

THE URGENT NEED TO AMEND THE INDONESIAN LAW ON CURRENCIES TO FACE THE DIGITAL AGE

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Abstract

This research focuses on Indonesian Law No. 7 of 2011 on Currency. Over the past ten years, information technology has developed so rapidly that it has been necessary to take another look at whether this law is still relevant now and in the near future. The research uses normative legal analysis methods with a conceptual approach, analytical approach, comparative approach across multiple countries, and case studies. The rapid development has left the law behind when addressing violations of the currency law. To eliminate ambiguity and hesitation in the implementation of the use of currency, this law must be amended. It is necessary to establish clear laws on digital money or electronic money (*e-money*), which is currently only regulated at the level of Bank Indonesia and Bank Indonesia Circular Letter. The use of foreign currency in border markets and places of foreign tourists, money in some places due to technological advances, and about the local wisdom of a society that has a history of using certain goods as currency. Things that develop and are a reality in society should be contained in statutes to settle the law.

Keywords: *Currency, Digital Age, Electronic Money, Local Wisdom, Technological Innovation.*

I. INTRODUCTION

The currency of the Republic of Indonesia as an independent and sovereign country is a symbol of state sovereignty that must be respected and honoured by all Indonesian citizens. Currency is needed as a legitimate medium of payment in national and international economic activities for the social welfare for all Indonesian people.¹ The Constitution of the Republic of Indonesia of 1945 in Article 23B mandates that the type and value of currency be

¹ The territory of the Unitary State of the Republic of Indonesia is the entire territory of Indonesia, including ships and aircraft flagged to the Republic of Indonesia, the Embassy of the Republic of Indonesia, and other representative offices of the Republic of Indonesia abroad. Indonesia, Law No. 7 of 2011 on Currencies (hereinafter Law on Currencies), considerations (a) and (b).

established by law. The derivative rule of this constitution is Law No. 7 of 2011 on Currency. Article 2 regulates: (1) The Currency of Indonesia is the Rupiah. (2) Rupiah consists of paper Rupiah and metal Rupiah. (3) Rupiah as referred to in paragraph (1) is symbolised by Rp.

Regarding the use of Rupiah, Article 21 affirms that the (1) Rupiah shall be used in: a. any transaction for payment purposes; b. settlement of other obligations that must be fulfilled with money; and/or c. other financial transactions conducted in the territory of Indonesia. (2) The obligations referred to in paragraph (1) do not apply to: a. certain transactions in the framework of the expenditure of the state revenues and budget resolutions; b. receipt or grant from or abroad; c. international trade transactions; d. deposits in banks in the form of foreign exchange; or e. international financing transactions.

Under Article 23, governing prohibited acts (1) it is unlawful to refuse to accept when intended as payment or to settle obligations that must be fulfilled with Rupiah and/or for other financial transactions in the Territory of Indonesia, unless there is doubt over the authenticity of the currency. (2) The provisions referred to in paragraph (1) exclude payment or for settlement of obligations in foreign exchange that have been promised in writing.

Article 33, mandates that (1) any person who does not use Rupiah in: a. any transaction that has the purpose of payment; b. settlement of other obligations that must be fulfilled with money; and/or c. other financial transactions as referred to in Article 21 paragraph (1) shall be subject to a maximum imprisonment of one (1) year and a maximum fine of two hundred million Rupiah (Rp200.000.000). (2) Everyone is prohibited from refusing to accept Rupiah whose submission is intended as payment or to settle obligations that must be fulfilled with Rupiah and/or for other financial transactions in the territory of Indonesia, unless there is doubt over the authenticity of Rupiah as referred to in Article 23 shall be punishable by imprisonment of a maximum of one (1) year and a maximum fine of two hundred million Rupiah (Rp200.000.000).

These laws are codified in Indonesia through Law on Currencies in the territory of the Republic of Indonesia, that the official currency is the Rupiah. Every citizen should submit, obey, and proudly use the Rupiah in transactions as one of the symbols of sovereignty of the Republic of Indonesia.

Rapid technological innovation is sometimes not predictable or anticipated properly. Laws and regulations are generally issued after practices in the field are well-established, so it is necessary to adjust. Specifically concerning the Currency Law, when it was enacted ten years ago it was still relevant and addressed problems in terms of currency. After ten years of validity, when

reviewed it turns out that there are gaps that have not been filled by regulations, leaving ambiguity to the implementation of norms in the field of currency.

Law on Currencies regulates that the Rupiah is recognised in two forms, namely, Paper Money is the raw material used to make Rupiah paper that contains safety and durable elements, and coinage where the raw material used to make Rupiah is metal that contains safety elements and is durable. However, this law does not yet regulate the Electronic Money or Digital Money. Does it include in the criteria of money?

The following problem, what about the enforcement of the law against the use of foreign / non-Rupiah currency that occurs in some Areas of the Unitary State of the Republic of Indonesia such as in border markets with neighbouring countries, regions or adjacent to neighbouring countries and the location of tourist destinations that are dominated by citizens of certain countries who directly use its currency in transacting in the territory of Indonesia. Will it be left alone, so that it appears that this law has no power in enforcing the rules?

Additional problem is, because the advancement of technological innovation is precisely currency (banknotes and coins) rejected as a tool to bear in some places. The Currency Law expressly states that everyone is prohibited from refusing to accept Rupiah whose delivery is intended as payment or to settle obligations that must be fulfilled with Rupiah and/or for other financial transactions in the Territory of Indonesia unless there is doubt over the authenticity of Rupiah. Furthermore, what about certain areas, which use certain goods (non-Rupiah) as a medium of exchange such as currency, such as bamboo, bones, and others? Is this considered local wisdom? However, the problem is not an exception referred to in this currency law. This is a challenge in the digital age.

Electronic technology is present due to advances in information technology. In 1996, the development of electronic money will certainly have a major impact or change. The Bank for International Settlements (BIS) projections say that the triangle of interests is the key in the use of electronic money, the interests of customers, the interests of banks and traders. Interoperability, privacy, and network security are the interests that electronic money should cover. It can be said that this is a writing that becomes a reference about electronic money before massive use or *ex ante*. Authors' research are *ex post* that targets aspects of electronic money regulation that have been so developed in Indonesia and widely used. The study targeted the results in the form of recommendations for changes to the law on digital money.

In 2014, Neda wrote about the use of electronic money that impacts monetary policy. Electronic money was not long known and used in developed

countries.² At that time, it was not known cryptocurrency, so it has not become the scope of the discussion of the writing. This article reaches the aspects of paper currency, demand instruments, electronic money, and cryptocurrencies in the jurisdiction of Indonesia. The existence of cryptocurrencies as well as electronic money fundamentally changes the range of regulations. Of course, changes in regulations regarding money issued by Bank Indonesia need to be done.

Kadek Kharisma Suryandari, Ni Putu Wiwin Setyari was encouraged to write about the increasingly popular and widespread use of electronic money, especially in tourism destinations, such as Bali. As a medium of exchange, electronic money according to the two researchers must have ease of use. That is the determinant factor of the use of electronic money.³

Vlasov addressed an important issue regarding electronic money, namely the concept. For him electronic money is a broad concept encapsulating that electronic money as an evolution of conventional money. Vlasov contributes to building knowledge about electronic money that is conceptually not yet established. This paper certainly not only sees electronic money as an evolutionary form of conventional money but looks at regulatory aspects related to nationality (jurisdiction), user protection, basic characteristics of money and of course related to the authority of Bank Indonesia as a monetary authority.⁴

Some things that can be noted as gaps in this study include Digital money or electronic money has grown so much. The issuer is not only a bank, but also an application provider. Development and facts require theoretical disclosure related to the role and position and authority of Bank Indonesia (BI) as a monetary authority. Digital money, such as cryptocurrency, is borderless and the rules of the game are not determined by a central bank, but rather by all parties. It cannot be denied that the state, in this case the BI, should take a great interest in the use of electronic money and digital money. Digital money, in contrast to conventional money, requires legal corridors in the form of regulations so that its use leads to more positive outcomes. The concepts and rules of the game of digital money are not yet fully understood. Therefore, regulations regarding digital money are needed to create a pathway for acceptance, as well as user protections.

² Neda Popovska-Kammar, "The Use of Electronic Money and Its Impact on Monetary Policy," *Journal of Contemporary Economic and Business Issues Provided* 1, no. 2 (2014): 79–92, <https://journals.ukim.mk/index.php/jeccf/article/view/146/90>.

³ Kadek Kharisma Suryandari and Ni Putu Wiwin Setyari, "Determinants of Interest in Using Electronic Money in Indonesia: Evidence from Denpasar, Bali," *Journal of Socioeconomics and Development* 3, no. 2 (2020): 126–33, <https://doi.org/10.31328/jсед.v3i2.1588>.

⁴ Andrei V. Vlasov, "The Evolution of E-Money," *European Research Studies* 20, no. 1 (2017): 215–24, https://www.ersj.eu/repec/ers/papers/17_1_p21.pdf.

The Law on Currencies (hereinafter referred to as “UUMU”) is based on a national perspective. Recently, digital money has become a fact of life. Digital money began to be widely used, it can be said to be a phenomenon of urban and modern life. BI as a monetary authority needs to be equipped with regulations that allow it to regulate the use of digital money, electronic money in Indonesia. Cryptocurrency, therefore, needs to be conceptually defined as a currency or means of investment. Determination of digital currency’s status has implications for the body that authorises its use in the community. If *cryptocurrency* is established as a means of payment, then it should be treated and regulated by monetary authority’s regulations.

The researcher’s position is that *cryptocurrency* can be a medium of exchange and a means of investment. Although it has now been treated as a means of investment, the BI is authorised to regulate and manage. Based on that argument, this study aims to provide recommendations on changes or making laws and regulations regarding digital money.

II. HISTORY OF USING THE RUPIAH

History of the use of Rupiah in Indonesia, there are many currencies used in daily transactions. The currency includes *De Javasche Bank banknotes*, *De Javasche Regering* banknotes and coinage with guilder units, *Dai Nippon* banknotes, Oeang Republic of Indonesia (ORI) issued by the Government of Indonesia. The use of Rupiah in Indonesia was then based on the provisions contained in the Currency Law 1951, among others, stating:

- (i) All coinage issued under *the Indische Muntwet* were removed from circulation on 3 November 1951, except for the copper money whose revocation was still be determined by the Minister.
- (ii) The unit of calculation of money in Indonesia is the Rupiah which is abbreviated as Rp and divided into denominations of 100.
- (iii) Indonesian coins that are legal tender were made from nickel in fractions of 500, as well as from aluminium in fractions of 200, 100, 50 and 10 Rupiah.
- (iv) To meet the needs that may arise at some time, the government can release paper fractions of 1 Rupiah and 2.50 Rupiah.
- (v) The manufacture of government coins and banknotes can only be done by or on behalf of the government treasury.
- (vi) The Minister of Finance sets the design of nickel and alumni metals, the level of money metal, the weight and size of the centre line and the tolerance limit.
- (vii) In certain areas with government regulations, it was possible to temporarily make payments with money other than the above.

If viewed from the general contents of the existing law, the arrangements in this law are quite comprehensive. However, there are some points that are subject to criticism on the grounds that it is less relevant to the condition of the development of currencies used by the community, as follows.

Too narrow a kind of Rupiah that only includes paper Rupiah and coin Rupiah. This can be criticised by the rise of non-cash transactions carried out by the public with electronic repairers. BI itself has conducted the National Non-Cash Movement (GNNT) to increase public awareness and encourage businesses, and government institutions to use non-cash payment facilities in conducting easy, secure, and efficient financial transactions on 14 August 2014. This then raises the question of how the implementation and position of electronic running equipment when the UUMU only limits the kind of Rupiah which only includes paper Rupiah and coinage?

Legitimate electronic-based payment instruments, such as those that have been widely used by the public, are not addressed in the UUMU. As discussed, the UUMU still does not accommodate electronic/digital payment tools other than paper Rupiah and coinage. This then leads to the paucity of regulations regarding electronic payment instruments. This has created legal uncertainty for the use of electronic/digital payment instruments. This omission patently violates the mandate in Article 23B of the Constitution of the Unitary State of the Republic of Indonesia of 1945 (UD 1945) which states that, “the type and price of currency is determined by law”, not with PBI or SEBI.⁵

The presence of electronic money is a logical consequence of the innovation of payment instrument development in Indonesia. Electronic money can be defined as a means of payment in electronic form where the value of the money is stored in a particular electronic medium. Users must deposit the money first to an issuer which stores the funds electronically before using it for transactions. The promulgation of electronic money has been regulated in Bank Indonesia Regulation No. 11/12/PBI/2009 dated 13 April 2009, on Electronic Money and BI Circular Letter No.11/11/DASP dated April 13, 2009, concerning Electronic Money. Under Article 23B of the 1945 Constitution and Article 2 of the Currency Law, the existence of electronic money cannot be defined as money. This is because the UUMU only mentions Rupiah, includes paper money and coinage.

Electronic money in Indonesia can be used within the territory of Indonesia for any type of financial transaction activities during each transaction so long

⁵ Pretend *Principle Lex Superior derogat legi inferiori*, a known principle in the rules Statutory- invitation, which means higher regulations may override the lower rules of position. The PBI and SEBI are trying to regulate the currency. electronic/digital as per the latest developments, but the law on it as the legal umbrella has not been changed, not yet amended so that it becomes disharmony in hierarchy legislation.

as it the transactions use the Rupiah. This is because the use of electronic money can be understood as financial transactions that use non-cash payment tools and mechanisms. Thus, looking at the provisions in Article 21, paragraph (1) of the UUMU, non-cash transactions intended for payments, settlement of obligations that must be fulfilled with money, and other financial transactions conducted in Indonesia if using Rupiah currency.

Based on Law No. 7 of 2011 concerning Currency, Article 21 paragraph (1) Rupiah must be used in:

- a. any transaction that has a payment purpose;
- b. settlement of other obligations that must be fulfilled with money; and/or
- c. other financial transactions,

which occur in the Republic of Indonesia. More specifically, Bank Indonesia Regulation No. 23/6/PBI/2021 on Payment Service Providers (PJP) (PBI No. 23/2021) Article 156 stipulates that electronic money is a payment instrument where the first element is issued based on Source of Funds in the form of Rupiah value deposited first to PJP which organises Fund Source management activities; and both Fund Sources in the form of value of money Rupiah is stored electronically in a media server or chip. Electronic instruments themselves are basically just fixed payment instruments issued based on the number of Rupiah deposited in them; if nominal Rupiah is used; electronic money remains valid.

The presence of electronic money if connected with the norms in the UUMU gives rise to several *pat pendas*. The Jakarta Citizens Forum (FAKTA) submitted an objection to the first amendment of PBI No. 11/12/PBI/2009, namely PBI No. 16/8/PBI/2014. FAKTA states that because of this rule, many public facilities, such as toll roads and Transjakarta reject the existence of cash transactions. In addition to this, FAKTA states that the rules regarding electronic money have led to unrest and public questions about the existence of the UUMU which basically regulates Rupiah only.

The application for a material test of PBI was rejected by the Supreme Court (MA) rendering electronic money consistent with the UUMU. The senior deputy governor of BI at that time, Mirza Adityaswara stated that the PBI issued was in accordance with UUMU because the Rupiah declared as a legitimate currency has cash and non-cash forms and plus its information about electronic money transactions is the same as transfer transactions through current accounts at banks or through savings transfers so that the transaction is a Rupiah transaction in non-cash form. In addition, PBI regulates the obligations of the organisers of e-money activities to prevent irregularities, organisers must use a secure and reliable system, must maintain, and improve the security of electronic money technology, have written policies

and procedures for the implementation of electronic money activities, and maintain the security and confidentiality of e-money user data.

Indonesia is currently in an era of global disruption, including Central Bank Digital Currency or CBDC or. Digital currency implies all changes or adaptations to the role of the Central Bank related to it. Some of the issues that arise are the role of the Central Bank as an authority that issues digital currencies; the position of the Central Bank is not intended to replace the private sector in financial intermediation or retail payments; and the possibility of misuse for money laundering or terrorism financing.⁶

CBDC, as such, will result in complex digital frameworks and sophisticated and complex software as well, but the key remains, which is secure, efficient, and accessible for its digital currency use. Technological advances are welcomed in digital currency have been welcomed by the community, proven by the rapid digital currency absorption and use by the community because of three key advantages as a means of payment. It is inevitable that the use of digital currencies will increase globally. Its use can be connected to the platform that enables it.⁷

In recent years, digital currencies have been a focus both across the Central Bank and international meetings on monetary policy and the financial system. With this focus, Bank Indonesia is currently continuing to conduct research in determining the concept of Rupiah Digital-Central Bank Digital Currency (CBDC) itself and the technology that will be used to support digital transformation in Indonesia.

The presence of CBDCs as applied through the Central Bank has spawned a digital transformation in society, while from the Central Bank side, the management will be easier because it is decentralised. Such high expectations must certainly be followed by adequate regulation. Unfortunately, the UUMU until now has not regulated this arena and must immediately keep up with the times. Additionally, in the outermost corners of Indonesia, there are still many types of currency used other than the Rupiah for everyday transactions.

Since 2008, the development of information technology and innovation in various fields including the financial sector has been rapid. Internet penetration factors and the development of smartphones cannot stop the pace of innovation and development of information and communication technology that inevitably also changes consumer and public behaviour.

⁶ Raphael Auer and Rainer Böhme, "Central Bank Digital Currency: The Quest for Minimally Invasive Technology," *BIS Working Papers*, 2021, <https://www.bis.org/publ/work948.pdf>.

⁷ Anton N. Didenko and Ross P. Buckley, "Central Bank Digital Currencies: A Potential Response to The Financial Inclusion Challenges of The Pacific," *Issues in Pacific Development*, no. 3 (2021), 4, <https://doi.org/10.1016/j.jmoneco.2021.05.002>.

The wants and needs of consumers for convenience, speed, and practicality in all respects demand development in various industries including the financial industry. Practically speaking, the intent of information technology is the Technology Acceptance Model that affects the habit of using digital money on electronic devices, user-friendly tools.⁸

Information technology overcomes limitations such as distance, space, and time. The virtual world has become borderless. Globalisation is a phenomenon today in all aspects of human life. Advances in information technology are forcing Indonesia to adapt domestic interests connected to global or international affairs.

The nature of information technology is that it is open to anyone. There is no state authority, no political authority, no financial authority, but rather the superiority of the application of information technology; not seeing who it is, but rather what it is. Ontology and epistemology of information technology widens its space for anyone if the needs and creation for the ease of society will surely be welcomed. Not surprisingly, the Indonesian market contains people who are very good at information technology and apply it to fill niche markets, including digital money.

The Indonesian market is open to the Indonesian people and the international economic community. Progress or more precisely the rapid pace of digital money, attracting legal discourse, ranging from provisions to theoretical thinking must close the gap. In fact, the law follows, although in the sociological view of law, authority can initiate law-making attempting to be one step ahead, but surely that is something that is very extraordinary projection.

Advances in information technology, in this case digital money, question the underpinnings of central banks and money. The development of digital money seems to justify doubts about the self-sufficiency of law claims. Recognition of the development is a change in the legal provisions related to money, namely the UUMU to close the speed gap of digital money practices with legal provisions.⁹ Changes in the provisions of the UUMU have been made. For example, Article 23, paragraph 1, states that the prohibition of the rejection of transactions with Rupiah. In other words, Rupiah is the currency that applies in Indonesia. This is the legal position of Rupiah currency according to UUMU.

Factually, the aim is to alter the understanding in the UUMU as to the acceptable form of Rupiah regulated in UUMU Article 2, paragraph 2,

⁸ Retno Fuji Oktaviani et al., "Implementation of Mobile Payment in Indonesia," *International Journal of Recent Technology and Engineering* 8, no. 2 Special Issue 4 (2019): 863–66, 864, <https://doi.org/10.35940/ijrte.B1172.0782S419>.

⁹ Mariano Croce, *Self-Sufficiency of Law: A Critical-Institutional Theory of Social Order* (Rome: Springer, 2012).

mentions the kind of Rupiah consisting of Rupiah paper and Rupiah metal. The restrictions are indeed limited to confirming the application of financial technology (fintech) that dominates modern society. Payment and financial transactions can currently be made in a variety of ways. The implementation of electronic money, e-wallets such as Go-Pay, Ovo, debit and credit cards, and others set the Rupiah as a means of payment of paper Rupiah and metal Rupiah.

Because of this, the advantages of digital money / electronic money such as challenging legal dominance and practices that ultimately display the laws are lagging. The question arises in legal problems, does the use of digital money have a basis (legality) under the law? If not, then the use of digital money is *per se* illegal. If so, the continued consequences of the implementation of the law if confirmed using digital money. This is the focus and the purpose of writing this article.

The UUMU in principle requires all financial transactions and payments use the Rupiah, but there is room provided for use foreign exchange (forex). Although limited, the UUMU, Article 23, paragraph 2, allows the use of forex if it conforms with Civil Law Code Article 1320-1337 on subjective and objective conditions. The same goes for digital money.

The use of digital money is certainly related to the two functions of money as a store of value and medium of exchange. Digital money can fill the niche needs because it has a Technology Acceptance Model (TAM) in the retail transaction market.¹⁰ The power of TAM from digital money is a matter of efficiency to carry out the process of buying and selling.¹¹ Not to mention, factors such as borderless transactions, the UUMU becomes inflexible and complicates its implementation of digital money.¹² In the realm of capitalism, the value of equality is fundamental, because the economy includes a number of markets, such as the labour market, financial markets, second-hand markets, online markets, commodity markets, property markets and so on, including digital money markets.¹³

¹⁰ Martin Suryajaya, *Asal Usul Kekayaan: Sejarah Teori Nilai Dalam Ilmu Ekonomi Dari Aristoteles Sampai Amartya Sen* (Yogyakarta: Resist Book, 2016), 39. To distinguish this from the above assumption about function distinctive or nature thing. Follow view that, digital money be tool to payment. This that Said function Natural that Mentioned as means value use.

¹¹ Marion Mbogo, "The Impact of Mobile Payments on the Success and Growth of Micro-Business: The Case of M-Pesa in Kenya," *Journal of Language, Technology & Entrepreneurship in Africa* 2, no. 1 (2010): 182–203, 184, <https://doi.org/10.4314/jolte.v2i1.51998>.

¹² Sufi Azhari Pambudi and M. Khoerul Mubin, "Analysis The Effect of Electronic Money Use on Velocity of Money: Evidence from Indonesia," *Jurnal Ilmu Ekonomi Terapan* 5, no. 1 (2020): 42–58, <https://doi.org/10.20473/jiet.v5i1.19626>.

¹³ Wilfred Beckerman, *Economics As/le Applied Ethics: Fact and Value in Economic Policy* (London: Palgrave Macmillan, 2017), 64.

Cryptocurrency is exemplified by Bitcoin. Bitcoin has become the most popular cryptocurrency compared to the other five thousand cryptocurrencies that exist today. Bitcoin is a decentralised digital currency created in 2009 by someone under the pseudonym Satoshi Nakamoto. Bitcoin promises low transaction fees compared to traditional online payment mechanisms.¹⁴

Bitcoin is merely a balance stored on a public ledger that everyone can access transparently.¹⁵ This currency is used in transactions on the internet without using intermediaries such as bank services. The system used is peer-to-peer or P2P, whose system works without a single storage and administrator. The U.S. Treasury Department says Bitcoin is a decentralised currency.¹⁶ To use it, users must install a Bitcoin wallet on a computer or mobile device. It will then automatically create a unique Bitcoin address. Like email, users can share Bitcoin wallet addresses with each other.¹⁷

Bank Indonesia prohibits Bitcoin as a legal means of payment because the legal means of payment within Indonesia is limited to use of the Rupiah. However, the Futures Exchange Supervisory Agency (Bappebti) included Bitcoin as a commodity. Bappebti itself has published a list of 229 cryptocurrencies that can be traded on the Indonesia Futures Exchange (BBJ). It is among Bitcoin, ethereum, and dogecoin. There are also 13 crypto asset traders already registered with Bappebti. Includes Indodax, Tokocrypto, Zipmex, Pintu, and Luno.¹⁸

The Indonesian Ulema Council (MUI) has just issued a fatwa on cryptocurrency. In essence, the use of cryptocurrencies as a currency is

¹⁴ Satoshi Nakamoto, "Bitcoin: A Peer-to-Peer Electronic Cash System," bitcoin.org, accessed November 3, 2021, <https://bitcoin.org/bitcoin.pdf>. Bitcoin is a novel form of electronic payment system *peer-to-peer* Purely that making online payments can happen from one party to a party. without going through a financial institution is part of the solution, but the benefits It will be lost if it still I need a third party to avoid Double spending (*Double-spending*). We propose the solution limit spending problems this doubles by using the network *peer-to-peer*. This network will make time record (*Timestamp*) of transactions by doing Hashing which will be put in the chain hash-based *proof-of-work* at that time, form notes that cannot be changed without repetitive activities *proof-of-work* aforementioned. The longest chain is not just Evidence of a series event Witnessed, but proof that the series emerged from cluster (*Pool*) computing power (*CPU Power*) biggest. During most of this computing power is controlled by the compound point of computation (*Node*) which does not mean If they attack this network, they will create the longest chain at once eliminates the opportunity to attack for the slinger Ang. This network itself You need a simple structure. Based on best efforts (*best effort* base), and computing points You can freely separate and rejoin the network, receive chain *proof-of-work* as evidence of events as long as they are inactive on the network.

¹⁵ CNBC Indonesia, "Apa Itu Bitcoin Dan Bagaimana Cara Kerjanya?," CNBC, 2021, accessed on 4 December 2021, <https://www.cnbcindonesia.com/tech/20211202100509-37-296039/apa-itu-bitcoin-dan-bagaimana-cara-kerjanya/1>.

¹⁶ *Ibid.*

¹⁷ *Ibid.*

¹⁸ *Ibid.*

haram, cryptocurrency is also haram as a commodity but excluded for cryptocurrencies that have underlying assets and have clear benefits.¹⁹ Along with the development of cryptocurrency, although BI has asserted that Bitcoin and the like is not a form of currency that applies in the territory of the Republic of Indonesia, BI should still prepare yourself to constantly conduct comprehensive studies. If at some point most of the global world recognises cryptocurrency as one form of global currency, of course BI is expected to need to improve and prepare from now on, and of course also by paying attention to the underlying aspects of assets as reminded by MUI.

Returning to practical transactions using currency in Indonesia not only involves fellow Indonesian Citizens (WNI), but also Foreign Nationals (WNA). The obligation to use Rupiah in transactions in Indonesia using Rupiah as stated by UUMU needs to be reviewed to find the accuracy of legal theory and practice in the community. One question remains as the voidability of agreed-upon electronic transactions if executed in Indonesia without using the Rupiah.

The Non-Cash National Movement began to emerge in 2014 with the aim of making financial transactions in Indonesia easier, more efficient, and safer. Internal contradictions are present in the UUMU. While the derivative regulations already accommodate electronic money to cover digital money. Currently the legal umbrella of Indonesian electronic money is still a regulation only, namely PBI No. 11/12/PBI/2009 which has been amended by PBI No. 16/8/PBI/2014.²⁰ In other words, there is a disharmony between UUMU and PBI related to digital money.

III. COMPARISON

To make this research comprehensive, it is helpful to compare Indonesia with how other countries address electronic money in their legal systems. Some countries are taken as micro-comparative and limited:²¹

A. Japan and Australia

Japan and Australia address this issue in a different way. In Japan, the existence of electronic money has become an item that must be owned by Japanese

¹⁹ *Ibid.*

²⁰ Dwi Hadya Jayani, "Negara Pengguna Sistem Pembayaran Nontunai Terbesar Di Dunia," katadata.co.id, 2019, accessed on 30 October 2021, <https://databoks.katadata.co.id/datapublish/2019/09/25/negara-pengguna-sistem-pembayaran-non-tunai-terbesar-di-dunia>.

²¹ Michael Bogdan, *Concise Introduction to Comparative Law* (Paris: Europa Law Publishing, 2012), 8.

depositors.²² This is because an e-money card can be used for various purposes such as paying transportation costs, eating at restaurants, shopping at vending machines, to shopping at franchises. In Australia, cashless payments have also become dominant. The difference is the card that is commonly used is the Mastercard debit card.²³ To use it, people just tap the card for payment. The card user does not need to recharge because automatically every transaction cuts the funds from the account balance. Although for the sake of distinguishing from Japan, the debit card cannot be used to pay for transportation.

B. The Philippines

In the Philippines, electronic money is regulated by Bangko Sentral Ng Pilipinas, which acts as the Central Bank under circular rule no. 649. Electronic money issuers also consist of Banks, Non-Bank Financial Institutions, and other non-financial institutions. The rules in this country impose a limit of P100,000.00 (Pesos) per month and do not allow the use of e-money as a deposit, so it is not guaranteed by the Philippine Deposit Insurance Corporation.²⁴ This is slightly different from Indonesia where e-money is treated almost like an ATM, and in Indonesia e-money transactions are not guaranteed by the Deposit Guarantee Agency. E-money issuers can also only operate in the *e-money* business. At first glance the arrangement regarding e-money in the Philippines feels tighter than in Indonesia but in some ways still have some things in common.

C. United States

The United States, e-money issuers are intensively regulated.²⁵ There are at least 13 conditions that must be met in issuing e-money including licensing, registration, capital requirements, security deposits at central banks, ownership restrictions, mandatory partnerships with banks, safeguarding customer funds, risk management, cybersecurity, anti-money laundering (AML), consumer protection, data protection, and interoperability.

²² CNN Indonesia, "Bank Sentral Jepang Mulai Eksperimen Penerbitan Uang Digital," CNN Indonesia, 2021, accessed on 5 December 2021, <https://www.cnnindonesia.com/ekonomi/20210405175038-78-626230/bank-sentral-jepang-mulai-eksperimen-penerbitan-uang-digital>.

²³ "Meski Ragu, Bank Sentral Australia Mulai Menimbang Penggunaan Mata Uang Digital," kontan.co.id, 2021, accessed on 5 December 2021, <https://internasional.kontan.co.id/news/meski-ragu-bank-sentral-australia-mulai-menimbang-penggunaan-mata-uang-digital>.

²⁴ "Bank Sentral Filipina Sambut Penggunaan Mata Uang Digital," wartaekonomi.co.id, 2020, accessed on 5 December 2021, <https://www.wartaekonomi.co.id/read304998/bank-sentral-filipina-sambut-penggunaan-mata-uang-digital>.

²⁵ Hadijah Alaydrus, "Bank Sentral AS Kaji Pembentukan Dolar Digital, Saingan Sama Rupiah Digital?," bisnis.com, 2021, accessed on 5 November 2021, <https://ekonomi.bisnis.com/read/20210323/620/1371142/bank-sentral-as-kaji-pembentukan-dolar-digital-saingan-sama-rupiah-digital>.

Non-bank e-money issuers must also guarantee that they have sufficient funds in reserve to allow consumers to withdraw funds. E-money issuers must have separate assets deposited in commercial banks, central banks, or other forms of investment with the aim of guaranteeing consumer data and protecting consumers if the issuer becomes insolvent.

D. Singapore

Electronic money in Singapore under Singapore's Payment Service Act 2019 (PSA) can be used in financial transaction activities, such as domestic remittances, cross-border remittances, digital payment/token transactions, and foreign exchange.²⁶ The use of electronic money in Singapore is authorised as long as it is still with the use of Singapore Dollar.²⁷ The use of electronic money in Singapore basically bears a resemblance to the use of electronic money in Indonesia. For instance, these two countries both provide provisions that required the use of their own currencies in every financial transaction.

E. India

The use of electronic money in India is also regulated under the Payment and Settlement System Act (the PPS Act) 2007.²⁸ This regulation allows banks and financial institutions to issue prepaid payment instruments only with authorisation from the governing authority. According to the provisions of this regulation, electronic money in India is issued by an institution and is valued in Rupees. Indonesia also applies the same provisions as India, namely the existence of a central bank like Bank Indonesia that authorises to issue this digital money to then be valued in the national currency, namely Rupiah.

F. Canada and England

Canada uses the largest non-cash system running in the world, Indonesia is still far from this condition.²⁹ Consumers in Canada have accepted and adopted

²⁶ Nindya Aldilla, "Diam-Diam, Bank Sentral Singapura Jajaki Pembuatan Mata Uang Digital," *bisnis.com*, 2021, accessed on 5 December 2021, <https://ekonomi.bisnis.com/read/20211109/620/1464009/diam-diam-bank-sentral-singapura-jajaki-pembuatan-mata-uang-digital>.

²⁷ Etelka Bogardi, "Singapore Payment Services Act: Impact on the Payments Industry," *nortonrosefulbright.com*, 2020, <https://www.nortonrosefulbright.com/en/knowledge/publications/30a3bc47/singapore-payment-services-act-impact-on-the-payments-industry>; "E-Payments," Monetary Authority of Singapore, 2021, <https://www.mas.gov.sg/development/e-payments>.

²⁸ Dany Saputra, "Bank Sentral India (RBI) Pertimbangkan Luncurkan Mata Uang Digital," *bisnis.com*, 2021, accessed on 5 December 2021, <https://ekonomi.bisnis.com/read/20210724/620/1421337/bank-sentral-india-rbi-pertimbangkan-luncurkan-mata-uang-digital>.

²⁹ Bernadinus Adi Pramudita, "Seriusi Mata Uang Digital, Bank Sentral Kanada Buka Lowongan Ekonom," *wartaekonomi.co.id*, 2020, accessed on 5 December 2021, <https://www.wartaekonomi.co.id/read309750/seriusi-mata-uang-digital-bank-sentral-kanada-buka-lowongan-ekonom>.

the use of non-cash payments. The average person in Canada has two or more credit cards. The score provided by Forex Bonuses related to the use of non-cash payment systems in Canada was the highest of any country in 2017 with a score of 6.48 out of a scale of 10. The share of non-cash payments, the total value of payments by consumers is 90% and the percentage of the population with debit cards is 88%.

Similarly, the United Kingdom has long resisted the use of physical money in transactions for public transportation. The UK scored 6.42 on a scale of 10, just under Canada and Sweden for the use of non-cash payment systems. The share of non-cash payments, the total value of payments by consumers is as much as 89% and the percentage of the population with debit cards is as much as 88%.³⁰

IV. LEGAL ANALYSIS OF MONEY-USE PRACTICES

In certain areas barter using media of exchange such as bamboo, wood, bones, animal skins, and others, can still be found. Barter itself does not violate the UUMU. This is because basically the exchange is regulated under Article 1541 of the Civil Code that legalises barter that uses goods as a medium of exchange common to the community.³¹

This is still in line with the provisions in Article 21 of the UUMU, which only requires the use of Rupiah in transactions for payment, such as buying and selling and renting. While barter basically only covers exchange transactions. Thus, it can be concluded that the habit of bartering in certain areas does not violate the provisions of the UUMU.

The provisions in the UUMU, however, do not explicitly authorise or regulate barter transactions. Article 21 of the UUMU states that Rupiah must be used in transactions that: 1. have a payment purpose 2. Settlement of obligations fulfilled by money 3. Other financial transactions. The next paragraph provides exception to Article 21 of the UUMU but does not specifically identify barter as an exception. This has created unclear rules regarding barter under the UUMU. Barter is also not included in any of the acts prohibited in the UUMU. However, if the regulation in a location where the goods are considered money then it can be said to be a legal means of payment and done based on consent.

³⁰ Mutia Fauzia, "Bank Sentral Inggris Buka Kemungkinan Terbitkan Mata Uang Digital," Kompas.com, 2021, accessed on 5 December 2021, <https://money.kompas.com/read/2021/04/20/121140526/bank-sentral-inggris-buka-kemungkinan-terbitkan-mata-uang-digital?page=all#page2>.

³¹ Indonesia, Criminal Code, Art. 1541: "Exchange is a covenant, with which both sides bind themselves to give each other a good on a reciprocal basis, instead of another."

Article 21 of the UUMU affirms that the Rupiah must be used in payment transactions. Accordingly, if we look at the UUMU narrowly, then actually the medium of exchange of goods is not recognised according to this law. A broader interpretation views that the parties to the transaction have the freedom to determine the obligations under their agreement. Therefore, it is legitimate if indeed both parties agree to use goods as a medium of exchange, considering that in certain areas, it may be that the existence of Rupiah is not as important or does not have a demand as large as the goods used as a medium of exchange. Another interesting thing is the potential risks that can arise with the continued use of barter. Such goods used as means of payment may not be in accordance with the expected specifications and seeking redress may not have a legal foundation in the Indonesian courts (may be dispute resolution by customary means). As such, it does happen in the dilemma between unification of provisions or still respecting and letting the habits of society stay alive.

UUMU Article 21, which requires the use of Rupiah when making transactions within the territory of Indonesia, is enforced by sanctions stipulated in Article 33. Meanwhile, in the many areas in Indonesia there are still people who use the barter system, such as in Flores Market, Alor, and Pasar Terapung Lok Baintan-South Kalimantan. The barter system has been around for a long time and is still used today.³² This seems contrary to the UUMU. However, if these transactions are confined the community and not applied to the outside community, it is considered not to violate the provisions of the UUMU.

The presence of mediums of exchange (goods) in the form of barter, in certain areas, related to certain objects can be used as a legitimate medium of exchange. For instance, the barter system is alive and well in the community in Wailubi area, East Ganit Subdistrict, South Halmahera Island, North Maluku³³ The chairman of Gapoktan Usaha Muda stated that farmers in his region still exchange rice or crops for daily needs. For example, people exchange fish for rice because they have difficulty in using currency as a medium of exchange precisely because farmers have difficulty marketing their produce because of very limited road access.

The barter system is also still common in the village of Warloka East Nusa Tenggara. One of the residents stated that in the Warloka Market, the residents exchange goods as needed, but in this area, there have been some things paid for with money to complement the barter system when the merchandise has

³² Mia Kamila, "Sudah Modern, Ternyata Masih Ada Sistem Barter Di Indonesia," *genpi.co*, 2019, accessed on 5 December 201, <https://www.genpi.co/berita/6032/sudah-modern-ternyata-masih-ada-sistem-barter-di-indonesia>.

³³ *Ibid.*

not been exhausted. The barter system in Warloka Village is still used because it is a tradition from ancient times, and useful for the surrounding residents to meet their individual needs because the distribution of goods or products is very difficult.

It is still questionable whether bartering in certain areas as a medium of exchange violates the provisions of the UUMU, which is not clearly authorised therein. However, if reviewed through the aspect of barter which is merely an agreement where the barter system is done in accordance with the agreement between the parties if it meets the provisions, barter does not violate the UUMU. In addition, barter is not a foreign currency which is not allowed to be used under domestic law unless there is an exception to it.

Barter in the modern era is still used as well in exchange of liabilities (trade-in) or corporate debt into shares (debt *to* equity swap), and asset acquisition as a form of debt settlement. Regarding whether this type of barter violates the provisions of the MU Law or does not need to be further regulated and clearly stated in the article contained in the UUMU.³⁴

Using barter in the context of a contract, or in other words an exchange agreement of goods owned by a legitimate party, it is permissible under Article 1541 BW. However, if the medium of exchange is used not as currency, but as a coupon or voucher then it is not proscribed. This can be seen in practice from the case of the use of Dinar-Dirham currency in Muamalah Depok Market in February 2021. The defendant, Mr. Zaim Saidi, was required to transact with non-Rupiah exchange, but the judges of Depok District Court in the Ruling was decided on October 16, 2021, held that the defendant was free from all forms of prosecution because Dinar-Dirham is an exchange such as vouchers or food coupons. In addition, the panel of judges held that the medium of exchange only applies in certain communities.

The medium of exchange can be exchanged for ordinary money, and the Rupiah can be used in Muamalah Depok Market, it was simply justified because the Dinar-Dirham can be used as a *voucher*, so it does not violate Article 23 of the UUMU, that rejects use of Rupiah currency in Indonesian territory. The defendant's lawyer, Zaim Saidi, argued to the court argued that because there is no legal exchange with goods that are used as barter objects, and those that are used as barter objects are goods, the provisions of article 1541 BW apply.

³⁴ A debt/equity Swap is a refinancing transaction in which a debtholder gets an equity position in exchange for the cancellation of the debt. The swap is generally done to help a struggling company continue to operate. The logic behind this is an insolvent company cannot Pay its debts or improve its equity standing.

The Decision of PN Depok No. 202/Pid.Sus/2021/PN Depok Tuan Zaim Saidi was declared not guilty of violating Article 33 of Law No. 11 of 2011.³⁵

In Indonesia, there are still regions where the legitimate medium of exchange used is wood or other tools for the purpose of promoting traditional tourism, such as in The Traditional Market Lembah Merapi which uses Dhono Money where one-piece wood is a voucher worth Rp2,000.00 (two thousand Rupiah). Also, at Papringan Market in Kabupaten Temanggung uses bamboo rings as coupons that can be exchanged by sellers and buyers.³⁶

It can be concluded that it is permissible to use non-Rupiah instruments of exchange if it meets several qualifications: (1) The construction of the goods should be as used in barter and not currency; (2) The goods can be purchased or exchanged for Rupiah as vouchers or food coupons; and (3) Only applicable in certain regions and not used as legitimate currency.

V. ANALYSIS OF THE LEGAL USE OF FOREIGN CURRENCIES

Considering that certain regions use foreign currency in transactions such as in Batam using the Singapore Dollar, in Bali using The Australian Dollar, and Kalimantan border regions using Malaysia Ringgit clearly runs afoul of the UUMU. As stated in Article 21 of the Law, that Rupiah shall be used in any transaction that has the purpose of payment, settlement of other obligations that must be fulfilled with money and/or other financial transactions carried out in the Territory of the Unitary State of the Republic of Indonesia. Because Batam, Bali and the Kalimantan Border areas is still in sovereign Indonesia, use of these currencies violates the UUMU.

Under the UUMU, transactions with forex in Indonesia can likewise be said to violate its provisions. The obligation to use the Rupiah as a means of payment and that the use of forex is legal only if preceded by an agreement. These provisions mean that UUMU contains exceptions that allow while the use of forex in limited circumstances. Likewise, the UUMU purportedly proscribes use of non-currency or demand instruments.

In practice, however, the use of non-cash and foreign exchange transactions, especially in some border areas, cannot be stopped. This is because they both meet the needs and demands of the community. To answer the challenges of

³⁵ Vitorio Mantalean, "Zaim Saidi Divonis Tak Bersalah, Pengacara Jelaskan Tujuan Dinar-Dirham Dan Pasar Muamalah," *Kompas.com*, 2021, accessed on 5 December 2021, <https://megapolitan.kompas.com/read/2021/10/13/16030301/zaim-saidi-divonis-tak-bersalah-pengacara-jelaskan-tujuan-dinar-dirham>.

³⁶ Asriyati, "Di Pasar Tradisional Ini, Rupiah Diganti Dengan 'Dhono,'" *goodnewsfromindonesia.id*, 2019, accessed on 5 December 2021, <https://www.goodnewsfromindonesia.id/2019/10/17/di-pasar-tradisional-magelang-rupiah-diganti-dengan-dhono>.

globalisation and the development of information technology and innovation, the very limited form of Rupiah mentioned in the UUMU and the prohibition of the use of forex needs to be evaluated and studied further.

Article 23, paragraph 1, which prohibits the rejection of Rupiah is a strategic thing. This is important to maintain as Rupiah, sovereignty in the territory of Indonesia. Although in some border areas the demand for Rupiah for transactions is so low, they still should not refuse people who want to transact using Rupiah while in the territory of Indonesia.

VI. CONSUMER PROTECTION ISSUES RELATED TO PAYMENTS

In cases where consumers who cannot pay or are refused to enter the toll road with paper currency is also a violation of the UUMU. This is in line with the regulation in Article 23, Paragraph 1, of the UUMU which states that, "Everyone is prohibited from refusing to accept Rupiah whose surrender is intended as payment or to settle obligations that must be fulfilled with Rupiah and/or for other financial transactions in the Territory of INDONESIA, unless there is doubt over the authenticity of Rupiah." Accordingly, consumers should still be allowed to pay using paper money. It is necessary to still provide one or two toll payment gates so that paper money remains acceptable.

VII. CONCLUDING REMARKS

Some things can be concluded from this article, based on theoretical and juridical searches. The development of information technology produces digital money that has convenience and efficiency. The market is very open and requires those two things. Digital money and cryptocurrency have the potential to meet these needs. The provisions of UUMU are restrictive regarding the use of Rupiah for transactions conducted in Indonesia. Although, the UUMU provides opportunities for parties to use other than Rupiah. With this view, digital money also presents itself as an alternative to the means of payment. With the existence of digital money of course, UUMU must be changed and adjusted to accommodate its use in the territory of the Unitary State of the Republic of Indonesia. Some articles and paragraphs in the law are maintained, and some articles and paragraphs with changes are needed to provide the basis for the use of electronic /digital money.

The following is a proposal on matters that need to be revised / amendments from the UUMU to answer the needs of future developments and in accordance with the demands of the times. The proposals are: (1) Expanding the meaning of Rupiah which still only includes paper Rupiah and coin Rupiah to electronic money in the UUMU. The provisions of Article 2 paragraph 2 of

the UUMU strictly limit Rupiah which consists only of banknotes and coins. Though it can be seen and felt together how the use of various non-cash payment instruments in Indonesia is increasingly crowded and indeed moving in that direction. Categorising these non-cash payment tools as paper Rupiah is only a temporary and short-term solution. No one knows how financial technology develops in the next 5-10 years. So, Rupiah should be all kinds of nominal both paper, metal, and electronic money with denominations in Rupiah. (2) Facilitate legitimate electronic/digital-based payment instruments such as those that are already widely used by the public. (3) Provide innovation on the means of payment used by the community to improve the efficiency of transacting and realise social welfare. (4) Clearer arrangements regarding the clarity of bartering or putting barter in transactions that are excluded from using Rupiah. (5) Relaxation of the mandated use of Rupiah in the era of the global economic community is appropriate. Still maintaining the prohibition of rejection of Rupiah currency is appropriate because this is one form of sovereignty that needs to be maintained. However, loosening the use of forex in Indonesia is likely to make it easier for the global economic community to transact. (6) The development of technology and information will then be disrupted, the digital money that will also affect other electronic-based financial transactions. (7) Adding electronic/digital money provisions to the UUMU includes the definition, implementation, type, and nature of electronic/digital money that can be a substitution for currency. (8) Adding the enforceability of the barter system to certain areas with the provision that the system only applies if the system is applied only to related communities and not applied outside the community, and the community has indeed run the system before 1945 as a time limit for local wisdom habits that do not take place. (9) Increase oversight and law enforcement for violations of the UUMU that still occur in the community.

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