Journal of Central Banking Law and Institutions, Vol. 2 No. 3, 2023, pp. 373 - 400
e-ISSN: 2809-9885 – p-ISSN: 2827-7775
https://doi.org/10.21098/jcli.v2i3.182

AN IDEAL LEGAL TENDER FOR THE DIGITAL ERA

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Submitted: 26 March 2023 - Last revised: 11 August 2023 - Accepted: 17 August 2023

Abstract

The Covid-19 pandemic has accelerated a shift towards digital payments and altered consumer behaviour when it comes to making payments. As a result, the use of state-issued money as legal tender continues to decline in most countries. In turn, the functions and existence of legal tender has decreased. Acknowledging such facts, the purpose of this research is to examine an ideal legal tender for the digital era that can restore the legal tender function while accommodating payment innovation. This research explores legal theories on money and legal tender, as well as the characteristics of various forms of money issued by the State and the private sector, i.e., fiat money, commercial bank money, cryptocurrency, and central bank digital currency. This research concludes that an ideal legal tender for the digital era should incorporate both cash and digital currency. Under this notion, central bank digital currency might serve as the ideal legal tender for the digital era. Nonetheless, there are certain prerequisites to the issuance of such legal tender. These include at least conducting thorough interdisciplinary research and pilot projects by the central bank, establishing an adequate regulatory framework, and ensuring public acceptance of such currency as a means of payment, as well as developing the necessary infrastructure.

Keywords: *Legal Tender, Digital Currency, Future Money, CBDC, Digital Payments*

I. INTRODUCTION

The covid-19 pandemic has visibly shifted consumers' preferences to non-cash payments.[1] Advanced economies, emerging markets and developing economies have experienced significant growth in the total value of payments using non-paper-based or digital credit transfers, especially after the covid-19 pandemic.[2] Consequently, the declining use of cash means that the function of state-issued money as legal tender to discharge debts is also decreasing.

This research analyses an uncharted subject in existing legal literature: an ideal for the digital era. This research mainly analyses relevant theories on

[1] Committee on Payments and Market Infrastructures – Bank for International Settlement, "Covid-19 Accelerated the Digitalisation of Payments," December 2021: 1, https://www.bis.org/statistics/payment_stats/commentary2112.pdf.

[2] *Ibid.*

money and legal tender, changes in payment behaviour in the digital age, and the characteristics of money issued by the State and private sectors, including state-issued money, commercial bank money, cryptocurrency, and central bank digital currency (CBDC).

The study will build on legal theories on money and legal tender, such as those by Arthur Nussbaum (1950), David Fox (2008), and Charles Proctor (2020). Nussbaum argued that money is considered legal tender when it is agreed upon by both the creditor and the debtor. Focusing on different aspects, David Fox contended that legal tender is a status given by the State to money for use as a medium of exchange. Moreover, Charles Proctor viewed legal tender to settle debts should be set forth in national law. From these theories, we acknowledge that the declaration of legal tender by the State through the law and the acceptance of legal tender are crucial elements for legal tender.

The view advanced in this research is that ideal legal tender in the digital era should have a combination of cash and digital money features that can restore the function of legal tender that has been decreasing since the rise of digital payments. It is expected that future legal tender should also be able to accommodate payment innovation. Furthermore, this legal tender should have the ability to provide more hygienic, more secure, faster, and cheaper payments. Compared with other forms of money, CBDC has the potential to fulfil those characteristics, and therefore, it might serve as ideal legal tender for the digital era. However, this research recognising challenges in creating an ideal CBDC as legal tender. Thus, there are certain preconditions to meet in order for CBDC to legally and effectively function as legal tender.

The discussion in this research covers four sections. The first section serves as an introduction, followed by Section II, which lays out the concept and taxonomy of money, and relevant theories on money and legal tender. Section III discusses the changes in payment behaviour and analyses the characteristics of state-issued money, commercial bank money, cryptocurrency and CBDC. This section also examines the characteristics of CBDC that might serve as an ideal legal tender for the digital era and the preconditions needed before the issuance of money. Section IV provides concluding remarks.

II. MONEY AS LEGAL TENDER

II.A. Money: Concept and Taxonomy

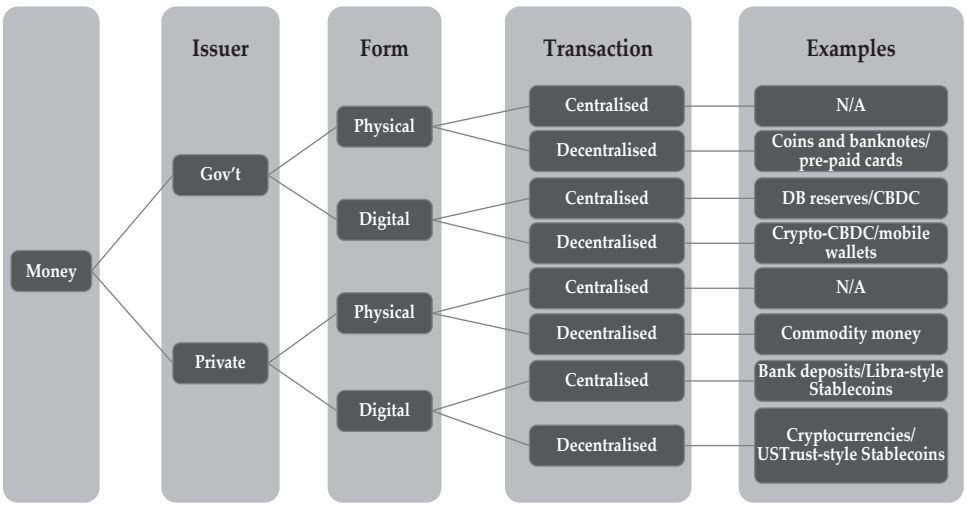
The term "money" has not yet been defined in English Law.[3] Under Indonesian Law, the definition of currency and money can be found in the Currency Law

[3] Fransiska Ari Indrawati, "Central Bank Digital Currency Under the State Theory of Money: A Preliminary Legal Analysis," *Journal of Central Banking Law and Institutions*, Vol. 1 No. 3, 2022: 379. https://doi.org/10.21098/jcli.v1i3.23.

as amended by the Strengthening and Development of the Financial Sector Law.[4] However, there are several understandings of money in different contexts and from different perspectives. In general, money can also be viewed as any media that is used to discharge debts or to pay for goods/commodities when it is agreed by relevant parties, even though such media is not acknowledged as legal tender.[5] Related to its functions, there are at least three traditional functions of money, which are as a medium of exchange, a store of value, and a standard for deferred payments. Furthermore, this money can be given the status by the State as legal tender, which must be accepted to pay for goods or serves or discharge debts.

From the era of *metallism*, gold money, *nominalism* to *bimetallism*, money or any object that was declared by the authority to function as money or to discharge debts had always been described as physical in nature. With the development of technology, money can now be in digital form, although there is a question on whether such a medium can still provide the conventional functions of money and legal tender.

To understand the classification of money, Figure 1 depicts a taxonomy for all forms of money, categorised based on the issuer of money, the form of money, and the settlement of transactions.



Source: Claeys et al. (2019)

Figure 1. A Taxonomy of Money

[4] Article 1 Paragraph 1 of Currency Law defines (Indonesian) currency as money that is issued by the Unitary State of the Republic of Indonesia, namely Rupiah. Article 1 Paragraph 2 of Currency Law defines money as legal tender. Moreover, under the Strengthening and Development of the Financial Sector Law that amended Currency Law, Rupiah consists of (i) bank notes, (ii) coins, and (iii) digital form, which is known as Rupiah Digital.

[5] *Ibid.*

Under this taxonomy, money can be issued by the government and private institutions in physical or digital forms, and transactions of such money can be conducted through a centralised or a decentralised network. Another taxonomy of money by Tobias and Griffoli classified money through its value, whether the redemption of the claim in currency is fixed value claims or variable value claims.[6] "Fixed value claims" means that claims can be redeemed at pre-established face values denominated by the unit of account, whereas "variable value claims" would be set at the going market value of the assets that back the claim.[7]

From Figure 1, it can be seen that the issuer of money can be the government or the central bank, or the private sector, including commercial banks. Money issued by the central bank is commonly called "central bank money." This money usually takes two main forms, which are in physical form like banknotes and coins, and in digital form like deposit money[8] and now, CBDC. The quantity of central bank money is a critical aspect of the central bank's monetary policy.[9] The private sector can also issue money, such as commercial banks, through their deposits. In the UK, this type of money makes up more than 79% of all the money circulating in the economy, while deposit money/reserves at the central bank only hold 18% and 3% for fiat money.[10] As technology develops, money created by the private sector becomes expanded to include all media that can function as money, such as stablecoin and cryptocurrency.

Furthermore, Figure 1 classifies money into a physical and digital forms. For digital money, monetary data is stored in the ledgers of banks or other financial institutions. Another approach to money where money is not always in a physical form was proffered under "the credit theory of money." This theory contended that the value of money does not rely on its materials but on the right that a creditor acquires to payment whereby the debtor can discharge his/her debt by the tender of an equivalent debt owed by a creditor.[11] From this approach, the function of money as legal tender to discharge debts may be exercised by money in a digital form, such as commercial bank money that is considered "good credit."

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[6] Tobias Adrian and Tomasso Mancini-Griffoli, "The Rise of Digital Money," Fintech Notes-International Monetary Fund, 2019: 5.

[7] *Ibid.*

[8] Committee on Payment and Settlement Systems-Bank for International Settlement, "The Role of Central Bank Money in Payment Systems," August 2003: 16.

[9] *Ibid.*

[10] Bank of England, "How is Money Created," October 2019. https://www.bankofengland.co.uk/explainers/how-is-money-created.

[11] See Indrawati, "Central Bank Digital Currency Under the State Theory of Money: A Preliminary Legal Analysis," 384; and A. Mitchell Innes, "The Credit Theory of Money", *the Banking Law Journal*, Vol. 31 (1914).

Related to the aspect of a "transaction" as mentioned in Figure 1, money can be processed through centralised or decentralised networks. The main difference between centralised and decentralised networks basically is the existence of the relevant authority in settling and recording transactions. CBDC, for example, in a centralised network, transactions are recorded in ledgers kept by the central bank, whereas in a decentralised network, the transactions are recorded by users or financial intermediaries under the rules and requirements determined by the central bank.[12] For cryptocurrencies, decentralisation and distributed consensus features are the principal features that distinguish them from other types of money.[13] Cryptocurrencies are processed by a decentralized network, meaning that there is no centralised record-keeping nor third-party intermediary to verify the integrity of transactions.[14] All computers on this distributed network (known as "nodes") agree on the data that will be recorded on the ledger, and such transaction data must be produced by an honest node known as proof-of-work.[15]

II.B. Fundamental Theories of Money

To understand the concept of money more thoroughly, there are at least two fundamental theories related to money that are discussed in the following paragraphs: the sovereign power of money and the state theory of money. Additionally, we also examine theories related to law and the state, which contribute to establishing a foundational understanding of money and the significance of State sovereignty.

The power to issue money originally began from the prerogative of the Roman Emperor to strike or mint coins.[16] The concept of sovereignty on money as the royal prerogative to coin money was also propounded by Bodin and Grimaudet in the 15th century.[17] They claimed that "the value of money depends on the State; that is to say, in a monarchy, upon the king, and in an oligarchy, upon the State, which alone has the right to coin money, or to have it coined and to stamp a valuation upon it."[18]

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[12] European Data Protection Supervisor, "TechDispatch#1/2023-Central Bank Digital Currency," 2023. https://edps.europa.eu/data-protection/our-work/publications/techdispatch/2023-03-29-techdispatch-12023-central-bank-digital-currency_en.

[13] Sarah Green, "Cryptocurrencies: The Underlying Technology," in *Cryptocurrencies in Public and Private Law*, eds. David Fox and Sarah Green (Oxford: Oxford University Press, 2019), 2-3.

[14] *Ibid.*

[15] *Ibid.*

[16] *Ibid.*, 381.

[17] Claus. D Zimmermann, "The Concept of Monetary Sovereignty Revisited," *European Journal of International Law*, Vol. 24 no. 3, (2013): 801.

[18] *Ibid.*

Blackstone, writing on English common law, said that the prerogative rights were distinctive and could only be exercised by the King.[19] This historical background is in line with the state theory of money of G.F Knapp, who contended that the State has the authority to issue money and create a monetary system.[20] He explained the general principles in the state theory of money that the State had the authority to choose the means of payment, to denominate the means of payments based on new units of value, and to define the new units.[21] To quote him in full: "The following general principles remain: (i) The choice of the means of payment is a free act of the State's authority; (ii) The denomination of the means of payment according to new units of value is a free act of the State's authority; and (iii) the definition of the new unit is also a free of the State's authority."[22]

From G.F. Knapp's theory, it can be inferred that there is no limitation on the State in choosing a media or monetary object as its means of payment. Furthermore, the validity of any monetary object as the means of payment should not be based on its materials or weight but rather on the declaration by the State that such monetary object is legal tender. However, under this theory, the State can proclaim any media of exchange that can be accepted as payment of debts without necessarily declaring such media as legal tender, for example, credit money or bank deposits. Central bank reserves are also an example of money, but which is not declared as legal tender.

When we discuss the power of the State and its sovereignty, we then explore the general theory of law and the State by Hans Kelsen. He stated that the elements of the State comprise territory, people, and power.[23] While the "power" of the State may be interpreted as the validity and efficacy of the legal order that can be imposed on people in its territory. Sovereignty is said to be the central characteristic of this power.[24] The power of the State, on the other hand, can also be defined as three functions of the state, namely legislative, judicial, and executive. From this theory, it can be concluded that the creation of state-issued money by the State through Parliament or central banks and the proclamation of money as legal tender through legal order expresses the sovereignty of the State and the result of the execution of a power of the State. In essence, money issued and declared as legal tender by the State represents both the State's power and its sovereignty.

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[19] William Blackstone, *Commentaries on the Laws of England* (Oxford: Oxford University Press, 2016): 232.

[20] *Ibid.*

[21] Georg Friedrich Knapp, *The State Theory of Money.* (Abridged edition, London: Published on behalf of the Royal Economic Society by Macmillan, 1924): 24.

[22] *Ibid.*

[23] Hans Kelsen, *General Theory of Law and State*, (Transaction Publishers, 2006): 255.

[24] *Ibid.*

III.C. Theories on Legal Tender

As mentioned earlier, state-issued money like banknotes and coins, and privately issued money have a distinct function to discharge debts when it is declared by the State as legal tender. If such money is not declared as legal tender, it may discharge debts only when it is accepted by the creditor and debtor as a tender to satisfy his/her outstanding debt. Furthermore, considering the distinctive characteristic of money as legal tender, it is constructive to begin by analysing the concept of legal tender under theories by the following legal scholars.

David Fox viewed legal tender as a quality conferred by the State on certain forms of a medium of exchange.[25] The consequence of offering money as legal tender means the acknowledgement of having a valid tender for the payment of debts.[26] Moreover, Charles Proctor contended that legal tender should be referred to as the money set by national law that will be effective in settling debts expressed in the national currency, and thus, all legal tender will be categorised as "money," but not all money will be legal tender.[27] From these understandings, it can be inferred that legal tender, indeed, is a status conferred by the authority on certain kinds of money. This status gives quality to money or other monetary objects that must be accepted to pay debts. This status is an intangible object given to money or other monetary objects regardless of the materiality of money. Moreover, the legal tender status cannot be reassigned to another object since it is given by the State through laws.

The ideas of legal tender in the modern era seem to have been in line with the theories in the 19th century by Arthur Nussbaum and F.A Mann, who discussed the concept of legal tender by explaining its acceptance. According to Nussbaum, legal tender is considered money under the law that a creditor is not privileged to reject if it is tendered by a debtor to repay debts.[28] In line with this notion, Mann also claimed that a creditor who refused to accept legal tender might be exposed to risks of being prejudiced in certain respects.[29]

These theories of Nussbaum and Mann emphasize that a creditor must accept legal tender offered by a debtor to discharge debts unless there is a specific reason why the creditor refuses such legal tender. The State, as a competent sovereign, can confer a status of legal tender to state-issued money

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[25] David Fox, *Property Rights in Money*, (Oxford: Oxford University Press, 2008), para 1.90.

[26] *Ibid.*

[27] Charles Proctor, "Legal Tender Under English Law*,"* in *The Euro as Legal Tender: A Comparative Approach to a Uniform Concept,* eds. Robert Freitag and Sebastian Omlor. Berlin: De Gruyter, 2020, 91.

[28] Arthur Nussbaum, *Money in the Law National and International: A Comparative Study in the Borderline of Law and Economics*, (The Foundation Press, Inc, 1950), 45-46.

[29] F.A. Mann, *The Legal Aspect of Money: with Special Reference to Comparative Private and Public International Law* (Fifth edition, Oxford: Clarendon, 1992), 43.

or another object through laws.[30] These laws force the acceptance of such money or objects as a means of payment.[31] When money is recognised as legal tender and accepted by the creditor and debtor as valid tender for the payment of debts, it can settle any monetary obligations in private transactions, such as purchasing goods, and public transactions, such as paying taxes and administrative sanctions.[32] A monetary obligation is discharged when an exact coincidence between the moment in which money as legal tender is received and the debt is repaid.[33]

However, there are conditions or qualifications that allow creditors to refuse the payment of debts by legal tender, including the quality of money, time of payment, and insufficiency of payment.[34] In the past, and possibly even up to the present day, the quality of money might have mattered, especially when legal tender consisted of coins made from precious metals. These coins might be worn down and lack of requisite metal content. However, with the issuance of digital money or token paper monies, this probably will not be a problem in the future because the legally conferred form is what makes them function.

From another perspective on the function of legal tender to discharge debts, the approach of the credit theory of money states that good credit can pay any debt.[35] This theory showed that the value of money that is used to discharge debts does not depend on its materials but on the right or credit that the creditor acquires to "payment," and the debtor can release his/her debt by the tender of an equivalent debt owed by the creditor, whereby the creditor should accept this tender in satisfaction of his outstanding balance. From this approach, the function of legal tender to discharge debts might not always be conducted through physical money but also through other forms of money, such as commercial bank money that is considered "good credit."

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[30] Helmut Siekmann, "Monetary Aspects of the Euro as Single European Currency – A German Perspective," in *The Euro as Legal Tender: A Comparative Approach to a Uniform Concept* / Ed. by Robert Freitag, Sebastian Omlor. (Berlin: De Gruyter, 2020), 12.

[31] Howard S. Ellis, *German Monetary Theory*, (Harvard University Press, 1934), 23.

[32] Siekmann, "Monetary Aspects of the Euro as Single European Currency – A German Perspective," 12.

[33] Vincenzo De Stasio and Stefano Boatto, "The Euro as Legal Tender from an Italian Perspective," in *The Euro as Legal Tender: A Comparative Approach to a Uniform Concept,* eds. Robert Freitag and Sebastian Omlor (Berlin: De Gruyter, 2020), 61.

[34] Nussbaum, *Money in the Law National and International: A Comparative Study in the Borderline of Law and Economics*, 51.

[35] Innes, *The Credit Theory of Money*.

III. ANALYSIS OF THE IDEAL LEGAL TENDER IN THE DIGITAL ERA

III.A. Digital Era and Payment Behaviour

Prior to discussing parameters for legal tender in the digital era, it is essential to define the digital era and to understand the significant changes in people's behaviour towards payments brought about by the Covid-19 pandemic.

A digital era can be defined as an era when there is a high involvement of technology that can heavily impact the economy and society.[36] Under this definition, it can be argued that, basically, there is no universal consensus in categorising an era as a digital era.

While certain figures can demonstrate the influence of technological advancements on our daily lives, they may not suffice to accurately define the arrival of a digital era. The relevance of figures associated with digital development may vary from one country to another. Consequently, the impact of technology on the economy and society can also differ across nations. Hence, we can conclude that each country may adopt a distinct approach when categorising the digital era. We discuss some relevant figures for the digital era for further consideration.

Related to digital connectivity, as of January 2022, the population of the world was 7.91 billion, more than 50% of whom have digital access or are connected to the Internet.[37] While in the context of digital payments, according to World Bank, 76% of adults globally now have an account at a bank, financial institution, and/or mobile money provider.[38] Regarding the use of digital payments, the numbers have flourished, including in the UK and Indonesia.

The Bank of England reported that 95% of the funds used for people's payments were deposited in banks, indicating that payments are primarily conducted by commercial bank money.[39] In Indonesia, approximately 98% of merchants have used digital payments, and 59% of them use digital financing. In the future, we expect to see accelerating figures that can firmly show us how significant is the impact of technology to the economy and also our daily lives.

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[36] Jill Sheperd, "What is Digital Era?" in *Social and Economic Transformation in the Digital Era,* edited by Georgios Doukidis, Nikolaos Mylonopoulos, and Nancy Pouloudi, (2004).

[37] Datareportal, Digital 2022: Global Overview Report, January 2022, https://datareportal.com/reports/digital-2022-global-overview-report.

[38] World Bank, "Covid-19 Drives Global Surge in Use of Digital Payments," Press Release No. 2022/073/DEC, June 2022. https://www.worldbank.org/en/news/press-release/2022/06/29/covid-19-drives-global-surge-in-use-of-digital-payments.

[39] Bank of England, "New Forms of Digital Money," June 2021, https://www.bankofengland.co.uk/paper/2021/new-forms-of-digital-money.

After attempting to understand the digital era, we examine how payment behaviour is evolving in society. During this pandemic, the total number of cash withdrawals declined by 23%, showing that the consumers withdrew less cash due to less commuting and travelling.[40] However, the less frequent use of cash had already been identified in 2019, and the Covid-19 pandemic merely accelerated online payments and reduced the use of cash.[41] Even after the pandemic, the European Central Bank's survey in 2020 showed that respondents were continuing to make fewer payments with cash. Moreover, the pandemic accelerated the use of contactless payments for hygienic reasons, meaning transactions are settled without exchanging cash or physical touch of a payment terminal/card.[42]

The European Central Bank also acknowledged that one of the reasons for changing payment behaviour during the pandemic is the risk of being infected by the virus via banknotes.[43] However, the risk of transmission from banknotes and coins during the pandemic was very low since the coronavirus mainly spreads airborne through aerosols and thus, the use of cash remains safe.[44] The payment behaviour of the public has already transitioned to cashless payment. Consequently, it causes the declining use of cash, which means that the function of state-issued money as legal tender to discharge debts is also decreasing. The spurred digital payments need responses from governments and the central banks to avoid negative impacts of the declining use of cash.

Digital or cashless payments, means that the payment is conducted through commercial bank money or privately issued digital currency and not using cash or state-issued money as legal tender. Consequently, there is a declining use of cash, meaning that the function of state-issued money as legal tender to discharge debts is also decreasing. While this is concerning, both private and foreign digital money could also displace State currency, and it would threaten the central bank's implementation of effective monetary policy.[45]

From those analyses, we may think that the change in habits in payment from cash to digital payments, especially during the pandemic, may have been caused by several reasons, including hygienic reasons, the development of technology,

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[40] *Ibid.*, 3.

[41] European Central Bank, "Study on the Payment Attitude of Consumers in the Euro Area," December 2022, 12. https://www.ecb.europa.eu/stats/ecb_surveys/space/html/ecb.spacereport202212~783ffdf46e.en.html#toc9.

[42] *Ibid.*, 24.

[43] Fabio Panetta, "Cash Still King in Times of Covid-19," Keynote Speech at the Deutsche Bundesbank's 5th International Cash Conference, June 2021. https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210615~05b32c4e55.en.html

[44] *Ibid.*

[45] Skylar Brooks, "*Revisiting the Monetary Sovereignty Rationale for CBDC*," Bank of Canada - Staff Discussion Paper (2021), 1.

and the efficiency of payment, both in cost and time. This change is likely to be consolidated in the future as people become increasingly dependent on advanced technology. When people have switched their preferences on how to make payments resulting in the decline of the use of cash as a legal tender, we should analyse why legal tender is essential to payments and the ideal criteria for legal tender.

Under the previous analysis of theories related to legal tender and analysis of why people shift their behaviour to digital payments, we should be able to understand that the function of legal tender is to discharge debts. In the future, discharging debts will still be the main function of money that has legal tender status. This status should be declared by the State through legislation or relevant laws. Moreover, the State may confer this status to any kind of medium of exchange regardless of its materials, physical or digital. There is an urgency for use of legal tender in payment. Using legal tender would restore the legal tender function that has been decreasing since the decline of the usage of cash. Therefore, restoring the legal tender function would bring a positive impact since there is an involvement of the State as well as the central bank in payment activities to protect the holders of legal tender.

In the later paragraphs, to find out which money fulfils the ideal criteria of legal tender in the digital era, we analyse the characteristics of (i) fiat money, such as banknotes and coins, (iii) commercial bank money, such as bank deposits, (iii) cryptocurrencies and (iv) CBDC.

III.B. Characteristics of Money

1. Fiat Money

Fiat money, or state-issued money, has specific characteristics that distinguish it from other monetary objects issued by private institutions. Under the theories of money that are discussed earlier, this type of money has at least three notable characteristics: (i) its material has always been a tangible object; (ii) it is created by the State/central bank, and its claims are a legal liability to the central bank; and (iii) mostly, it is proclaimed as legal tender by the law, usually through legislation, and simple delivery as its method of transfer.

Based on the sovereign power of money discussed previously, state-issued money is also perceived as an expression of the sovereignty of the State. A common feature of all kinds of state-issued money is that it is generally issued under some legal authorisation, and also, it can be used as legal tender. However, not all state-issued money has the status of legal tender for payments, as this status is an additional characteristic of money given by the State.

When discussing the materiality of fiat money, the history of money, especially from the era of metallism, shows that state-issued money, which

functioned as legal tender, had always been a tangible object or in physical form. State-issued money in this context is physical money that can be clearly seen and touched as a tangible object, e.g., banknotes and coins. This type of money is also considered property which furthermore falls under property law regulating certain rights and characteristics of money. Therefore, state-issued money has basically been characterised as a tangible object.

The essential doctrines of metallism and *nominalism* explain the physical form of money for both concepts but with different approaches for assessing the value of money. As a branch of commodity theory, the doctrine of *metallism* emphasized the value of money as a medium of exchange due to its bullion content or metal content, and therefore, it had an absolute value.[46] Examples of money under the *metallism* era include coins made from brass, bronze, and copper with specific sizes and weights.[47]

Moving to the *nominalism* era, Knapp explained that money and other payments, such as tickets, stamps, and tokens, do not have intrinsic value, but they can still derive their meaning from legal authorities.[48] The *nominalism* idea by Knapp disconnects money from the metallic element. However, under this nominalism belief, state-issued money still came in the form of physical money even though the value might not be stated on such money. Howard S. Ellis also concluded the nominalism concept in money, in which value was relative and exercised by a unique medium of exchange function.[49] Under this idea, money can be created by a "thing" that does not have intrinsic value, but it still can function as money. Regarding the value of money, although it has nominal value, it does not have intrinsic value and its worth is determined by the supply and demand of the money as it also depends on its status as legal tender.

Another recognizable characteristic of fiat money is the ownership of cash money is shown by the possession of holders of the money, and these holders can spend the money by reducing his/her possession of such money by a simple delivery to a counterpart.[50]

The delivery method of this physical money is also different from the other types of money. The transfer of its legal title is done by simple delivery or physical transfer, regardless of the validity of any underlying legal transaction related to the delivery of money.[51] However, the delivery method of physical

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[46] See Nussbaum, *Money in the Law National and International: A Comparative Study in the Borderline of Law and Economics*, 2; and Ellis, *German Monetary Theory*, 5 and 91.

[47] Thomas Rüfner, "Money in the Roman Law Texts," in *Money in the Western Legal Tradition: Middle Ages to Bretton Woods,* eds. David Fox and Wolfgang Ernst, Oxford Academic (2016).

[48] Knapp, *The State Theory of Money,* 38.

[49] Ellis, *German Monetary Theory*, 5.

[50] Fox, *Property Rights in Money*, 23.

[51] *Ibid.*, 19.

money can be burdensome, particularly for payments of large amounts. Rather than using cash as payment of debts, people tend to conduct payments using other forms of money, such as commercial bank money. This method of payment also avoids risks and costs related to payment by cash arising, among other things, from the transportation of money and physical delivery to the creditor.[52]

Nonetheless, fiat money as state-issued currency is the anchor of a monetary system and having this as the centre of the monetary system would allow the central bank to have an effective monetary policy and act as last-resort lenders.[53] In line with the fundamental theories of money as discussed earlier, the greater use of fiat money as sovereign money, the greater degree of monetary sovereignty to preserve monetary policy autonomy and to prevent destabilizing capital flows.[54]

We have also noted in previous paragraphs that the use of cash has declined, especially after the Covid-19 pandemic. The fear of being infected by the virus via cash is one of the reasons for the use of cash to drop, and since paying with cash has always needed physical delivery thus, cash might not be the best medium for hygienic payment.

2. Commercial Bank Money

Commercial banks also create money known as commercial bank money. In general, commercial bank money has distinctive features related to (i) its materials which are intangible but can be proven by proof of funds, (ii) its claims are a legal liability to a commercial bank, and (iii) its method of transfer consists of an adjustment of credit and debt between payor and payee.

In legal terms, this commercial bank money may be referred to as incorporeal money, which is defined as a customer's legal right to perform an action to have a credit balance in the bank or any overdraft facility.[55] By having commercial bank money such as deposits, the customer has a claim to be paid by the bank in the form of balances on an account that can be transferable to become media of exchange.[56] This type of money is a legal claim against banks for payment of a debt by tender of notes or coins. Based on this understanding, commercial bank money can be inferred as an intangible object that can be represented by any proof of funds issued by banks, such as deposit certificates and bank statements.

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[52] Benjamin Geva, "The Concept of Payment Mechanism," Osgoode Hall Law Journal *24.1* (1986), 4.

[53] Brooks, *Revisiting the Monetary Sovereignty Rationale for CBDC,* 13.

[54] *Ibid*., 16.

[55] Fox, *Property Rights in Money*, 12.

[56] *Ibid.*

Different from state-issued money, the issuance of commercial bank money in any kind of financial product or banking service does not fall on the state theory of money as mentioned earlier. Consequently, this issuance, which banks carry out as private entities, does not require a legal basis.

The transfer of commercial bank money, such as deposits, can be performed relatively easily since there is no physical delivery required. Basically, this "transfer" consists of an adjustment of the debt liabilities of the parties' banks to the payer and recipient.[57] In other words, the transfer of commercial bank money for any kind of payment purposes means debiting the debtor's bank account and crediting the amount of the withdrawal to the creditor's account. According to David Fox, the creation of the recipient's title on the money depends on the decision of the recipient's bank to assume a debt liability.[58] Furthermore, the determination of a liability relies on banking practices and procedures.[59] In general, this time point or decision to assume a debt liability is executed real-time as soon as the adjustment between liabilities is created.

Regarding legal tender status, commercial bank money does not have most of the legal characteristics of fiat money, which are: (i) it is not issued by the State; (ii) it is not a legal tender; (iii) it does not serve as a media of universal exchange; and (iv) it is not negotiable.[60] Commercial bank money can be used to discharge debts as long as the creditor and debtor agree to use such money. However, whether commercial bank money can be an ideal legal tender in the future, we should understand that claim on such money would be the liability of the banks, and since banks are private institutions, there are insolvency risks the holders of commercial bank money are exposed to the risk of their banks failing. Therefore, we can argue that commercial bank money might not be viewed as ideal legal tender.

3. Cryptocurrencies

Another form of money is a cryptocurrency created by the private sector, such as Bitcoin and stablecoin. We may characterise this type of money, among other things, as follows: (i) it is intangible material; (ii) any regulators or institutions do not guarantee its claims; and (iii) its method of transfer consists of adjustment of the ledger of payee and payor.

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[57] *Ibid.*, 31.

[58] *Ibid.*, 33.

[59] Geva, "The Concept of Payment Mechanism," 13-14.

[60] Sarah Green, "It's Virtually Money," in *Cryptocurrencies in Public and Private Law*, eds. David Fox and Sarah Green (Oxford University Press, 2019), para. 2.06.

To understand this type of money, a cryptocurrency or virtual currency is defined by Financial Action Task Force[61] as: "a digital representation of value that can be digitally traded and functions as; (i) a medium of exchange; (ii) a unit of account; and/or (iii) a store of value, but does not have legal tender status (i.e., when tendered to a creditor, is a valid and legal offer of payment) in any jurisdiction."

Fulfilment of the above functions is agreed upon among the community of users of the virtual currency, which is not guaranteed by the State since such currency is issued by the private sector.[62] The core distinction from the national currency or fiat money is the lack of legal tender status for cryptocurrencies resulting in cryptocurrencies serving as money only by the agreement among the relevant parties.[63]

Regarding the method of transfer of cryptocurrency, payments using cryptocurrency could occur instantly if a recipient's digital wallet provider is authorized to receive such transfer, and the wallet holder can access his/her cryptocurrency without any hindrance.[64] The transfer is considered to happen when a receipt is recorded in their digital wallet.[65] The adjustment of the ledger between payee and payor occurs after such transfer.

Related to the traditional money functions that we mentioned earlier, some argued that cryptocurrencies might not be able to function as ideal legal tender due to their inability to serve as a reliable store of value. There are critics of the countries that have declared Bitcoin as their official legal tender, among other things, regarding their unpredictability values.[66] In its official statement, the International Monetary Fund (IMF) suggested that El Salvador remove the legal tender status of Bitcoin as they entailed risks to financial stability, financial

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[61] Financial Action Task Force, Virtual Currencies: Key Definitions and Potential AML/CTF Risks, June 2014, 4, https://www.fatf-gafi.org/en/publications/methodsandtrends/documents/virtual-currency-definitions-aml-cft-risk.html.

[62] *Ibid.*

[63] Charles Proctor, "Cryptocurrencies in International and Public Law Conceptions of Money," in *Cryptocurrencies in Public and Private Law*, eds. David Fox and Sarah Green (Oxford University Press, 2019), 2-3.

[64] Christopher Hare, "Cryptocurrencies and Banking Law: Are There Lessons to Learn?" in *Cryptocurrencies in Public and Private Law*, eds. David Fox and Sarah Green (Oxford University Press, 2019), para. 9.25.

[65] Ibid.

[66] See USA Today, *El Salvador becomes first country to make bitcoin national currency and then it hit a snag*, https://eu.usatoday.com/story/money/2021/09/08/bitcoin-becomes-el-salvadors-national-currency/5767198001/; BBC, *Bitcoin Becomes Official Currency in Central African Republic*, April 27, 2022, https://www.bbc.co.uk/news/world-africa-61248809; and CNBC, *Central African Republic Becomes Second Country to Adopt Bitcoin as Legal Tender*, https://www.cnbc.com/2022/04/28/central-african-republic-adopts-bitcoin-as-legal-tender.html

integrity, and consumer protection as well as fiscal contingent liabilities.[67] Claeys et al. also viewed cryptocurrencies as speculative assets rather than money due to their inherent volatility because of their inelastic supply limit.[68]

When it comes to the legal tender status of cryptocurrencies, specifically Bitcoin, only two countries, namely El Salvador and the Central African Republic, have proclaimed Bitcoin as their legal tender through the enactment of legislation. The Legislative Assembly of El Salvador has enacted a Bitcoin Law that regulates Bitcoin as an unrestricted legal tender to be used in any transactions in El Salvador. El Salvador has proclaimed Bitcoin as its legal tender because they believe that Bitcoin's value can respond to free-market criteria, which furthermore can increase national wealth for the benefit of the public and promote the economic growth of the nation.[69]

Unlike cash which represents a direct liability of the central bank, and commercial bank money, which is guaranteed by the commercial banks, cryptocurrency operates independently from the State, authority, or any institution. It is not backed by the traditional assets of these parties. This condition exposes the holders to risks, especially when the issuer becomes insolvent.

Related to the public's acceptance as a means of payment, a study by Alvarez et al. on Bitcoin as El Salvador's legal tender concluded that Bitcoin is not widely accepted as a means of payment in El Salvador because most of the respondents did not trust the system or Bitcoin itself and therefore, they still prefer to use cash.[70] Even though the State has enacted a law to force the use of Bitcoin as a valid legal tender, the acceptance of relevant parties to use it as payment is another thing, and is not motivated by such law.

The above case demonstrates the importance of the public's acceptance of the implementation of new legal tender. The State or central bank should have strategies to educate the public about the newly introduced legal tender, encompassing financial literacy and increasing the public's trust regarding the new legal tender.

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[67] International Monetary Fund, "IMF Executive Board Concludes 2021 Article IV Consultation with El Salvador," January 2022, https://www.imf.org/en/News/Articles/2022/01/25/pr2213-el-salvador-imf-executive-board-concludes-2021-article-iv-consultation.

[68] Gregory Claeys, and Maria Demertzis, "The Next Generation of Digital Currencies in Search of Stability," European Parliament - Monetary Dialogue Papers, December 2019, 9. https://www.europarl.europa.eu/cmsdata/207654/14.%20PE%20642.35%20Bruegel%20publication-original.pdf

[69] Bitcoin Law of El Salvador, unofficial English version available at https://freopp.org/el-salvadors-bitcoin-law-full-proposed-english-text-9a2153ad1d19.

[70] Fernando E. Alvarez, David Argente and Diana Van Patten, "Are Cryptocurrencies Currencies? Bitcoin as Legal Tender in El Salvador," Working Paper No. 2022, 54. https://bfi.uchicago.edu/insight/research-summary/are-cryptocurrencies-currencies-bitcoin-as-legal-tender-in-el-salvador/#:~:text=This%20paper%20studies%20a%20unique,of%20exchange%20for%20all%20transactions

From the characteristics and concerns mentioned, we may argue that cryptocurrency might not serve as ideal legal tender as it poses various risks for the holders.

4. Central Bank Digital Currency (CBDC)

CBDC may be viewed as a new form of money, issued digitally by a central bank and is intended to serve as legal tender and has distinctive characteristics from other forms of central bank money, e.g., banknotes and traditional reserve accounts maintained by banks with the central bank.[71] The main characteristics are (i) it is intangible, (ii) just like cash, in that its claims are guaranteed by the State/central bank, and (iii) Similar to commercial bank money and cryptocurrency, its method of transfer consists of adjustment of the ledger of payee and payor.

The general designs of CBDC are categorised by their purposes, namely (i) wholesale CBDC and (ii) general purpose/retail CBDC. This discussion leads to the conclusion that retail CBDC has the most suitable characteristics as legal tender in the future as it has both cash-like features and digital features that can fulfil the needs of people to optimize digital payment.

Wholesale and Retail CBDC

Wholesale CBDC is designed only for wholesale payments, and it is accessible to particular firms including financial institutions.[72] Wholesale CBDC would not be available to the public, and thus, it has a limited function in discharging debts. In the earlier discussion, we note that money as legal tender should be available to the public, and the public should accept it as means of payment to discharge debts. Thus, the restriction of participants and functions in wholesale CBDC may not be ideal characteristics for legal tender.

Wholesale CBDC is intended only for wholesale transactions or high-value payments, such as payments between financial institutions or securities settlements.[73] This shows that wholesale CBDC can only be used to discharge debts within certain parameters, and therefore, it might be classified as having limited legal tender status. If we look at the legal tender regulation in the

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[71] Tommaso Mancini Grifolli et al., "Casting Light on Central Bank Digital Currency," IMF Staff Discussion Note (November 2018).

[72] See Bank for International Settlements, "Central Bank Digital Currencies," March 2018, 13; Center for Latin American Monetary Studies, "Key Aspects around Central Bank Digital Currencies Policy Report," CEMLA Fintech Forum, (May 2019): 7, https://www.cemla.org/fintech/docs/2019-06-KeyAspectsAroundBankDigitalCurrencies.pdf; and Bank of Canada, Bank of England and Monetary Authority of Singapore, "Cross-Border Interbank Payments and Settlements: Emerging Opportunities for Digital Transformation," November 2018, 28, https://www.mas.gov.sg/-/media/MAS/ProjectUbin/Cross-Border-Interbank-Payments-and-Settlements.pdf.

[73] Bank for International Settlement, "BIS Annual Economic Report 2021," June 2021, 70. https://www.bis.org/publ/arpdf/ar2021e.pdf

UK, in 1971, gold coins as legal tender could be used for payment of any amount. This regulation also authorized other specific coins as legal tender, such as cupronickel, silver, and bronze that could be used for a certain amount of payment.[74] If wholesale CBDC is proclaimed as legal tender, similar to cupronickel, silver, and bronze coins, it would have restricted use for payments. It cannot be used for payment of debts below a minimum threshold, making it less ideal as legal tender, which is intended to settle debts of any amount.

Unlike wholesale CBDC, retail CBDC is intended to be universally accessible to and for all payments, including retail payments.[75] This type of CBDC would offer cash-like convenience to the public. Retail CBDC is also intended to be regarded as payment for any amount in both private and public transactions.

The retail CBDC also offers a variety of schemes such as (i) the nature of its claims, whether it will be a direct or indirect claim to the central bank, (ii) the infrastructure of technology of CBDC, whether it will use a conventional central bank infrastructure or Distributed Ledger Technology/DLT, and (iii) the scope of CBDC whether it will be used as domestic or cross border payment.[76] Nonetheless, the implementation of each design would require different mechanisms and regulatory frameworks in the financial system.

Moreover, there are two possible variants for retail CBDC, namely, token-based retail CBDC and account-based retail CBDC.[77] The token-based retail CBDC may recognize anonymity in payment, just like cash. The transfer or payment mechanism using retail CBDC for both types, just like other money in digital forms, involves an adjustment of the balances of the payer and payee.[78]

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[74] See Section 2 of the Coinage Act 1971.

[75] Bank for International Settlements, "Central Bank Digital Currencies," 13; and Center for Latin American Monetary Studies, "Key Aspects around Central Bank Digital Currencies Policy Report," 7, and Bank of Canada, Bank of England and Monetary Authority of Singapore, "Cross-Border Interbank Payments and Settlements: Emerging Opportunities for Digital Transformation," 28.

[76] Raphael Auer and Rainer Bohme. "The Technology of Retail Central Bank Digital Currency," *BIS Quarterly Review*, (March 2020), https://www.bis.org/publ/qtrpdf/r_ qt2003j.pdf.

[77] The token-based system allows CBDC to be accessed by individual users and is based on password-like digital signatures with private-public key cryptography. With this approach, token-based retail CBDC can recognise anonymity in payments since personal identification would not be required. There is no verification needed for payment using token-based retail CBDC. Meanwhile, in order to be able to use account-based retail CBDC, the user or holder should create an account in the central bank, either directly with the central bank or through the commercial bank as an intermediary. A verification of the user's identity would be needed before CBDC is used. The verification stage is compulsory to identify the holder in order to authorise the transactions using CBDC. See Bank for International Settlements, "Central Bank Digital Currencies," 6; Bank for International Settlement, "BIS Annual Economic Report 2021," 72; and Raphael Auer and Rainer Bohme, "The Technology of Retail Central Bank Digital Currency," 19.

[78] Bank for International Settlement, "Central Bank Digital Currencies: System Design and Interoperability," September 2021, 4.

Nonetheless, both types of retail CBDC would still require an adjustment in their ledgers. A verification process might be an essential element in deciding which type of CBDC is suitable as legal tender. If we look at the nature of physical cash, token-based retail CBDC most likely falls within the classification of this money since it has a similar "settlement process," which would not require any verification for payment processing.

Like cash, token-based retail CBDC can also be designed to represent a bearer instrument and support offline payments.[79] Cash can be used freely without any verification from the authority because of its design. Meanwhile, account-based retail CBDC would need a verification process to confirm the legitimacy of the holder before the CBDC is transacted.[80]

Furthermore, a token-based retail CBDC that is designed as non-traceable or anonymous in payments would operate like cash money, which is relatively untraceable[81]. It means that it is challenging to identify the former owner of specific money when the money is mixed, and thus, the legal title to money is generally ended when it is already mixed[82]. To conclude, token-based retail CBDC might have the closest features and characteristics to conventional cash that carries function as conventional legal tender. Therefore, this type of CBDC is likely to be proclaimed an ideal legal tender.

Advantages for CBDC as Legal Tender

From the earlier analysis, we may perceive that, in general, CBDC offers an ideal concept of legal tender because its features are a combination of features of cash and commercial bank money. There are several advantages to proclaiming CBDC as legal tender, which we will explain in the following arguments.

CBDC, as central bank money, could serve as an alternative mode for digital payments and a monetary tool for the central bank. With the existence of digital central bank money in the financial system, CBDC could diversify the range of digital payment options where cash could not be used.[83] If CBDC is designed for offline payment, then it would serve as a useful contingency if there were any outage of electricity.

In addition, the issuance of CBDC as legal tender in the financial system allows the creation of money by the central bank because it can influence

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[79] *Ibid.*

[80] Kahn, Charles M. "How Are Payment Accounts Special," prepared for the Payments Innovation Symposium Federal Reserve Bank of Chicago, October 2016, 5.

[81] Fox, *Property Rights in Money*, para. 1.61.

[82] *Ibid.*

[83] Bank of England, "Central Bank Digital Currency: Opportunities, Challenges and Design," Discussion Paper, March 2020, 16. https://www.bankofengland.co.uk/paper/2020/central-bank-digital-currency-opportunities-challenges-and-design-discussion-paper

spending in order to achieve its monetary policy targets.[84] CBDC would also serve as an alternative tool or instrument for the central bank to achieve its policy targets. Compared to the creation of money by commercial banks, the central bank might rely on the policy rate of interest to influence the borrowing and saving of households and businesses.[85] CBDC, as legal tender, can function as an effective competitive constraint on electronic payment providers that were used to perform by physical cash.[86] Therefore, the decline of cash would not be an issue as CBDC can still fulfil the role of legal tender.

CBDC could restore the function of legal tender. When we talk about digital payment or cashless payment nowadays, this means that the payment or discharging of debts is mostly conducted through deposits or commercial bank money, and not using state-issued money as legal tender. The declining use of cash also means that the function of state-issued money as legal tender to discharge debts is also decreasing. While this is concerning, another argument that is also concerning is that both private and foreign digital money could displace the State currency, and it would threaten the central bank's task of creating an effective monetary policy.[87]

If many people use CBDC to discharge debts, a greater number of virtual legal tender will be used. The reason why it is important to restore the function of legal tender on state-issued money is that we need to bring back the original function of state-issued money to discharge debts that might be diminished over time, especially with the rapid innovation in the financial system and digital payment.

CBDC also offers faster, more secure, and cheaper payment than using cash and commercial bank money. Since CBDC is digital state-issued money that will be processed through the system provided by the central bank, it is expected that the process of "delivery" of money from the originator to the receiver can be conducted timely or perhaps faster than the process of payment of commercial bank money.

CBDC should be treated as digital cash, which can be transferred on an automated system just like commercial bank money. The technology might cause it to be transferred faster than cash or commercial bank money at a lower

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[84] Ben Dyson, Graham Hodgson, and Frank van Lerven, "Sovereign Money: An Introduction," Positive Money, 4, https://positivemoney.org/wp-content/uploads/2016/12/SovereignMoney-AnIntroduction-20161214.pdf.

[85] *Ibid.*

[86] Monetary Authority of Singapore, "A Retail Central Bank Digital Currency – Economic Consideration in the Singapore Context," November 2021, 14. https://www.mas.gov.sg/-/media/MAS/EPG/Monographs-or-Information-Paper/A-retail-CBDC---Economic-Considerations-in-the-Singapore-Context.pdf

[87] Brooks, *Revisiting the Monetary Sovereignty Rationale for CBDC*, 1.

cost (or free). CBDC promotes more secure payment since the central bank is involved in the transaction process of CBDC, either directly or indirectly.

Moreover, during a crisis, holders of commercial bank money and cryptocurrencies may be exposed to insolvency risks feared by the issuers. Therefore, since there is a low probability for the central bank to be exposed to insolvency risks and thus, CBDC, similar to fiat money, promotes a secure feature compared to privately issued money.

III.C. Preparing for the Issuance of Legal Tender in the Digital Era

The central banks play an important role in the issuance of CBDC as digital legal tender in the digital era. They should work alongside relevant authorities to carefully design and implement such money to fulfil the specific needs and characteristics of each country's economy and jurisdiction.[88]

Noting that each country has its own unique challenges regarding the issuance, distribution, and transfer of their money, thus, it would also require interdisciplinary research for CBDC as legal tender, including legal perspective.[89]

From a legal perspective, in order to ensure the smooth issuance, distribution and transfer of this type of money, it is important for the central bank to prepare an adequate legal environment as a basis for legal tender. This legal environment consists of a comprehensive regulatory framework and clear legal arrangements among the involved parties.[90] This regulatory framework should include, at a minimum, (i) an institutional framework on the central bank and legal foundation central bank as the relevant authority and (ii) a legal basis as legal tender.[91]

For instance, in Indonesia, as previously mentioned, the foundation for the central bank to issue Indonesian CBDC as legal tender was enacted through the Strengthening and Development of the Financial Sector Law that amended the Currency Law. This new law has added a new form of Indonesian currency in a digital realm, known as "Rupiah Digital."[92] The law has also designated this type of money as legal tender within the borders of Indonesia and, furthermore, provided mandates to Bank Indonesia to issue and regulate CBDC.[93] To ensure clear guidelines, implementing regulations

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[88] Indrawati, "Central Bank Digital Currency Under the State Theory of Money: A Preliminary Legal Analysis," 398.

[89] *Ibid.*

[90] *Ibid.*

[91] *Ibid.*

[92] See Article 2 of Currency Law as amended by the Strengthening and Development of the Financial Sector Law.

[93] Article 14A of Currency Law as amended by the Strengthening and Development of the Financial Sector Law.

should be established for CBDC based on its specific design and intended purposes. These regulations might cover, among others, the technology used and criteria of participants in the ecosystem, ownership and distribution of such money, data privacy, and the finality of settlement for online transfer and offline transfer.

Preparing the infrastructure for CBDC as a digital legal tender system is also necessary to allow the smooth operation of CBDC. The infrastructure for CBDC might use a conventional central bank infrastructure, distributed ledger technology, or other technology. The design of CBDC, whether it is designed as retail or wholesale, account-based or token-based, and for domestic or cross-border payment, will result in distinct infrastructural requirements. According to the technology acceptance model theory by Fred D. Davis, to have widespread acceptance among prospective users, the technology or infrastructure employed for this novel form of currency should possess both utility and user-friendliness,[94] among others, by ensuring the platform or wallets for digital money that are user-friendly for public.

The central banks must also have strategies to implement and increase the adoption of new legal tender by consumers and merchants, among others, by disseminating the use and benefits of using legal tender and providing incentives for adopting new legal tender. The central banks must also learn valuable lessons from the challenges faced in implementing digital legal tender in some countries, such as El Salvador, as we have elaborated earlier, and also Nigeria.[95] Among the obstacles faced when introducing digital legal tender in Nigeria are issues such as the public's low level of adoption due to a lack of trust in the monetary system, inadequate technological reliability and the need for appropriate central bank policies. To anticipate these challenges, the central banks could consider strategies such as increasing public literacy across various segments, ensuring technological capabilities and enhancing the transparency of the central bank's policies.

IV. CONCLUDING REMARKS

Legal tender can be any media or a thing that has the status of legal tender given by the State through legislation. From a historical perspective and relevant theories developed about money and legal tender, it can be argued that

[94] Fred D. Davis, "Perceived Usefulness, Perceived Ease of Use and User Acceptance of Information Technology," *MIS Quarterly,* Vol. 13 No. 3, September 1989, 320. https://doi-org.ezproxy.is.ed.ac.uk/10.2307/249008.

[95] Jookyung Ree, "Nigeria's eNaira, One Year After," IMF Working Papers WP/23/104, May 2023, https://www.imf.org/en/Publications/WP/Issues/2023/05/16/Nigerias-eNaira-One-Year-After-533487.

all kinds of state-issued money, including legal tender, were tangible objects, whereas legal tender is a status, an intangible characteristic, that can be given to money as designated by the State. Furthermore, we note that any kind of money, regardless of its materials, can be proclaimed legal tender.

From this analysis, it is valid to argue that any kind of money, including virtual money, can have the status of legal tender proclaimed by the State through legal ordinances. These legal ordinances are essential to determine the status of money as legal tender, which furthermore can create legality in public as legal tender and encourage acceptance by the public as a means of payment.

Legal tender for the digital era should have a feature of cash that ensure the involvement of the central bank related to the claims of money, besides having a digital feature for its method of payment. This cash-like feature means that just like fiat money, the legal tender should be issued by the State, and it could recognise anonymity in payments to simplify the transaction.[96] The issuance of money by the State allows the holders to have a direct claim to the central bank, and since there is a low probability for the central bank to be exposed to insolvency risk, this cash feature would enable the holders from this insolvency risk.

After determining the ideal characteristics of legal tender, we may conclude that CBDC could serve as an ideal concept of legal tender for this technological era since CBDC has both cash-like features and digital features that can fulfil the needs of people to optimize digital payment. While the Covid-19 pandemic has increased our concern about a media that can transmit the virus from one to another, CBDC could address this issue since CBDC could offer hygienic payment, unlike cash.

Furthermore, as virtual sovereign money, CBDC is believed to be more secure for its holders since its claims, just like banknotes and coins, would be the liability of a central bank with a low likelihood of being exposed to insolvency. As sovereign money, CBDC can function as legal tender to legally discharge debt, and it can express the sovereignty of a country in the digital era as monetary policy can be more effectively conducted. CBDC might be a faster and cheaper payment since, most likely, CBDC will be transacted using the infrastructure provided by the State or the central bank at a lower cost (or even free) compared to those provided by the private sector.

Despite CBDC offering ideal characteristics to serve as legal tender, it should not be intended as a replacement for fiat money. Instead, it should be designed to complement fiat money. In this notion, CBDC would function as an alternative digital payment available to the public in the form of central bank

[96] Bank for International Settlements, "Central Bank Digital Currencies," 6.

money. Moreover, CBDC would also serve as an additional tool or instrument for the central bank to achieve its monetary policy target.

More than 86% of the central banks are now conducting research on CBDC, including preparing grand designs or white papers, including Indonesia.[97] However, before implementing CBDC as legal tender, certain preconditions should be fulfilled. The central banks should at least conduct thorough interdisciplinary research, establish an adequate regulatory framework, and ensure public acceptance of such currency as a means of payment, including the necessary infrastructure. They should also consider the effectiveness of the monetary tasks of the central bank and the use of technology that can ensure the protection of data privacy.

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