JIEFeS

Journal of Islamic Economics and Finance Studies

Volume 6, No. 2 (December, 2025), pp. 266-289
DOI. http://dx.doi.org/10.47700/jiefes.v6i2.12341

ISSN 2723 - 6730 (Print)
ISSN 2723 - 6749 (Online)

Reforming the Monetary System: Should it be the Core Motivation of Sharia-compliant CBDC?

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Received: 23 September 2025	Revised: 23 December 2025	Published: 31 December 2025

Abstract

Throughout the Islamic history of money, *Fulūs* (copper coins) and paper money emerged in Muslim societies as a monetary phenomenon, alongside with gold (Dinars) and silver (Dirhams) as sovereign Islamic currencies under Sharia terms. In recent years, this phenomenon has been extended to digital currencies, precisely central bank digital currency (CBDC), which raises questions about its role and functions in the monetary system. In the literature, the motivations of CBDC are essentially the financial system efficiency, the financial inclusion, and the confrontation of cryptocurrencies' widespread use; however, these motivations are secondary compared to the need for reforming the current monetary system. This paper aims to demonstrate that the core motivation of the CBDC should be the reform of the monetary system. In this regard, this research examines the core and primary motivation of CBDC theoretically as a new currency, aiming to fulfill an effective economic and monetary role in accordance with a reformist Islamic perspective. Fundamentally, the core motivation of CBDC could be the opportunity to reform the monetary system in Muslim societies, which is deeply rooted in interest rates, money creation, and excessive indebtedness. This paper employs a descriptive-analytical methodology grounded in a normative approach to examine the challenges associated with the use of CBDC in promoting monetary sovereignty, stability, and fulfilling the functions of money in accordance with Sharia. The core motivation of CBDC is based on two main axes: the reinforcement of monetary sovereignty and the rethinking of the money functions in compliance with the principles of Sharia, allowing a strong connection of the financial sector with the real sector. This study concludes that the optimal Sharia- compliant CBDC is conditioned on being fully sovereign, legal, society-accepted, gold-backed, Zakāh-based, hoard-free, interest-free, investment-based, publicly available, fully reserve-based, and non-subject to maturity transformation.

Keywords: CBDC; sovereignty; money creation; *Sharia*; money functions

INTRODUCTION

From an Islamic perspective, the monetary system in Muslim societies is characterized by some imperfections, mostly the excessive money creation or credit extension, interest rate mechanism (*Riba*), and excessive debt, which weaken monetary sovereignty and money functions. What central banks are doing today in listening to the public and what society expects from the monetary authorities is, in the end, a tacit acknowledgment by these authorities of their shortcomings in realizing and achieving the goals of stability and justice. This conscious change is a welcome transformation if the intentions are right to reform monetary systems that generate recurrent crises and exacerbate the increase of social inequality. The usage of alternative monetary systems or complementary currencies is often motivated by feelings of inequity of fiat monetary systems (Lietaer, 2001). In this regard, the technological revolution and digital transformation in the financial world led to the development of new private digital currencies, the most important of which is Bitcoin, which influences the strategies of the monetary authorities regarding the possibility of issuing a central bank digital currency (CBDC). The reaction of the central bank to issuing CBDC occurred after the widespread use of private digital currencies, although paper money and credit money perform their functions as defined by monetary authorities.

The motivations of CBDC are not necessarily the motivations cited in the literature, essentially the improvement of the financial system efficiency, the widespread use of cryptocurrencies, and the cashless, but mostly for the necessity to introduce reforms to the current monetary system, given its imperfections, and this is what is expected to happen. Therefore, this motivation will depend on the optimal design, issuance, and implementation of the CBDC. From an Islamic perspective, CBDC could be primordial for rebuilding a sovereign and a fair monetary system in Muslim societies as follows.

First, the CBDC is expected to be built through the concept of monetary sovereignty, which is considered among the pillars of the Islamic economy. In this context, the issuance of the CBDC may lead to the restoration of some strength to the monetary authority without the need for direct regulation of new currencies (Brunnermeier, James, and Landau, 2019). This trend is supported by the Islamic vision of the central role of the state in managing monetary affairs and the exclusive role of central banks in issuing sovereign money. Furthermore, CBDC can enhance the role of the central bank in the management and control of money supply and limit the excessive creation of money and its effects on the economy, significantly criticized by many researchers when studying the financial crises of 1929 and 2007 (Minsky, 1986; Allais, 1993; Yousri, 2017). Principally, the money creation originates from the banking system. Money creation is the consequence of two money mechanisms: the first is called the money multiplier (Fractional reserve system), where the creation is realized through the derived deposits (Demand deposit) by the whole banking system. The second mechanism is the credit multiplier or credit creation, which can be realized by one bank and essentially out of nothing, which means without the existence of real demand deposits or derived demand deposits. The money creation out of nothing is cited in the literature as the most dangerous credit mechanism and as the principal factor of crises and indebtedness increase (Minsky, 1986; Allais, 1993; Werner, 2014). Through the phenomenon of money creation out of nothing, the disruption it causes in the real economy, the exacerbation of indebtedness, and the growing power of cryptocurrencies, the importance of a sovereign CBDC is a potential solution to these problems and their economic and social impacts in particular. Furthermore, the money history highlights the importance of gold coverage in money issuance to face the money instability issue and to link money to the real economy, which can reinforce the sovereignty and resilience of the monetary system through a CBDC gold-backed.

Second, in this reformist framework, the money functions for CBDC are crucial and need to be reviewed under the *Sharia* rules and conditions regarding money. In fact, money accepted by society represents a medium of exchange as a principal function and proves the existence of a socio-economic relationship between the society members, which supposes a mutual trust and indicates the importance of the social dimension of money. The functions of CBDC are important to define and include in its design, issuance, and implementation. These functions highlight the importance of the application of rules of *Riba*, hoarding, and *Zakāh* (Abū Al-Saūd, 1968). Money represents the root of the monetary system and is the main source of interest rate, which can alter money functions and affect the separability of the real sector from the financial sector as one of the foundations of Islamic economics. Hoarding is prohibited, given its undesirable effects on money velocity and money circulation (*Al-Rawaj*), while Zakāh has the opposite effect regarding investment and the redistribution of wealth through the increase of money circulation.

According to these issues, the paper addresses the motivation of CBDC for reforming the monetary system in compliance with Sharia. The design, issuance and implementation of CBDC are crucial to contribute to the reform and rebuilt of the monetary system in Muslim societies, deeply based on interest rates, money creation, and excessive indebtedness. The monetary reform through CBDC is based on two main axes: the reinforcement of monetary sovereignty and the rethinking of the money functions in compliance with the principles of Sharia. The issues presented above lead us to the research problem regarding the motivation for CBDC introduction and what CBDC is required to achieve or resolve for the purpose of reforming the monetary system.

This paper aims to demonstrate that the core motivation of the CBDC should be the reform of the monetary system. According to the motivation of CBDC for reforming the monetary system, this paper has two principal objectives: firstly, the paper aims to investigate the sound relationship between the CBDC and the goals of monetary sovereignty and the Sharia compliance of money functions. Secondly, the objective is to emphasize the importance of CBDC characteristics, allowing the reform of the monetary system. This paper uses a descriptive-analytical methodology grounded in a normative approach to examine the motivation of CBDC for reforming the monetary system and the design, issuance, and implementation of the CBDC. This paper identifies a research gap in the monetary dimensions of CBDC regarding the monetary sovereignty principle and the money functions fulfilment in accordance with Sharia. This paper fills this gap, which makes an additional value to the literature, leading to a proposal of an optimally designed CBDC. The analysis and the recommendations of this paper are based on the hypothesis of the technology code of ethics.

The remainder of the paper is as follows. The second section presents the literature review. The third section discusses the announced motivations of the CBDC issuance with a critical view by proposing the core motivation of the CBDC that should be. The fourth section focuses on monetary sovereignty and how CBDC can tackle money creation and its effects, considered as a main issue in the monetary system, in addition to the importance of gold in CBDC design. The fifth section examines the conditions favoring optimal money functions in accordance with Sharia through the implementation of the CBDC. The last section concludes.

LITERATURE REVIEW

The subject of this research is in the field of digitalisation of money, precisely the CBDC. Research and debate on CBDC have attracted significant attention from academic researchers and policymakers. Furthermore, in recent years, research in the conventional context has grown substantially, and the topic of CBDC has reached a high level in scientific publications by addressing the subject extensively from different aspects and dimensions of the CBDC. However, research is scarce in the context of Islamic economics. In our literature review for the CBDC from an Islamic perspective, and after searching, we find that the majority of research about CBDC does not specifically address our subject and its underlying issues; rather, we found research that focused on the CBDC from an Islamic perspective in relation with financial or banking phenomena. In this paper, we provide a literature review in the Islamic context regarding the CBDC and its relationship with the financial, monetary, and banking systems.

From the financial system side, Hamza and Ben Jedidia (2019) examine the subject of CBDC and place the discussion within the context of dual banking intermediation and financial stability. A CBDC Sharia-compliant might be a solution for addressing the financial instability and volatility of cryptocurrencies. In a dual banking system, Islamic banks could limit the disintermediation effect of CBDC and maintain financial stability under Sharia compliance. In the same context, Mohamed (2020) analyses the implementation of a central bank-issued digital Currency with economic implications and considerations. Methodologically, the author used qualitative, comparative, and analytical assessments on the critical impact on crucial levers like dilution to monetary policy, and the stability of the financial. The author concludes that a Sharia-compliant CBDC may have the capacity to tackle issues plaguing the current financial system. Al-Ansari, Aysan, and Syarif (2025) explore the convergence of fintech and Central Bank Digital Currencies (CBDCs) and how the collaboration of these two domains can catalyze the growth of a sustainable financial ecosystem and their potential convergence to preserve a resilient, inclusive, and sustainable financial system. The study provides a roadmap for leveraging the potential of CBDCs and Islamic fintech to increase sustainable financial ecosystems.

From the monetary system side, Tekdogan and Guney (2024) mention that the rise of digital money, particularly CBDCs and stablecoins, indicates a turning point in the monetary system. CBDC holds the potential to become the dominant form of money due to its legal tender status, safety as base money, and programmability. The CBDCs can provide significant benefits for financial regulation, inclusion, and stability. The authors emphasize that the implementation of CBDCs presents several challenges, and it is crucial to consider regulatory and technological issues while mitigating potential risks. The authors conclude that CBDCs offer an opportunity for Islamic countries to develop a sound economic, monetary, and financial system in alignment with Islamic principles. In the same scope, Abduallah (2024) clarifies the impact of monetary reform on retail banking, with the introduction of private crypto-currencies (CCs) and retail central bank digital currencies (CBDCs). The impact of private CCs and the introduction of retail CBDCs will eliminate credit creation, thus rendering the commercial banking model obsolete. This will inevitably involve a structural change in the global financial system, with the separation of the public issuance of money and the private issuance of equity finance and investment.

From the banking system side, Prayudya and Al-Ayubi (2023) propose a CBDC design that is aligned with Islamic principles, as well as strengths, weaknesses, opportunities, and threats of its design. The result shows that CBDC design should be both retail and wholesale interlinkages, account and token-based payment authentication, hybrid architecture, non-interest bearing remuneration, and managed anonymity. The main strengths of CBDC are fostering digital financial inclusion, better resiliency towards power outage, and mitigating bank disintermediation. In the context of Islamic banking, Lukonga (2023) states that Central bank digital currencies (CBDCs) promise many benefits but, if not well designed, they could have undesired consequences, including for monetary policy. The author highlights that issuing a CBDC in an Islamic setting raises several complex design issues. Sharia principles prohibit interest payments, thus remunerated CBDCs are either not an option or the central banks have to design a CBDC that incorporates a profit-sharing mechanism. Furthermore, as CBDCs are perfect substitutes for unremunerated demand deposits, the large share of unremunerated deposits elevates the disintermediation risk in Islamic banking.

In relation to CBDC and the liquidity in Islamic banks, Umi and Pati (2024) investigate the design of Central Bank Digital Currency (CBDC) in accordance with sharia principles and its potential to mitigate the liquidity risk of Islamic banks. To ensure the survival of Islamic banks and mitigate liquidity risks arising from the adoption of a CBDC, the authors conclude that it is imperative to establish a liquidity management mechanism rooted in sharia principles that incorporates the use of CBDC. For the same purpose of banking liquidity, Hasan (2022) analyzes the role of CBDC on Islamic banks and sheds analytical light on the core structure of CBDC and to what extent it is compatible with Islamic sharia principles. In addition, Hasan (2022) discussed on how CBDC could be used as a tool for liquidity management in the Islamic banking operations.

This research adds novelty and contributes to this literature in three ways. First, this research contributes to the literature of Islamic economics regarding CBDC as a new digital money by investigating deeply the motivation of the CBDC to reform the monetary system from an Islamic perspective. Second, the research examines the principal issues of the monetary system and the way in which the potential of CBDC contributes to an effective monetary sovereignty and a Sharia-compliant money functions. Finally, the study contributes to the literature by showing the optimal characteristics and design of CBDC.

RESEARCH METHOD

This paper uses a descriptive-analytical methodology grounded in a normative approach to examine the motivation of CBDC for reforming the monetary system regarding monetary sovereignty, stability, and fulfilling the money functions in compliance with Sharia**.** The descriptive analytical methodology is based on the definition of the research problem and how to address it. This methodology is based on a critical discussion and a normative approach regarding what is expected from the CBDC to achieve the goals of reinforcing the monetary sovereignty and fulfilling the Sharia compliance of money functions. The appropriate methodology is chosen according to the research objectives and the characteristics of the research topic, intending to provide meaningful insights that can lead to a scientific contribution regarding the potential of the CBDC for reforming the monetary system. The descriptive-analytical methodology relies on a precise, in-depth description of phenomena and related relationships as they exist to highlight the importance of CBDC in the monetary system, which allows us to gain an understanding of its relationships with monetary concepts of sovereignty and money functions. The CBDC motivation from an Islamic perspective is examined in depth and thoroughly by studying its challenges for the reinforcement of monetary sovereignty and the review of money functions by providing a deep and precise interpretation of all aspects of the topic and understanding all its concepts and dimensions.

Research methodology relies on organized steps for studying CBDC, starting by using information and ideas combined with the contribution of the literature review and criticizing the view regarding the priority motivations of CBDC, allowing us in the second step to formulate the scientific content regarding why the core motivation of CBDC Sharia-compliant should be the reform of the monetary system. In the end, the goal is to reach conclusions and recommendations that contribute to developing the reality of CBDC.

RESULTS AND DISCUSSION

Motivations of CBDC: A Critical View of Priorities

CBDC is defined as a monetary value stored electronically and can be used to make payments (Fung and Halaburda, 2016). Like cash, the CBDC is a liability of the central bank and would be widely accessible to the general public as legal tender. CBDC is a new form of money, issued digitally by the central bank and intended to serve as legal tender and designed for retail payments (Mancini-Griffoli et al., 2018). We define a CBDC as a new, sovereign, legal, and digital money issued and backed by central banks that has traditional money functions and is available to one or all economic agents; these money functions are medium of exchange, measure of value, store of value, and medium of term payment. Digitization is not a novel feature of modern money since today's commercial bank deposits are privately issued digital money, and central bank reserve balances are sovereign digital currencies (Omarova, 2021). In addition to the existing money represented by cash, deposits, reserves, and private digital currencies, the CBDC is considered an innovation since it establishes a direct financial relationship between the central bank and the economic agents. As legal tender, the CBDC can be held by all economic agents or a restricted set for retail or wholesale payments (Hamza and Ben Jedidia, 2019). The CBDC is intended to be a new form of money alongside other forms of money, with some differences in accessibility, form, interest-bearing status, payment mechanism, anonymity, and issuer. The accessibility of CBDC, as new characteristics of money, to the general public is the proposal of Tobin (1987) who recommends that the government create "deposited currency accounts" (DCAs) at the central bank: "*I think the government should make available to the public a medium with the convenience of deposits and the safety of currency, essentially currency on deposit, transferable in any amount by check or other order*" (Tobin, 1987).

The interest in CBDCs has significantly grown in recent years, till July 2025, 137 countries and currency unions, representing 98% of global GDP, are exploring a CBDC with three countries have fully launched a digital currency—the Bahamas, Jamaica, and Nigeria, for China the digital yuan (e-CNY) is still the largest CBDC pilot in the world (Atlantic Council, 2022). The UAE is expected to launch the CBDC (digital dirham) in Q4 2025. The European Central Bank has made substantial progress on the digital euro in 2025, and Brazil is advancing its digital currency initiative, DREX, scheduled for launch in early 2026, as a major transformation of the Brazilian monetary system[1]. A survey of IMF country teams shows that 19 central banks in the Middle East and Central Asia (ME&CA) are exploring issuing a CBDC, and 7 have already benefited from IMF capacity development on this topic (Bouza et al., 2024). Islamic countries strongly committed to CBDC projects are Saudi Arabia, UAE, Qatar, Turkey, Pakistan, Indonesia, and Malaysia.

[1] https://e-axes.com/cbdcs-2025-progress-across-global-jurisdictions/

The motivations for issuing a CBDC are increasingly cited by international monetary and financial institutions (Boar and Wehrli, 2021). Overall, these motivations are the following:

1) The technological development is essentially through cryptography and blockchain,
2) The increase of security and efficiency in payment systems (including cross-border payment).
3) The declining use of cash (Cashless), where cash use may continue to fall, and card use (the main cash substitute) may fall by more if CBDC is issued (Khiaonarong and Humphrey,2022).
4) The development of financial inclusion (Ricci, L. et al., 2024; Bouza et al., 2024; Ozili and Náñez,2024), where in emerging market economies, the CBDC is able to foster financial inclusion by reaching out to the unbanked segments of the population (Mancini-Griffoli et al., 2018).
5) The growing competition with private cryptocurrencies (Bitcoin, Ethereum..)
6) The risks of private digital currencies on the financial system through their high volatility, which does not meet the money functions (Assaf, 2019), and CBDC could potentially offer the public a default-free, presumably cheap medium of exchange with potentially higher anonymity (Rossi, 2024).
7) An additional mechanism for monetary policy and financial stability, the launch of CBDCs increases banks' financial stability (Heitmann, Koch, Islam, and Eva, 2025; Ponce and Toroco, 2025).
8) The reduction of the illicit use of money (money laundering, tax evasion, shadow economy, terrorist financing) (Coeuré, and Loh, 2018; Dionysopoulos, Marra, and Urquhart, 2024).
9) The possibility for individuals (retail) and institutions (Wholesale) to own a sovereign digital currency.
10) Sharia compliance for using CBDC by Islamic financial institutions and facilitating financial products and services.

The motivations should include, as a priority, the reform of the monetary system through tackling its imperfections (money creation system, indebtedness, price instability). In this regard, it must be noted that what society is asking for today from the monetary authorities is the stability of prices, the reduction of indebtedness, equal investment opportunities for all, and social equality. Financial inclusion and preserving central bank monetary sovereignty are the leading motivations for emerging market central banks (44%) and developed market central banks (50%), respectively, and CBDCs, as the digital version of central bank money, should reinforce this stabilising role and safeguard monetary sovereignty (OMFIF, 2025).

In Islamic countries, the motivations for CBDC implementation are presented in the Table 1.

Table1. CBDC projects motivations in Islamic countries

Islamic countries with CBDC projects	Principal Motivations announced
GCC countries	Efficiency of the financial system, financial inclusion, financial integration, Sharia compliance.
South Asia Islamic countries	Efficiency of the financial system, financial inclusion, financial stability, Sharia compliance.
Middle East	Efficiency of the financial system, financial inclusion, and countering private digital currencies.
North Africa	Efficiency of the payment system, financial inclusion, countering private digital currencies, and money laundering.
Islamic African countries	Payment efficiency, financial inclusion, countering private digital currencies, and monetary policy.

Source: Author

It is relevant that financial inclusion and financial system efficiency are mostly cited as the principal motivations. The Sharia compliance of CBDC is cited by some countries however it is not proposed as Sharia policy regarding monetary system, and even if Sharia compliance of CBDC is announced it is to serve the activities of Islamic financial institutions and to facilitate financial products and services. None of these countries announces fundamental motivation for reforming the monetary system according to Sharia principles.

The primary motivation for the introduction of new sovereign money through CBDC is to address the imperfections of the monetary system, in addition to the objectives of monetary authorities to ensure monetary stability and promote social welfare in Islamic societies. These challenges can be reached according to *Sharia* principles and Islamic thought heritage regarding the role of money in Islam. The Sharia and Islamic heritage of money have a rich contribution to a stable and fair Islamic monetary system, and many scholars tackled the money issues and provided contributions that can be beneficial for reforming the current monetary system (Essentially: Ibn Khaldoun, Al-Maqrizi, Al-Ghazali, Al-Isfahani, Al-Mawardi, Ibn Taymiyyah, Ibn Al-Qayyim, Ibn Abidin) . Money as a form of wealth serves the community and its religious faith and in confirmation of that is the holy hadith of Muḥammad Allah's Messenger (Sallá Allāh ‘Alayhi Wa-Sallam): “*We sent down wealth to establish prayer and pay Zakāh*” (Al-Albani, Al-Sahih Al-Jameh ,N° 1739). Besides, the principal roles of money are the facilitation of financial and economic transactions, a useful tool for monetary policy, promotion of social relationships, and the achievement of equality between the rich and the poor in rights and investment opportunities. In this context, for the design, issuance, and implementation of CBDC, the reformist Islamic vision is based on the importance of the monetary sovereignty principle and the fulfillment of money functions in compliance with the *Sharia*.

Reinforcing Monetary Sovereignty Through CBDC

Monetary sovereignty means the right to issue and control money only by the state and its duty to preserve rights and serve the interests of the individual and society. According to the *Sharia* principles, the right to issue money is for the Imam alone (the State, the *Soltan*), and he must authorize someone who performs this function …. It is not permissible for anyone other than the Imam to issue money, because it is a violation of the Imam's right[2]. This view is shared by almost all scholars and many renowned Muslim scholars who pointed out that the state is the unique issuer of money (Ibn Khaldoun, Ibn Taymiyyah, Al-Nawawi, Al-Maqrizi, Al-Suyuti*).* The money issuance as the function of the state reinforces the sovereignty view of money in society. As an issuer of sovereign currency, the central bank can provide the core trust in the monetary system (Carstens, Frost, and Song Shin, 2022). Digital central bank money is only as strong and credible as the institution that issues it (Prasad, 2022). The money sovereignty principle is crucial under *Sharia* objectives (*Maqasid*) for wealth protection (*Hifdh Al-Maal*) from banks' practices (money creation, leverage, interest rate). From a Sharia compliance perspective, the centralized issuance of CBDC ensures effective governance and regulatory oversight (Qadri, 2023).

Resolving Excessive Money Creation through CBDC

Money in the form of copper coins and banknotes is created legally by the central bank as the unique institution having the responsibility of the money affairs; however, the role of money in society is altered by derived deposits and the credit creation out of nothing realized by the banking system, which goes against the monetary sovereignty principle. The money created by the banking system through loans is large (McLeay, Radia, and Thomas, 2014) and is weakening the sovereignty of the legal money and the role of the monetary authorities, where the basic money created by the central banks is largely less than the money created by the banking system under the tacit acceptance of the central bank. Due to the weakness of monetary sovereignty, credit money has become the principal money creation in the banking system and is considered as the main cause of the separation of the financial sector from the real economy. With the growing role of credit money, the imbalance between the financial and real sectors increased and the indebtedness of individuals and society increased as well. In this regard, the banks, through money creation, gain large profits which tempt them to expand credit more and more, accumulate easy and cheap money, and create inflation (Al-Masri, 2013).

The money creation increases the deposit and, therefore, increases the leverage. Leverage is a mechanism or practice in the core of the relationship between banks and depositors, based on interest rate as ensured income, through which banks maximize their profit with minimal own resources under the challenge to

[2] Al-Mawsoua Al-Fiqhiat Al-kuwaytia. *Hak Istadar Al-Nuqud*. Paragraph 16. p 178. Volume 41. First Edition. Ministry of Awqaf and Islamic Affairs – Kuwait. (2002).

realize an investment return superior to the resources cost. This practice weakens the bank capitalization and disadvantages the depositor's position and could lead to an inequality between stakeholders in the case of Islamic banks. The leverage practice indicates the imperfection of interest rate and promotes the separation of the financial sector from the real economy. In this regard, the excessive leverage by the banks is the consequence of money creation through credit, which also increases the banking risk supported at the end partly by the customers. The fact that money is created upon the creation of bank loans (Werner, 2014), while repayment implies money destruction, both of which are an accounting reality, implies that banks are not "intermediaries". Through the concept of fractional reserves system, it is not possible to talk about intermediation which supposes the ownership of money to lend and not out of nothing. The notion of "disintermediation" is misleading, given that bank lending does not mean intermediation but money creation (Gross and Siebenbrunner, 2019). Banking is not money lending; to lend, a money lender must have money (Minsky, 1986). The 'Money Multiplier' model of money creation is a fallacy (Keen, 2011). A bank is therefore not an office for "borrowing" and "lending" money, but it is a Manufactory of Credit (Macleod, 1891). The process by which banks create money is so simple that the mind is repelled. Dealing with such an important topic, a deeper mystery seems only decent (Galbraith, 1975).

Money creation through the banking system hinders the control of the money supply. It is appropriate for the central bank to have full authority to control the monetary mass and not leave the banking system to create credit money out of nothing (Allais, 1993). When the commercial bank generates new credit money, it has loaned what it did not own and owned itself what it had no right to, then profited from its possession of the usurped money (Alsabhani, 1998). In this sense, the non-ownership of loans funds means the non-possibility of granting credit. Thereby, credit creation does not fulfill the rules of ownership and resembles to the short-selling practice in the financial market, which is forbidden in *Sharia*.

The CBDC as legal tender is quite close to the Islamic vision regarding money issuance, which should be the monetary function of the State, leading to the limitation of money creation, as a principal indicator of non-sovereignty, and contributing to money stability. Excessive indebtedness as an indicator of money creation is an indicator of sovereignty loss. The sovereignty of the CBDC could be measured through the volume of money created by the banking system or indebtedness, the control of money creation, and its social impact regarding justice, equality, indebtedness, and money stability. The design, issuance, and implementation of CBDC are based on its sovereignty, which is deeply advocated in the Islamic heritage. The reinforcement of money sovereignty allows the central bank to better control the money supply and as a result lead to the limitation and control of indebtedness in addition to an optimal allocation of investment. Further, a positive effect of CBDC issuance regarding the limitation of money creation is through the new role of the central bank in banking intermediation allowing the central bank to lend CBDC free of interest (*Qardh Hassan*) which promotes its social role and providing CBDC investment deposits with returns according to the principle of PLS (Profit and loss sharing) which is the central mechanism of Islamic banking intermediation. CBDC sovereignty could be a key factor in addressing money issues, essentially the money creation responsible for the increase of indebtedness, social inequality, and instability.

Rationally, money issuance and legitimate money creation are a response to the performance of the real economy, which means that money increase is a consequence of wealth creation, but really money and credit creation are simply a creation of debt with interest and with an unequal counterpart in the real economy, and this explains the volume of indebtedness in the world compared to the GDP. The money created out of nothing through the credit mechanism can be assimilated to bad money or counterfeit money (Allais, 1993). Originally, money creation arises from the growth of the real economy and the increase of wealth in society, while money creation today arises from the mechanism of credit or lending, meaning that the source of money is the usurious debts, which represent a paradox in the nature of money and a loss of its social role and detachment from the real economy. Bank money creation is an issue due to the role of commercial banks in excessive money creation and its effects on indebtedness, and inequality given that this credit creation increases the debt burden for the debtors and the state and is mostly beneficial for the creditors through the increase of their wealth. Excessive money creation increases the money supply compared to the volume of commodities and services in the economy and, as a result, leads to an increase in inflation and a decrease in the purchasing power of individuals already burdened by the debt originated from credit creation. According to the International Islamic Fiqh Academy (2021) "Since the main cause of inflation is the increase in the quantity of money issued by the relevant authorities for various well-known reasons, the Academy calls upon these authorities to make every effort to eliminate this underlying factor which causes great harm to society…."[3].

In this regard, limiting or eliminating money creation is the most prominent component of CBDC that would put an end to the money creation by commercial banks, which is possible through an exclusive issuance and creation of the CBDC by the central bank and through what we call the full reserve system. In fact, the great depression of 1929 in the United States led the economists of Chicago Plan to recommend the abandon of fractional reserve banking responsible of excessive money creation and financial crisis. The call for a sovereign money system with full reserves instead of fractional reserves is advocated after the financial crisis of 1929 and 2007. In terms of fairness, it is found that the partial reserve system gives commercial banks the right to issue money in the form of derivative deposits and lend it at usurious rate, while money in itself is a social institution that all agents

[3] Resolution No 115 (9/12): Inflation and the Changing Value of Currency.

participate in creating by means of general acceptance of it. Therefore, in giving commercial banks the right to sell them, there is clear injustice (Al-Jarhi, 1981). The complete replacement of bank deposits with CBDC could eliminate money creation by commercial banks and will lead to the creation of what some monetary reform enthusiasts call the “sovereign money system” (Pichler, Summer, and Weber, 2020). Fractional reserve banking will be seriously reduced if a significant volume of deposits is transferred to the CBDC.

The partial reserve system is less stable, less fair, and it makes the production of real money more expensive. It is better, for reasons related to the adequacy of the economy's efficiency and the fairness of distribution, to adopt a system of full reserve where the legal reserve rate becomes 100% (Al-Jarhi, 1981)**.** There is a recommendation to apply the full reserve system for demand deposits as they are considered as *Wadia* (Deposit) based on *Amana* (Trust) principle and therefore cannot be used under the fractional reserve creation for money creation (Khan and Mirakhor, 1994). A full reserve requirement would reduce the danger of Gharar in money-holding (Siegfried, 2001). The use of CBDC can potentially limit the fractional reserve system, and the business banking model might tend to narrow banking, limiting in this way the excessive lending and ensuring financial stability (Greenwood, Hanson, and Stein, 2016), where under narrow banking, deposits are fully backed by central bank reserves. The CBDC may pave the way toward a narrow banking system that reduces the risk of banking panics and financial crises due to fractional reserves, eliminating the need for deposit insurance and the associated regulatory apparatus (Cukierman, 2020). Removing private banks’ money creation ability may offer potential benefits and a CBDC may allow a gradual transition toward a full money system (Gross and Siebenbrunner, 2019). It is rather likely that CBDC will fundamentally alter the existing system of banking, as it will influence the commercial banks’ “monopoly” of issuance of accounting money with general accessibility (Schweigl, 2018). Retail CBDCs will clearly prevent money creation since CBDCs can only be issued by central banks and not created by commercial banks (Abduallah, 2024). A properly design and issuance of a CBDC would reduce the disadvantages of the fractional reserve system and give impetus to the full reserve system and this leads to the reduction of money creation. The introduction of CBDCs in Muslim-majority countries could facilitate a shift from fractional reserve banking to full reserve banking, consolidating the state's authority over currency within the banking sector while safeguarding central banks' monetary sovereignty and enhancing seigniorage income (Tekdogan and Guney, 2024). The access of the public to CBDC could unbundle the banking functions, based on the fractional reserve system, leading to the model of narrow banks or full reserve banks (Ketterer and Andrade, 2016). The full reserve system or narrow banking applied for a CBDC complies with the sovereignty view of money and in accordance with the Sharia principles. In their CBDC projects, some Islamic countries are approaching the sovereignty of CBDC from a limited view regarding the limitation of dollar dependence, which is insufficient, as sovereignty means fundamentally the right to issue and control of money only by the state and its duty to preserve rights and serve the interests of the individual and society according to the *Sharia* principles.

Sovereignty of the CBDC through Gold

What promotes monetary sovereignty refers to the origin of money, which is gold and silver money, and the properties they possess that made them occupy an important place in the history of Islamic societies. The gold and silver money were cited many times in the *Coran* and *Sunna* with strict rules regarding *Riba*, Zakāh, and hoarding. In Islamic money history, the *Fulūs*, metal money or terminological money, made from metals other than gold and silver (copper, zinc…) appeared in addition to the gold and silver money. *Fulūs* were created to assist gold and silver money and progressively, with other money forms, they replaced them totally at the end of the 20th century. The money as it is today, which is not gold or silver, is assimilated to *Fulūs.* In addition, the period before the first World War indicated that the golden money was mostly stable; however, with the arrival and widespread of coins, paper money[4] and principally credit money, the situation changed considerably leading to the excessive money creation and the recurrence of monetary instability crises. The Islamic history of money calls for the revival of the role of gold in the economy and its contribution to monetary stability and resilience.

According to the World Gold Council's survey of retail gold investors across six economies (Germany, India, the US, the UK, China, and Russia), 67% of retail holders keep gold because it protects against inflation and currency fluctuations (OMFIF,2021). In this regard, it reveals the importance of rethinking the consideration of gold in the money design and, naturally, the CBDC design. A gold-backed CBDC could boost the metal's role in the global financial system (OMFIF ,2021). In fact, credit money is characterized by the possibility of unlimited money creation; however, with the issuance of CBDC with a gold-backed or golden coverage, the money creation and credit expansion will be limited and controlled, favoriting the stability of money as a principal condition of money functions leading to success in meeting the society's needs. CBDC will have to be 100% backed by gold and/or silver, since empirical analysis over 1,400 years has confirmed that prices expressed in gold and silver are low and stable over the long term (Abduallah, 2024). The non-existence or reduced stock of gold is not an obstacle for the country with no gold production, given that economic performance is the main factor that allows the monetary system to acquire its gold needs and also reinforces the relationship of the monetary system with the real economy. Holding money without a constant value in real assets involves a danger of *Gharar*, that is to say, there is a strong danger of *Gharar* since

[4] Paper currencies are considered a legal form of money, possessing all the characteristics of value, and are subject to the rulings prescribed by Shariah for gold and silver with regard *to Ribā* (usury), *Zakāh*, Salam, and all other transactions. International Islamic Fiqh Academy (Resolution No. 21 (9/3): Shariah Rulings on Paper Money and the Changing Value of Currency).

the money is not backed by real assets and only the strength of the economy serves as a guarantor for the money (Siegfried, 2001).

The sovereignty of CBDC gold-backed could be promoted by strengthening the state's authority in monetary matters, limiting the issuance and creation of basic money to central banks only, forbidding banks to create CBDC through fractional reserves, as well as creating credit CBDC out of nothing, and implementing the application of the full reserve system to demand deposits. Moreover, for the central bank, there is no possibility of issuance of CBDC without gold cover, and for banks, the possibility of financing is only by using investment deposits, and an interest-free CBDC for lending is possible in the form of *Qardh Hassan*. The design, issuance, and implementation of CBDC with gold cover could be effective for money stability and the achievement of money function under *Sharia* rules. Till today, the Islamic countries strongly committed to CBDC projects (Saudi Arabia, UAE, Qatar, Turkey, Pakistan, Indonesia and Malaysia), in addition to Nigeria, which launched its CBDC in 2021, are not approaching to back CBDC to gold but by the power of law. Furthermore, regarding the prohibition of riba, an interest-free and PLS-CBDC is conceivable in these countries according to their project announcement and their commitment to Sharia principles.

Rethinking the Money Functions of the CBDC

The sovereignty of money is the principal pillar and servant of the money functions fulfillment under the condition of money stability and the responsibility of the monetary authorities through optimal monetary policy. The discussion about the issuance of a CBDC should address the contribution of this currency to the fulfillment of the money functions under the Islamic view of money. In fact, money stems from the society's need for a means to facilitate economic transactions (exchange of goods, services, and financial assets) and promote social institutions (Zakāh, waqf), and thus serves the community and cannot in any way be a source of economic and social problems affecting the human right to a decent life and social welfare. Money was made to serve the community, which can be called the business model of money or the social construction of money. Any authority or institution cannot volunteer money to serve its influence or the influence of stakeholders, essentially, financial institutions. In this regard, CBDC should be approved by the central Sharia board and accepted by society.

The direct access of the general public to the CBDC (Token or account-based) reinforces the social role of money and could give more information to the monetary authority regarding the monetary policy. CBDC has social value due to its ability to blend features of cash and deposit (Agur, Ari, and Dell'Ariccia, 2019). Any decision regarding the introduction of CBDC should be based on social desirability for this fundamental change that includes financial intermediation, money creation, credit allocation, monetary policy implementation, and macroeconomic stability (Pichler, Summer, and Weber, 2020). The new and direct relationship between the public and central banks through CBDC can enhance the functions of money, increase confidence in the monetary system, and create a balance between the financial system and the real economy.

Muslim scholars (Essentially Al-Ghazali, Ibn Taymiyyah, Ibn Al-Qayyim, Ibn Khaldoun, Ibn Abidin) consider money as a price for a means to the intended and has functions to perform, represented as a medium of exchange and a measure of value as two basic functions, to which are added the functions of a store of value and a medium of term payment. The acceptance of the society of money as prices (*Al-Thamaniia*) is the core condition for the fulfillment of these functions. The function of medium of exchange is favoured compared to the function of store of value, given that the Islamic view encourages the exchange instead of the hoarding, where *Zakāh* purifies hoarding; however, *Riba* encourages it (Faqih, 2016). Money would be restricted to the role of medium of exchange rather than a store of value (Siegfried, 2001**)**. Linguistically, *Dhahab* (gold) is taken from going and moving on, and *Fidha* (silver) from dropping and dispersing. With this general linguistic content, it appears that the terms gold and silver carry with them the meaning of trading and not hoarding (Belabes, 2022). Among the purposes of the Sharia is not to freeze wealth but to stimulate it in ways that benefit people from the types of investment (Ibn Al-Khouja, 2004).

The concept of *Al-Rawaj* (circulation) is crucial as an indicator of the medium of exchange function and means the circulation of money in the hands of as many people as possible in a rightful way, and it is a great legal purpose indicated by the enticement of transactions (Ibn Ashour, 1947). Further, one of the purposes of the Sharia is to increase the dealings with the two currencies (gold and silver) in order to obtain circulation with them (Ibn Ashour, 1947). Muḥammad Allah's Messenger (Sallá Allāh ‘Alayhi Wa-Sallam) said, "*If I had gold equal to the mountain of Uhud, it would not please me that it should remain with me for more than three days, except an amount which I would keep for repaying debts*."[5] The hadith is a clear statement of spending encouragement and hoarding avoidance and highlights that the main existence reason of money is spending, circulation, and exchange. The spending of money is mentioned three times in the same verse in Surat Al-Bakara: *And whatever good you [believers] spend is for yourselves, and you do not spend except seeking the countenance of Allah. And whatever you spend of good - it will be fully repaid to you, and you will not be wronged* (2:272). The repetition in the same verse is an indicator of the extreme importance of money spending, circulation, and exchange. The acceptance of CBDC as digital money by society allows it to perform properly the function of medium of exchange. In addition, the digital characteristic of the CBDC increases its circulation. The function of medium of exchange is only performed by the money and not the other assets, if we exclude the barter transactions; therefore,

[5] Sahih al-Bukhari n°2389.

this reinforces the importance of this money function (Al-Jarhi, 1981**)**. Al-Ghazali (2005), in his greatest book "*Ihya Ulum Al-Din*" proves the importance of this function in facilitating transactions.

Further, the focus on the function of money as a store of value is a justification for the importance of the interest rate in maintaining the value of money which is not *Sharia-compliant* and induces the injustice of the role of money. Moreover, this misleads the importance of other assets in preserving the value of wealth, as money is the least valuable asset due to its strong and continuous deterioration by inflation. This observation does not exclude the "store of value" function, but money should have stable value to be a good "store of value" and protect wealth. The store value of the CBDC is insured by investing it in *Sharia* tools according to the principle of PLS avoiding the interest rate (Riba) prohibited by Sharia.

The rules of prohibition of hoarding, interest rate, and the encouragement of Zakāh, and spending provide the necessary conditions for an efficient monetary system in performing its various functions (Al-Sabhani, 2000). From an Islamic view, the store value function is achieved under principal conditions. First, the form of CBDC should be free from interest rate. The wisdom of prohibiting interest rate is the injustice of the means (money) to the objective (commodity) by its superiority over it or its separation from it, where the money becomes the servant and the commodity becomes the server, or in other words, the development of money without linking this growth to the real economy (Faqih, 2016). Thus, the injustice of interest rate is manifested in the lack of value added in future monetary transactions that benefit the individual and society. Interest rate is a mechanism for the growth of indebtedness away from economic activity and wealth generation (Al-Suwailem, 2013). Abolishing interest payments for banks deposits would induce people to invest in commodities (Siegfried, 2001**)**. Money in Islam adheres to the real sector, and it is a form of wealth, and the development of wealth is one of the legitimate goals in Islamic economics. The tackle of interest rate is through the tackle of money because the source of *Riba* is the money in all its forms (commodity, paper, credit).

CBDC should not use any interest rate; otherwise, it will cause expense to the central bank or to the treasury (Dyson and Hodgson, 2016). The CBDC *Sharia-compliant* could be interest-free or/and PLS-based (Hamza and Ben Jedidia, 2019; Lukonga, 2023). The choice of CBDC backed by real assets and based on PLS directly involves the central banking in the real economy, which limits the financialization of the economy. The Central bank can open investment accounts with other banks, where it adds what it issues and withdraws whatever money it wants and thereby managing the money supply and monetary policy (Al-Jarhi, 1981). In this regard, the central bank and banks, as intermediaries, can propose these CBDC investment accounts to the banks and public as an investment opportunity for the economic project with PLS-return, which reinforces the relationship between money and the real sector without the use of interest rate as the price of money lending prohibited by *Sharia*. Furthermore, the creation of a CBDC investment account could be with long-term maturity to limit the fallacious maturity transformation mechanism or maturity mismatch based on an unbalance between resources maturity (short-term) and assets maturity (long term). A CBDC investment account with long maturity allows more financial stability to the central bank and banks, and reinforces the balance between resources and assets, which reduces the liquidity risk and considers CBDC holders as quasi-shareholders given their involvement in the PLS approach.

The reform of the monetary system in Islamic societies through CBDC is also based on the application of Zakāh approach to money. The first brick of reform is the issuance of new Zakāh money, meaning purified from the suspicions of hoarding and interest rate, as the owner is forced to spend it as soon as it is acquired, because the ability to hoard brings interest, and the new money is cleansed of suspicions that obstruct full exchange and facilitates the process of consumption and production (Abu Al-Saud, 1968). Zakāh money is money that cannot be stored and does not demand interest[6]. Money must remain in circulation, and it will not remain so except by spending. This means that money must be subject to the tradition of diminishing, or at least finding legislation that does not enable individuals to hoard and forces them to spend, and for this reason, this legislation must focus on the type of money, its function, and the method of dealing with it, this new Zakāh money is through which its owner is forced to spend as soon as he acquires a lawful earning (Abu Al-Saud, 1968). Money in the form of CBDC could also have a designated shelf-life, making real the idea of "depreciative money", first articulated by Silvio Gesell (1862-1930, a German economist) more than 100 years ago (Nolting, Heinz, and Köhling, 2020).

The CBDC stability is crucial for the fulfillment of money functions. CBDCs are perceived as a more stable form of digital currency as they are supported by a central authority (Comcec report, 2023). The instability of money is a major issue for the fulfillment of money functions and affects the social situation of economic agents. Currencies with high uncertainty and volatility cannot be *Sharia-compliant* because the instability of money is not in conformity with the *Sharia* principles (Al-Sabhani, 1998) and weakens the money functions**.** Throughout Islamic money history**,** the stability of money value is an ultimate objective and a necessary condition for the fulfillment of the money functions for the well-being of society. Further, the volatility and instability of money harm the trust of society toward money as a medium of exchange, and as a consequence, the payment system of the central bank, which therefore affects the credibility of the monetary authorities. By building on a core of trust, central bank money can provide the foundation for a rich and diverse monetary ecosystem that is scalable and designed with the public interest in mind (Carstens, Frost, and Song Shin, 2022).

[6] The idea of Abu Al-Saud aligns with the proposal of Silvio Gesell (1862-1930, a German economist).

CONCLUSION

The findings of this paper support that the core motivation of the CBDC should be the reform of the monetary system. The CBDC, as a new sovereign digital money, could be an opportunity for the monetary authorities to reform the monetary system, considered as a generator of excessive indebtedness and monetary instability. The implications of the reform as a core motivation of the CBDC are the reinforcement of monetary sovereignty and the strong connection of the financial sector with the real sector through the review of the money functions to be in compliance with Sharia.

In fact, the implications for the reinforcement of monetary sovereignty are justified by the negative effects of banks' money creation on the society's indebtedness in addition to the widespread of private currencies and their imbalance impact on the monetary system. The sovereignty of CBDC could be promoted by: strengthening the state's authority in monetary matters, limiting the issuance and creation of CBDC to central banks only, preventing banks from creating CBDC through fractional reserves or out of nothing, and implementing the application of the full reserve system to demand deposits. For money functions implications, the CBDC should respect the rules of *Riba* prohibition, hoarding prohibition, and Zakāh application. These *Sharia* rules involve money functions favoriting money stability and money's social role under monetary sovereignty. The CBDC design calls for the switch from the interest rate mechanism to the PLS mechanism, tying in depth the monetary sector to the real economy instead of the financialization and its undesirables' effects. In this regard, the CBDC becomes the basis for the development of wealth (PLS principle) and not a source of indebtedness (creating usurious money)**.** Further, a positive effect of CBDC issuance is through the new role of the central bank in banking intermediation, allowing the central bank to lend CBDC that it owns free of interest, which promotes its social role and also by providing CBDC investment deposits with returns according to the principle of PLS. Moreover, for the central bank, there is non-issuance of CBDC without gold cover, and for banks, there is non-financing without investment deposits and an interest-free CBDC for lending in the form of *Qardh Hassan*. The issuance of CBDC with gold cover could be effective for money stability and the fulfilment of money functions under the *Sharia* rules. In a nutshell, to succeed the optimal CBDC, this currency is conditioned to be sovereign, legal, acceptable by society, gold-backed, subject to Zakāh, hoarding-free, investment-based, available for the public, under a full reserve system, not subject to maturity transformation, free of interest and the optimal CBDC should be approved by a central Sharia board and accepted by society. In conclusion, our research supports the motivation and the potential of the Sharia-compliant CBDC to reform the monetary system properly.

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