The implementation of Digital Rupiah is a complex process that requires the collective effort of all stakeholders in order to ensure widespread access to public education. The significance of an extensive educational campaign to guarantee public comprehension of the characteristics, hazards, and advantages of Digital Rupiah cannot be exaggerated.

Interoperability is a crucial requirement for digital technology, specifically for the Digital Rupiah in Indonesia. It is necessary for the Digital Rupiah to be interoperable with different payment systems and platforms, allowing for seamless integration and widespread usage. In addition to focusing on international collaboration through coordination with other central banks and international financial organizations, this will contribute to the uniformity and efficiency of laws.

Regulators employ a risk-based strategy to develop lawful products. This method enables regulators to adjust to swiftly evolving technical dynamics, offering flexibility in regulation. The regulations are not overly stringent due to the extensive oversight by numerous rules and institutions. Article 14A of Law Number 4 of 2023, which pertains to the Development and Strengthening of the

²⁹ Kemenkeu RI Ditjen Perbendaharaan Direktorat PKN, "Mengenal Lebih Dekat Central Bank Digital Currency (CBDC)," accessed 13 March 2023

³⁰ Michael, Bordo D. and Levin, Andre "Central Bank Digital Currency And The Future of Monetary Policy," 2017, NBER Working Paper Series 23711.

Financial Sector, governs: “Digital Rupiah management includes planning, issuance, circulation and administration.”

The primary concern for the Central Bank is to establish the system for determining the exchange rate of the digital rupiah. This can be done by either adopting the Fixed Exchange Rate System, the Floating Exchange Rate System, or the Managed Floating Exchange Rate System. Rate. Does the digital rupiah have the same value as the conventional rupiah or a different value? If there is a difference, it will inevitably lead to currency dualism, necessitating the equality of both nominal value and real value. However, the inherent worth of traditional money and digital money will surely change due to variations in their creation processes.

The Digital Rupiah concept is expected to have the same value as one unit of conventional Rupiah (for example, 1 Digital Rupiah = 1 Rupiah paper or coin). The goal of this parity is to ensure smooth transition and adoption, as well as to prevent confusion among users. Consistency in value between digital and physical versions of currency will facilitate the transaction process, calculations and acceptance of digital currency by the wider community. Please note, even though the nominal value is equivalent, the features, transaction fees, speed, and other aspects of digital currency may differ from conventional currency. Therefore, adoption of Digital Rupiah may be influenced by public perception and acceptance of these features.

In terms of exchange rates, if Bank Indonesia ensures 1:1 equality between the Digital Rupiah and the conventional Rupiah, then there will be no exchange rate difference between the two. However, it should be noted that currency exchange rates (both digital and conventional) against other currencies (e.g. USD or EUR) will remain influenced by various economic factors, including demand and supply in the foreign exchange market, monetary policy, macroeconomic conditions, etc.

Currently, the rupiah operates under a Fiat system, meaning that its value is not backed by tangible assets. Instead, the value of a currency is contingent upon the public's faith and confidence in the stability of the economy and the policies of the government that issues it. An important critique of Fiat Currency is that governments have the ability to print unlimited amounts of money without the support of tangible commodities such as precious metals. This unrestricted printing can result in inflation or even hyperinflation. Nevertheless, by effectively implementing monetary policy and practicing fiscal prudence, this danger can be mitigated.

The condition of the conventional rupiah which uses the Floating Exchange Rate System, the most important thing is that it has a high level of trust by the world community to be safely used in transactions and appropriate monetary policy. To create the right Digital Rupiah, the main thing that must be prepared is the principles and principles that will be used, this can of course determine the quality of good regulations, as well as avoid too many regulations.

On the digital front, a blockchain system will be employed, such as crypto assets, or a central database that is essentially equivalent to conventional rupiah, but distinct in terms of its structure. By utilizing a blockchain system that incorporates a decentralized ledger, it becomes feasible to document every transaction, thereby ensuring a high level of security and transparency. Blockchain is the fundamental technology that underpins cryptocurrencies. Blockchain is a decentralized system designed to securely store and transport digital data, eliminating the danger of hacking or

manipulation.³¹ Blockchain technology is constructed by integrating multiple preexisting technologies. The primary technologies behind blockchain include asymmetric key encryption, hash functions, hashchain functions, and peer-to-peer networks. Hashing is a deterministic procedure that transforms input data into a fixed-length array of random characters. Each unique input data will have a unique output hash value. Unlike encryption, data that is transformed into a hashed form typically cannot be reversed to its original form.

Data security is a primary emphasis in blockchain technology. Blockchain functions as a decentralized and accurate ledger that meticulously records all transaction activities with few errors.³² The security of data on the blockchain is ensured through the implementation of multiple layers of advanced technologies, including hash functions, hashchains, private-public key encryption, and peer-to-peer data dissemination. Blockchain is well-suited for storing public data that is susceptible to tampering. As an illustration, consider the data related to the identity of residents. Population identity, being susceptible to manipulation and hacking, necessitates stringent security measures for its storage. However, it also needs to be readily accessible to the public for purposes such as data validation. Blockchain is well-suited for storing this type of data.³³

CONCLUSION

CBDC is not intended to replace conventional money, but rather to complement it by providing an additional, state-backed digital payment option alongside cash and electronic money. Similar to e-money, its use will require a controlled and secure ecosystem. However, unlike traditional payment instruments, the implementation of CBDC introduces complex legal challenges that require careful and forward-looking regulatory planning. From a legal standpoint, the success of CBDC hinges on the clarity, adaptability, and enforceability of its regulatory framework. The government must define foundational legal principles that govern its issuance, circulation, accountability, and dispute resolution mechanisms. Special attention must also be given to the implications of financial technologies involving automated systems and AI-driven transactions, which challenge traditional legal concepts of responsibility and liability. To build a robust and future-proof legal framework, Indonesia should adopt innovative legal instruments such as: (1) cross-border legal cooperation mechanisms to address the transnational dimensions of digital finance; and (2) the development of digital legal infrastructure, including smart contract regulation and AI accountability standards.

The digital rupiah is an independent authority of Bank Indonesia, in the regulations made must be oriented to its duties to maintain monetary stability and financial stability. Regulations made by Bank Indonesia must be free from any intervention, even if the goal is to maintain the national economy so that it does not have double standards. CDBC has the risk of attacks and cyber crimes, these risks must be mitigated before they occur. CDBC users can trust if it has exchange rate capability,

³¹ Andika Putra. *Penggunaan Teknologi Blockchain Dalam Upaya Meningkatkan Keamanan Data di Masa Era Digital*. Universitas Komputer Indonesia, Bandung: 2023.

³² Ida Bagus Prayoga Bhiantara. *Teknologi Blockchain Cryptocurrency Di Era Revolusi Digital*." Seminar Nasional Pendidikan Teknik Informatika (SENAPATI). Vol. 9. 2018, p. 176.

³³ Wildan Maula *et.al.* "Penerapan Teknologi Blockchain Dalam Mengoptimalkan Proses Manajemen Rantai Pasokan Menggunakan Metode SWOT." *Jurnal Ilmu Komputer Revolusioner*, Vol.8 No.6, Juni 2024, p. 55. ISSN: 24430355

good cyber security, smooth payment system, and access that can be facilitated by all banks operating in Indonesia.

REFERENCES

Books

- Andika Putra, *Penggunaan Teknologi Blockchain Dalam Upaya Meningkatkan Keamanan Data di Masa Era Digital*, Universitas Komputer Indonesia, Bandung: 2023.
- Bank Indonesia, *Proyek Garuda, Menavigasi Arsitektur Digital Rupiah*, Bank Indonesia, Jakarta: 2022.
- Bambang Rinto Rustam, *Manajemen Risiko Perbankan Syariah di Indonesia*, Salemba Empat, Jakarta: 2013.
- Oemar Seno Adji, *Pengadilan Bebas Negara Hukum*, Airlangga, Jakarta: 1980.
- Rahardja Prathama, *Uang Dan Perbankan, Edisi Baru*. PT. Rineka Cipta, Jakarta: 1997.
- Ronny Hanitjo Soemitro, *Metodologi Penelitian Hukum dan Jurimetri*, Ghalia, Jakarta: 1990.
- Soerjono Soekanto, *Pengantar Penelitian Hukum Edisi Kedua*, UI Press, Jakarta: 1982.
- _____, and Sri Mamudji. *Penelitian Hukum Normatif suatu Tinjauan Singkat*. Rajawali, Jakarta: 1985.
- Subekti, *Hukum Perjanjian*, Intermasa, Bandung: 2010.
- Yudha Bhakti, *Penafsiran dan Konstruksi Hukum*, Alumni, Bandung: 2000.
- Siska Yuli Anita, et.al, *Manajemen Risiko*, Global Eksekutif Teknologi, Padang:2023.

Journal

- Afif Noor, et.al., "Crypto Assets and Regulation: Taxonomy and Framework Regulatory of Crypto Assets in Indonesia," *Journal of Etika Demokrasi*, Vol. 8 No. 3, 2023
- Akhmad Khubi Ali, *at.all*, "Positivisme dan Pengaruhnya Terhadap Penegakan Hukum di Indonesia," "Ma'mal, *Jurnal Laboratorium Syariah dan Hukum*, Volume No. 03, 2022.
- Al-Khansa, Atikah Sanusi and Taruno, Yudho Muryanto. 2022. "Perlindungan Hukum Pemberi Pinjaman Terhadap Klausula Baku Pada Layanan *Peer To Peer Lending*." *Privat Law* Volume, 10(2).
- Arman Nefia and Agus Sardjono. "The Urgent Need To Amend The Indonesian Law On Currencies To Face The Digital Age", *Journal of Central Banking Law and Institutions*, Vol. 1 No. 1, 2022.
- Imam Subechi, "Mewujudkan Negara Hukum Indonesia," *Jurnal Hukum dan Peradilan*, Volume 1 No. 3, 2022.
- Sri Wahyuni Laia dan Sudialman Daliwu. "Urgensi Landasan Filosofis, Sosiologis dan Yuridis Dalam Pembentukan Undang-Undang Yang Bersifat Demokratis di Indonesia." *Jurnal Education and Development*. Vol.10 No. 1. 2022.
- Nussbaum, "Basic Monetary Conceptions in Law," *supranote 2*, at 867; see also Nussbaum, *Money in the Law*, *Supra Note*. 1
- Purnama, Yulia "Manajemen Risiko Hukum Perbankan Syariah", *Eksisbank*, volume 3 No.1, 2019.
- Wildan Maula *et.al*. "Penerapan Teknologi Blockchain Dalam Mengoptimalkan Proses Manajemen Rantai Pasokan Menggunakan Metode SWOT." *Jurnal Ilmu Komputer Revolutioner*, Vol.8 No.6, Juni 2024.

Regulations

Indonesia. Law Number 21 of 2011 on Financial Services Authority. Jakarta

Indonesia. Law Number 4 of 2023 on Financial Sector Development and Strengthening. Jakarta

Other Resources

Ahmad Zuhudy Bahtiar. "Mencuri Uang Secara Masif dan Terorganisir Melalui Berbantuan Teknologi Informasi," <https://www.iainpare.ac.id/> 2023.

Agung Rianto Prasetyo. "Tinjauan Yuridis Penggunaan Mata Uang Digital dalam Transaksi Jual Beli di Indonesia." Theses, University of North Sumatra, 2019.

Departemen Komunikasi Bank Indonesia, Rupiah Digital, Uang Masa Depan Kita, <https://www.bi.go.id/id/publikasi/ruang-media/cerita-bi/Pages/Rupiah-Digital-Uang-Masa-Depan-Kita.aspx>, accessed 13 March 2023.

Kemenkeu RI Ditjen Perbendaharaan Direktorat PKN, "Mengenal Lebih Dekat Central Bank Digital Currency (CDBC)," accessed 13 March 2023.

PPATK, Pola Kejahatan Dalam Pendanaan Terorisme, <https://www.ppatk.go.id/>, 3 Juli 2019.

Prawiro, M. "Pengertian Regulasi Secara Umum, Tujuan, Contoh Regulasi," Maxmanroe, 2018, <https://www.maxmanroe.com/vid/bisnis/pengertianregulasi.html>, accessed 15 March 2023.

Purwanto, Antonius, Mata Uang Kripto, Dari Sejarah Awal Hingga Regulasi di Indonesia, <https://www.kompas.id/> 7 January 2022.

Ida Bagus Prayoga Bhiantara. Teknologi *Blockchain Cryptocurrency* Di Era Revolusi Digital." Seminar Nasional Pendidikan Teknik Informatika (SENAPATI). Vol. 9. 2018.

E. Jonathan. "Money Laundering Prevention: Detering, Detecting, And Resolving Financial Fraud." New Jersey, John Wiley & Sons Inc., 2011.

Mc. Kinsey. "The fight against money laundering: Machine learning is a game changer," 2022.

Meaning, Jack and Dyson, Ben. "Broadening Narrow Money: Monetary Policy with a Central Bank Digital Currency." *International Journal of Central Banking*. Vol. 17, No. 2, 2021.

Michael, Bordo D. and Levin, Andre "Central Bank Digital Currency And The Future of Monetary Policy," *NBER Working Paper Series 23711*, 2017.