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Fundamentals of Modern Money and its Application to Central Bank Digital Currency (CBDC): An Exploratory Shariah Analysis

By Ahmad Khairuddin, Mohamad Falah Noor Azmir, Siti Nurul Ain Zakaria and
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Fundamentals of Modern Money and its Application to Central Bank Digital Currency (CBDC): An Exploratory Shariah Analysis

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Abstract

The essence of modern money, where it comes from, and how it works are widely misunderstood. An accurate understanding of modern money is key in forming the basis for further Shariah deliberation on its applicable rulings. Theoretical and historical accounts of money extracted from various social disciplines, supported by balance sheet mechanics, are used in this paper to shed light on and answer the fundamental question: '*What is modern money?*' Based on this, Shariah analysis on modern money is conducted, taking into consideration classical Shariah conception and historical perspective of money in the past Islamic civilisations.

This paper concludes that the essence of modern money is a credit relation and promise to pay abstract value, constituted by social (economic and political) relations between individuals, banks, central bank and the state. This updated understanding of modern money – as affirmed by monetary authorities across various jurisdictions – exposes fundamental gaps in applying classical Shariah conception of money in the modern context.

To explain more accurately and comprehensively the concept of modern money from Shariah perspective, the authors attempt to explore a hybrid approach in which modern money may take a set of rulings of both *nuqud istilahiyyah* and *dayn* (debt). This is in view that modern money functions both as a means of payment and as a means of funding or credit/debt instrument. In this regard, all the rules of *riba* on debt deferment, *riba* on loan, and *riba* in exchange (*riba al-buyu'*) would also be applicable to modern money.

Keywords: Money, CBDC, Credit Theory of Money, History of Money, Shariah Analysis

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Introduction

The rapid pace of digitalisation has significantly influenced the evolution of the financial landscape, leading to a growing number of feasibility studies and proof-of-concepts on emerging topics such as the introduction of Central Bank Digital Currencies (CBDC) and the use of digital assets as financial instruments. In response to these developments, Bank Negara Malaysia (BNM) has embarked on a multi-year exploratory study on the CBDC proof-of-concept to address gaps in the financial sector and achieve public policy objectives as outlined in BNM's Financial Sector Blueprint (FSBP) 2022 – 2026.² This paper complements the CBDC study by ascertaining the fundamentals of modern money and exploring the appropriate Shariah views and rulings on CBDC. On this note, the primary objectives of this paper are to –

- i. understand modern money³ and how it works in the current banking and economic system; and
- ii. explore Shariah views and *fiqh* adaptation (*takyif fiqhi*)⁴ of modern money (including CBDC) and its applicable Shariah rulings.

To ascertain Shariah views on modern money including CBDC, it is imperative to understand the concept of modern money in its entirety – its essence and nature, how it is created (or its origin), how it works in the modern banking system, as well as its hierarchy at both national and international perspectives. This is crucial as the understanding of the issue and reality (*fahm al-mas'alah wa al-waqi'*) is a key component of Shariah decision-making framework – as an Islamic legal maxim emphasises, “Shariah ruling on a matter is dependent on having accurate understanding and conception thereof”⁵.

Based on the authors' observation, an accurate and comprehensive understanding of modern money might have not been presented to and deliberated holistically by contemporary Shariah scholars to date, leading to the current gaps⁶ in the existing *fatwa* on modern money, both domestically and globally. Part 1 of this paper attempts to explain modern money that is reflective of the current monetary operations. Classical Shariah deliberation of money is discussed in Part 2 to provide broad comparisons between modern money (which is credit in nature) and money in the past Islamic civilisations (which is commodity-based), followed by Part 3 exploring possible updated *takyif fiqhi* and applicable rulings on modern money including CBDC.

² BNM FSBP 2022-2026 Box Article – *Digital Currencies: A new Frontier*.

³ The term ‘modern money’ used in this paper refers to money in the current economic and financial system. For example, BNM banknotes, commercial banks deposits, CBDCs and Eurodollars. However, the scope of modern money in this paper **excludes private decentralised digital tokens or crypto assets** e.g. Bitcoin & Ethereum due to lack of issuer liability and regulatory clarity.

⁴ Refers to finding the most similar concept from existing concepts in Islamic jurisprudence.

⁵ الحكم على الشيء فرع عن تصوره

⁶ Further deliberated in Part 1(c), Part 2 and 3 of this paper.

Part 1: Fundamentals of modern money – what is modern money?

(a) The essence and operation of modern money

1.1 Modern money is a credit relation

Money is usually explained by its functions i.e., a medium of exchange, unit of account, measure of value and standard of deferred payments.⁷ As the saying goes, '*money is what money does*'.⁸ However, this only explains what money does and not what money is. Defining money only by its functions does not specify/differentiate 'money' from 'non-money'. Analogically, a shoe is not a hammer when it is used to hammer nails.

Secondly, the functional definition assumes that all four functions exist in one 'thing' (e.g. coins, banknotes), although historically this has not been the case.⁹ If different things are used for different functions, which one is money? Where is the quality of 'money' located? Considering the subjective interpretation of money by its functions, this paper focuses on the intrinsic nature or essence of money as the central discussion. In this paper, modern money is specified and characterised not by its functions, but rather by its essence.

The essence of modern money is a credit/debt¹⁰ or a credit relation¹¹ between a debtor and creditor, usually denominated in a sovereign unit of account.¹² It is a social technology constituted by political and social relations of promises to pay (also known as "I owe you", IOU).¹³ ¹⁴ Every economic agent, be it the individuals, firms, banks, central banks, and even nation states can be seen as banks, each having their own balance

⁷ Jevons is usually attributed as the source for these four functions. Defining money by its functions dates back to Aristotle in the 4th century BC. See Banque de France, "What Is Money?" in *Payments and Market Infrastructures in the Digital Era*, 2018 and William S. Jevons, *Money and the Mechanism of Exchange* (New York: D. Appleton and Company, 1875).

⁸ Original quote by Francis Walker: '*Money is that money does.*' See Joseph A. Schumpeter, *History of Economic Analysis* (London: Routledge, 1954) and Samuel A. Chambers, *Money Has No Value* (Berlin: De Gruyter, 2023).

⁹ Matthias Doepke and Martin Schneider, "Money as a Unit of Account", *NBER Working Paper No. 19537* (2017) and Paul Einzig, *Primitive Money: In Its Ethnological, Historical and Economic Aspects*, 2nd ed. (Oxford: Pergamon Press Ltd., 2014).

¹⁰ The authors intentionally use the phrase 'credit/debt' as credit and debt are inseparable (i.e., two sides of the same coin). As Innes pointed out: "*What A owes to B is A's debt to B and B's credit on A. A is B's debtor and B is A's creditor. A will speak of this relationship as a debt, while B will speak of it as a credit*". See A. Mitchell Innes, "What is Money?" *The Banking Law Journal* (1913), and Samuel A. Chambers, "The Money Array; or, Show Me the Debtor," *Finance and Society* vol. 9, issue 2 (2023).

¹¹ In many circumstances, such credit/debt is transferable among economic agents (beyond the original issuer and holder) as it can be used as the means of payment in a financial transaction.

¹² Josh Ryan-Collins et al., *Where Does Money Come From?* (London: New Economics Foundation, 2011).

¹³ An IOU, or 'I owe you', is a promise to pay someone at a later date. See Michael McLeay et al., "Money Creation in the Modern Economy: An Introduction," *Bank of England Quarterly Bulletin Q1* (2014).

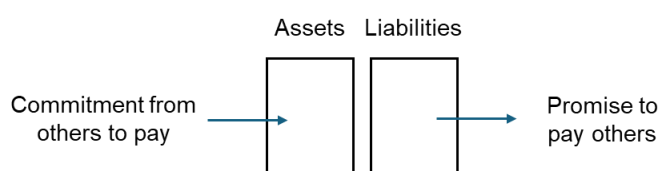
¹⁴ Perry G. Mehrling, "Financialization and Its Discontents," *Finance and Society*, vol.3, issue 1 (2017).

sheet of assets and liabilities (**Diagram 1**).¹⁵ These agents make commitments to pay others (i.e., liabilities) and accept commitments from others to pay them (i.e., assets). These assets and liabilities are linked in an economy-wide interlocking balance sheets (**Diagram 2**).¹⁶ As aptly stated by Adrian et al.¹⁷ –

*“All modern forms of money are based on **credit relationships** and represent claims and liabilities between related parties. Even central bank money is a liability of the government from the standpoint of a consolidated balance sheet...*

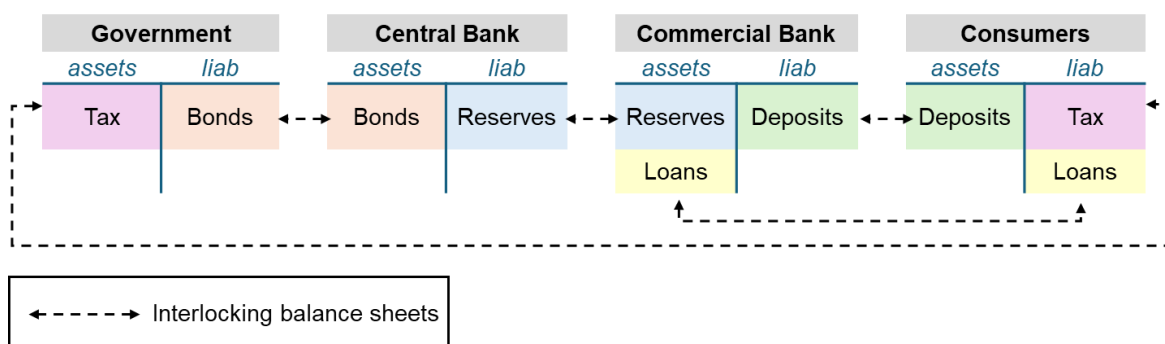
*...Commercial bank money represents a credit relationship between the bank and its depositors, and nonbank money represents a claim by the customer on the nonbank issuer. In contrast, unbacked **crypto assets, such as bitcoin, are not based on any credit relationship** and are not liabilities of any entity.”*

Diagram 1: All economic agents have assets and liabilities



Source: Authors' illustration on a stylised balance sheet of any economic agent

Diagram 2: Economy as a network of interlocking balance sheets*



Source: Authors' illustration, based on Kapadia, *A Political Theory of Money*

**Note: each asset and liability pairing are represented by the same colour. The stylised balance sheets are highly aggregated and simplified to emphasise the interlocking feature. In reality, there are more categories, millions of balance sheets, each with various types of assets and liabilities.*

Part 1(a) articulates the essence of money as a credit relation from various angles.

¹⁵ Quoted from Hicks, in Perry Mehrling, "The Monetary Education of John Hicks," in *Money, Finance and Crisis in Economic History* (Routledge, 2018).

¹⁶ Anush Kapadia, *A Political Theory of Money* (Cambridge University Press, 2023).

¹⁷ Tobias Adrian et al., "Trust Bridges and Money Flows," *BIS Working Paper No. 1112* (2023).

1.2 *There is not one single type of money, but multiple types of monies even within domestic space of transactions.*

We are accustomed to think about the variety of monies across national boundaries denominated in different currencies¹⁸. For example, the US dollar is the money used in the United States, while Ringgit is used in Malaysia. Even at the domestic level, there are actually multiple monies, i.e., there is not one 'ringgit' but multiple 'ringgits'. Central bank money (e.g. BNM money) is distinct from commercial bank money (e.g. Maybank money, CIMB money etc.) in the sense that, each money is a liability of, or direct claim on, its respective issuers.

The plurality of monies within a domestic space is obscured by the fact that, commercial bank monies exchange at par to central bank money by regulation¹⁹ (i.e. the exchange rate is 1 to 1)²⁰ and payments using deposits from different banks function seamlessly.²¹ This feature of money, called the 'singleness' of money, where its value is fully aligned in nominal and real value terms²², is important to establish the trust that money can be used anytime, anywhere at the same value, no matter what form it takes.²³ To be clear, the singleness of money is a feature of the **payment**, rather than the feature of private liabilities/monies as **stores of value**.²⁴ This is because the value of private liabilities/monies (e.g., bank deposits) as stores of value may differ across different issuers, just as the value of securities or bonds differ across issuers.

¹⁸ The term "currency" is used to refer not only the unit of account used in a domestic national money space, but also to name the 'money-stuff' issued by the central bank and denominated in the sovereign unit of account. The term "ringgit" is usually used to indicate both the denomination (money of account) and the money-stuff (BNM notes or coin) issued by BNM. See Randall Wray *Modern Money Theory, A Primer on Macroeconomics for Sovereign Monetary Systems* (Palgrave Macmillan, 2012), Chambers, "The Money Array" and BNM "Glossary," 2012. https://www.bnm.gov.my/documents/20124/255111/x_en.pdf

¹⁹ Jon Cunliffe, "Do We Need 'Public Money?'" *speech given at the OMFIF Digital Money Institute*, London (2021), Andrew Bailey, "New Prospects for Money," *speech given at London* (2023). Jon Cunliffe, "Money and Payments: A 'Black Ships' Moment?" *speech given at the Economics of Payments XII Conference at the Federal Reserve Board*, Washington (2024), Andrew Bailey, "The Future of Money and Payments," *speech given at Group of Thirty's 39th Annual International Banking Seminar*, Washington (2024) and Aldasoro et al., "On Par: A Money View of Stablecoins," *BIS Working Paper No 1146* (2023).

²⁰ Hence the two qualitatively different types of money maintain a quantitative equivalence. See Perry G. Mehrling, "Essential Hybridity: A Money View of FX," *Journal of Comparative Economics* 41 (2013): 355–363. This par rate is one of the four prices of money, the others being the interest rate (money with other money in the same denomination), the exchange rate (money with other money in different denominations) and the price level (money with goods and services). See Aldasoro et al., "A Money View of Stablecoins".

²¹ Clavero termed this as 'novation liquidity', the ability to transfer claims from one issuer to another with no change in nominal value (deposits trade at par across banks). See Borja Clavero, "Money Creation by Credit Institutions Under the Law: A Response to Werner," (2022), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4038817.

²² Bailey, "The Future of Money".

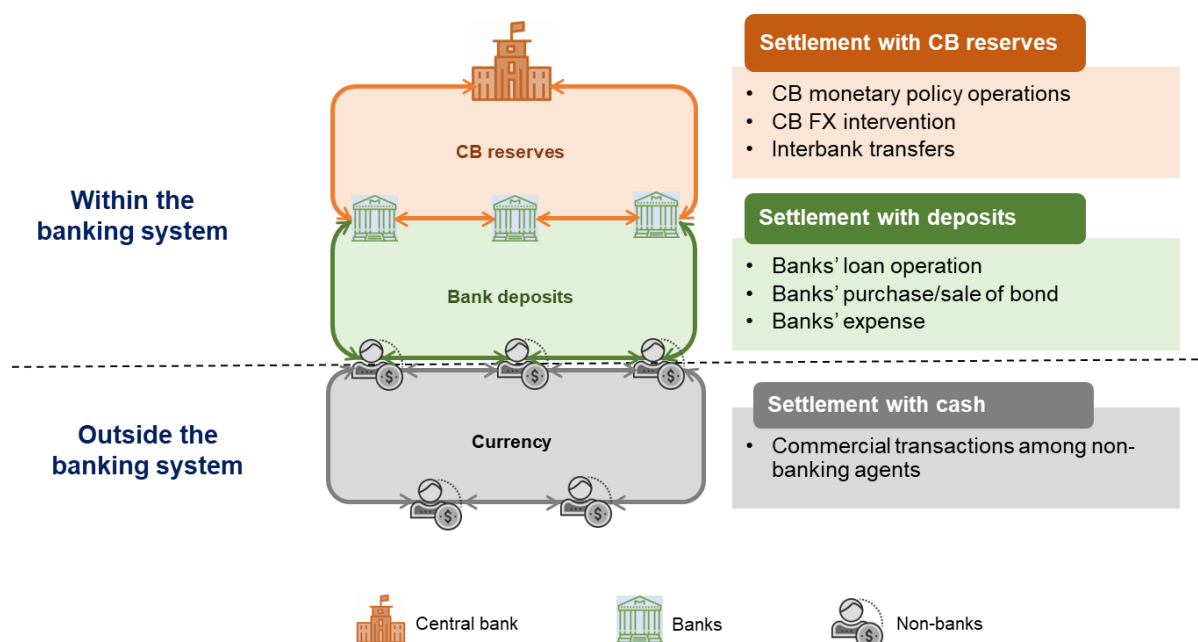
²³ Cunliffe, "A 'Black Ships' Moment?"

²⁴ Rodney Garratt and Hyun Song Shin, "Stablecoins Versus Tokenised Deposits: Implications for the Singleness of Money," *BIS Bulletin No. 73*, (2023).

1.3 Public and private monies in a domestic economy

There are three main types of money in a domestic economy:²⁵ (1) currency-in-circulation, CIC (2) bank deposits and (3) central bank (CB) reserves. Each type does not co-mingle with each other and serve different functions. For instance, a commercial bank cannot use its retail deposits to pay another commercial bank in the interbank money market. As **diagram 3** shows, any interbank settlement is done using CB reserves.

Diagram 3: Types of money and settlement in the current financial system



Source: Authors' illustration. Each type of money is used for different purposes.

In Malaysia, as of April 2025, the CIC amount stood at RM159.6 billion, but this only constitutes 6% of the total money in the economy by value²⁶ (RM2.5 trillion). This figure does not include CB reserves (*in this context refers to deposits by financial institutions with BNM*), which amount to RM149.7 billion.²⁷ Relatively, the CIC in other countries such as the UK also constitutes minor fraction of the total money aggregate, only at 3% (GBP 86 billion) vis-à-vis overall value of GBP3.1 trillion.²⁸ The significant bulk of the money supply is in the form of bank deposits, issued by commercial banks.²⁹ Money we see in our Maybank account or Bank Islam account, are not direct claims on BNM. They are direct claims on Maybank and Bank Islam respectively.

²⁵ From the perspective of the public and commercial banks.

²⁶ BNM, "Monthly Highlights & Statistics in April 2025," Available at <https://www.bnm.gov.my/-/monthly-highlights-statistics-in-april-2025>.

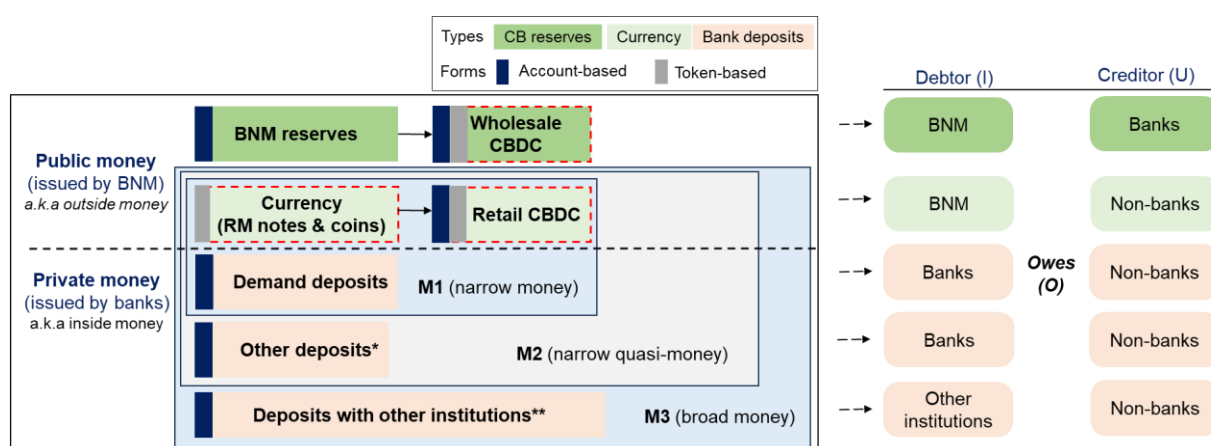
²⁷ BNM, "Statement of Assets & Liabilities," 30 April 2025," Available at <https://www.bnm.gov.my/-/bnm-statement-of-assets-liabilities-30-april-2025>.

²⁸ Bank of England, "Banknote Statistics," June 2025, available at <https://beta.bankofengland.co.uk/statistics/banknote>

²⁹ McLeay et al., "An Introduction".

Diagram 4 exhibits the composition of public (BNM) and private money issuers (banks) within our current operations, where it also represents the IOU relationships between the issuers and holders respectively. CBDC on the other hand, is a type of public money issued by the central bank. The Bank is currently exploring potential use cases of CBDC via a proof-of-concept i.e. Project Mawar (elaborated further in part 1.11).

Diagram 4: Illustration of public and private monies



* Savings deposits, fixed deposits & foreign currency deposits

** Deposits by non-bank private sector with finance companies, merchant banks & discount houses

Source: Authors' illustration, based on BNM Money Aggregate (BNM Monthly Highlights & Statistics). Each type of money represents a credit relation between a specific debtor (issuer) and creditor (holder).

New private digital assets (i.e., decentralised tokens/ cryptocurrencies) are emerging as alternatives to the current monetary and payment instruments. Private tokens such as Bitcoin or XRP may be widely used as means of payment outside the banking system in the future, replacing CIC or bank deposits.

Nonetheless, it is argued that these private decentralised tokens must overcome large obstacles to be able to complement or replace the current payment system.³⁰ Without centralised (public or private) institution or intermediaries, crypto platforms³¹ require large liquid balances to effect payments across different cryptocurrencies, as decentralisation does not allow any party's balance sheet to expand and contract.

³⁰ Among others, a lack of a stable nominal anchor, tendency towards fragmentation and sustained by speculation. See Frédéric Boissay et al., "Blockchain Scalability and The Fragmentation of Crypto," *BIS Bulletin No. 56* (2022), BIS, "The Future Monetary System". *Annual Economic Report 2022*, Chapter III (2022) and BIS, "Blueprint for the Future Monetary System: Improving the Old, Enabling the New". *Annual Economic Report 2023*, Chapter III (2023).

³¹ For example, the Poly Network has to hold large token balances of different cryptoassets such as Binance USD (BUSD) and USD Coin (USDC). See Aldasoro et al., "A Money View of Stablecoins".

Additionally, some crypto platforms do issue crypto assets as their liabilities,³² in effect acting as banks and intermediaries.³³ Hence cryptoassets may exist outside the regulated banking system, but not necessarily in a decentralised manner. Historically, private credit monies had been accommodated into the public money structure when the private credit monies lost their credibility, and the holders wish to convert into safer public monies.³⁴

1.4 Modern money is a financial asset i.e. a claim on someone else³⁵

Modern money is a financial asset, an IOU³⁶, a credit/debt, representing a credit relation³⁷ between a creditor and debtor (i.e., it is claim on its issuer and an asset to its holder). For instance –

- a) central bank money issued by the central bank is the liability of the central bank, and the asset of the holder (e.g., other central banks, commercial banks and individuals) where the holder has the right to claim it from the issuer
- b) commercial bank money issued by the commercial bank is the liability of the commercial bank, and the asset of the holder (e.g., individuals, non-bank financial institutions) where the holder has the right to claim it from the issuer.

As every liability is an asset for someone else, the entire money structure can be seen as a symmetric pyramid in **Diagram 5** below, with a credit-to-money vertical axis, starting from zero at the centre of the pyramid's base, so that total net credit at any level is zero.³⁸ This is due to fact that money, as financial assets and liabilities, cancel each other out in aggregate.³⁹ The vertical axis in **Diagram 5** does not suggest a hierarchy of 'money-ness' where the top is 'money' while the bottom is 'credit'. Rather, each instrument in the hierarchy is 'money' and 'credit' in its own way.⁴⁰

³² For instance, Tether issues Ethereum and Tron on separate blockchains as its liabilities. See Aldasoro et al., "A Money View of Stablecoins".

³³ See Sébastien Derivaux "Cryptodollars and the Hierarchy of Money," (2024). Available at SSRN <https://ssrn.com/abstract=5000167>

³⁴ For example, the accommodation of Bank England (then a private entity) notes by the British government in the late 18th century, accommodation of bank deposits by the US Treasury in early 20th century via the Federal Reserve and the accommodation of private shadow monies by the Federal Reserve in 2008. See Steffen Murau, "*The Political Economy of Private Credit Money Accommodation: A Study of Bank Notes, Bank Deposits and Shadow Money*" (PhD dissertation, City University of London, 2017) and Zoltan Pozsar, "Shadow Banking: The Money View," *OFR Working Paper 14-04* (2014).

³⁵ Any resource or claim that derives value from a contractual right or ownership stake, typically in the form of cash, a security, or a financial instrument. Financial assets are simply claims on someone else in the economy — an IOU to a person, company, bank or government. See Michael McLeay et al., "Money Creation in the Modern Economy," *Bank of England Quarterly Bulletin Q1* (2014).

³⁶ McLeay et al., "Money in the Modern Economy".

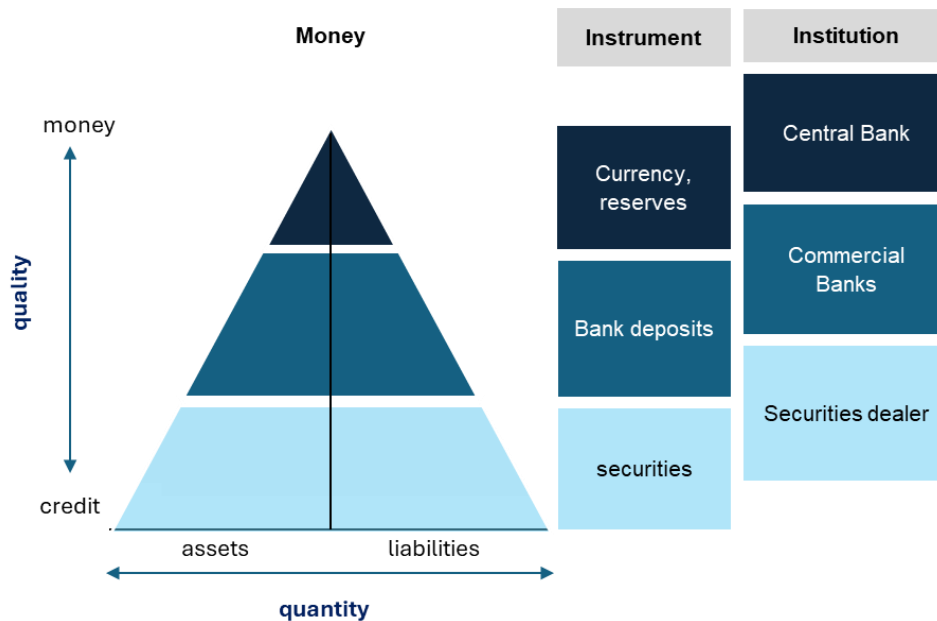
³⁷ Adrian et al., "Trust Bridges and Money Flows".

³⁸ Perry G. Mehrling, "The Inherent Hierarchy of Money," in *Social Fairness and Economics*, ed. Lance Taylor et al. (Routledge, 2012).

³⁹ McLeay et al., "An Introduction".

⁴⁰ As will be further explained in section 1.7 and 1.10.

Diagram 5: Money structure and its hierarchy



Source: Aldasoro et al. "A Money View of Stablecoins". Monetary instruments exist in a hierarchy – some are of higher quality than others.

1.5 The money structure and its institutions are inherently hierarchical

As the issuers of IOUs are of different quality and credibility, these various monies and issuers are not equal but exist in a hierarchy. Promises to pay (i.e., debt) at one level serves as a means of payment (i.e., money) from the view of the level(s) below. In other words, what appears to be money at any level of the system appears as debt from the perspective of other level(s) above it.⁴¹ For example, commercial bank deposits are debts from the banks' point of view, but from the view of non-banks, it appears to be money. This deposit money is utilised to make payments to each other.

Similarly, CB reserves are debts from the central bank's perspective but serve as means of payment between commercial banks. The singleness of money in payments is maintained because central banks run systems that ensure ultimate settlements at par value in terms of the domestic unit of account.⁴² This can be done by ensuring the elasticity of money in the upper level of the hierarchy by accommodating the demand for CB reserves, expanding and contracting the central bank's balance sheet as and when payment needs to be made. In general terms, the singleness of any money is due to the mechanisms of clearing monies and settlement of the web of promises, by institutions intermediating between different levels.

⁴¹ Mehrling, "The Inherent Hierarchy of Money".

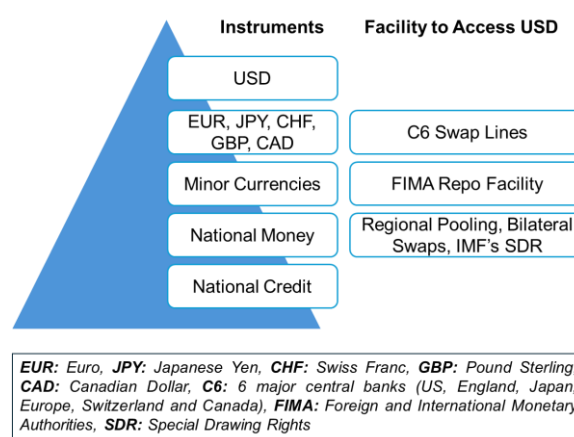
⁴² Garrat and Shin, "Stablecoins Versus Tokenised Deposits".

1.6 The hierarchy of money extends globally

Each ‘money-credit’ is used as the instruments of payment and funding at its respective level. Individuals and businesses pay and fund each other using bank deposits and national currency, while commercial banks pay and fund each other using CB reserves. How do central banks or institutions from different countries pay and fund each other?

Just as the various monies within the domestic space, the various monies within the international space are also not equal as per **Diagram 6**. International payments, cross-border settlements and funding require international money. An example of international money is the international dollar. Similar to other national monies, the vast amount of USD is privately issued by commercial banks. However, the international dollar is not the onshore dollar (dollar deposits issued by commercial banks in the US), but the offshore dollar (dollar deposits issued by private banks outside the US, e.g., Eurodollars).⁴³ While US commercial banks hold reserves at the Federal Reserve, offshore dollar issuers hold bank deposits at the onshore US banks as their ‘reserves’. The IMF’s Special Drawing Rights (SDR),⁴⁴ present on many central banks’ balance sheet, are not international money but mechanisms to access USD from institutions higher in the hierarchy.⁴⁵

Diagram 6: Hierarchy of International Money



Source: Perry Mehrling, “New International Economic Order”. National monies are not of equal quality but exist in a hierarchy.

⁴³ Eurodollars are bank liabilities denominated in dollars but not regulated under US banking regulations. Most Eurodollar deposits are held in Europe, but they also are held at other countries. No matter the location, these deposits are usually referred to as Eurodollars. See Federal Reserve of Richmond, “Eurodollars,” in *Instruments of The Money Market* (1998).

⁴⁴ SDR’s value is linked to a basket of five major currencies. (IMF 2022). As of December 2024, BNM holds about RM30 billion worth of SDRs. See IMF, “Press Release – IMF Determines New Currency Amounts for the SDR Valuation Basket,” accessed June 23, 2025, (2022) <https://www.imf.org/en/News/Articles/2022/07/29/pr22281-press-release-imf-determines-new-currency-amounts-for-the-sdr-valuation-basket> and BNM, (2023). *Annual Report 2024/2023*.

⁴⁵ Although administered by the IMF, SDR itself is not the liability of the IMF, but the Exchange Stabilization Fund (ESF). On the participants’ balance sheet, SDR assets and liabilities are called ‘SDR holdings’ and ‘SDR allocation’ respectively. For technical details, see Steffen Murau, Fabian Pape and Tobias Pforr, “The Hierarchy of the Offshore US-Dollar System: On Swap Lines, the FIMA Repo Facility and Special Drawing Rights,” *Global Economic Governance Initiative* (2021).

The hierarchy of various monies, structured according to their quality, depends on the economic agents' confidence on the institutions that issue the money. For instance, in a banking crisis, the quality of money in the form of deposits will temporarily decline as the banks may not be able to make settlements. This decline in quality will reduce its demand and acceptability.⁴⁶

1.7 Money is different for different institutions across different hierarchy⁴⁷ (i.e., money and credit are relative terms, not absolute constructs)

There is no absolute or hard difference between 'credit' and 'money'. It depends on the location within the hierarchy and which institution is involved. CB reserves are money for commercial banks, but from the central bank's perspective it is credit/debt. Similarly, bank deposits are money for individuals and businesses are credit/debt from the commercial banks' perspective. Notwithstanding such different perspectives, all the monies in the hierarchy share the same essence – there are simultaneously 'money' and 'credit'. Money is distinct from credit only in quality, not in essence.⁴⁸ Thus, we may call this 'money-credit'.⁴⁹

Contrary to some accounts of the money hierarchy, where base money, central bank money or state money is 'outside money' (i.e., money) and the rest are 'inside money' (i.e., credit), viewing the money hierarchy as a global system means which financial instrument is 'inside' ('credit') or 'outside' ('money') depends on the location within the hierarchy. The credit/debt nature of certain monies higher up in the hierarchy may not be obvious to those below, as to them, it appears as money. Credit at one level (inside money) is concurrently money at another level (outside money). This property of 'outsideness' endows money with its 'thing-ness' characteristic.⁵⁰

1.8 Most modern monies are account-based and token-less money (i.e., money is not a 'thing', but a 'relation')

Although CIC (banknotes and coins) is only a tiny fraction of the supply of money, it is the most prevalent mental conception of money, as a token circulating from hand to hand,

⁴⁶ Hence money's intrinsic value is not fixed. The Kiyotaki-Wright model is a popular reference on the equilibria of money transactions, according to the degree of the acceptability of money. See Nobuhiro Kiyotaki and Randall Wright, "On Money as A Medium of Exchange," *Journal of Political Economy*, vol. 97, no.4 (1989): 927-954, Nobuhiro Kiyotaki and Randall Wright, "A Contribution to The Pure Theory of Money," *Journal of Economic Theory*, vol. 52, issue 2 (1991): 215 – 235 and Nobuhiro Kiyotaki and Randall Wright "Acceptability, Means of Payment and Media of Exchange," *Federal Reserve Bank of Minneapolis Quarterly Review*, vol. 16, no. 3 (1992): 18–21.

⁴⁷ Zoltan Pozsar, "How the Financial System Works: A Map of Money Flows in the Global Financial Ecosystem," *appendix to "Shadow Banking: The Money View* (2014).

⁴⁸ Perry G. Mehrling, "Studies in the Credit Theory of Money" (PhD diss., Harvard University, 1988).

⁴⁹ Chambers, *Money Has No Value*.

⁵⁰ Kapadia, *A Political Theory of Money*.

account to account.⁵¹ Most monies today, however, are in account form. This is not to say that money is ‘inside’ the account. The **account itself is money**. The categorisation into account-based and token-based money may look trivial but has significant implication⁵² towards CBDC design choices as well as legal implications. Most importantly, this distinction helps to understand the essence of money as a credit relation. This can be understood via (1) verification methods⁵³ and (2) stealing methods.

Token-based money is verified by the authentication of the token (e.g., whether the banknote is forged). Account-based money is verified by the identity of the transacting individual. For example, in the current banking practices, this is done through the e-KYC verification process. If the person can prove his identity, then the money exists. In other words: “*I am, therefore, I own*”.⁵⁴ Stealing token-based money is straightforward, by stealing the token itself. But how do you steal account-based money? By pretending to be the individual, i.e., by *stealing the identity* of the money holder. This can be done via the password, OTP or other identity verification methods. If account-based money is verified and stolen through the identity, where then, is the money ‘located’? There are no specific electronic impulses or memory bits in the banks’ server which can be specified as the ‘money’. Notwithstanding the saying (“*I am, therefore, I own*”), neither does the money reside *within* the individual. This illustrates that **money is located within the relation** between the depositor (as creditor) and the bank (as debtor). In essence, the credit relation is what constitutes money.

This, however, does not imply that token-based money is not representative of a credit relation. It is a credit relation but rather embodied in a token form. This should remind us that money, even if it appears as a token, cannot be understood only by examining the token.⁵⁵ The relation is what matters, while the physical or virtual representation in token form is secondary or optional.

Moreover, this could help us to distinguish between currency notes (as token-based money) and bank deposits (which are account-based). When currency notes are deposited into a bank account, such currency notes cease to be the customer’s asset. What the customer now owns is a claim on the bank (i.e., the newly created bank deposit). Understanding this reality may eliminate the common misconception/ psychological

⁵¹ Bitcoin and other crypto coins are clear exhibits of this cognitive effect. Although they are not coins (or money), by visualising themselves as ‘coins’, they can be perceived to be money.

⁵² See Nurjannah Ahmat and Sabrina Bashir, “Central Bank Digital Currency: A Monetary Policy Perspective,” *BNM Staff Insights 2017/11* (2017), Committee on Payments and Market Infrastructures, Bank of International Settlements, “Central Bank Digital Currencies,” (2018) and Wouter Bossu et al., “Legal Aspects of Central Bank Digital Currency: Central Bank and Monetary Law Considerations,” *IMF Working Paper 20/254* (2020).

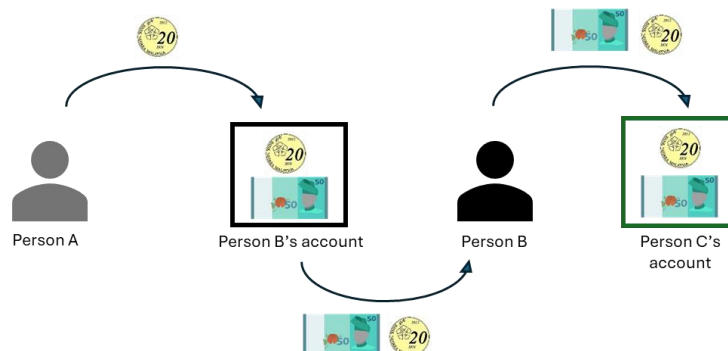
⁵³ Charles Kahn, “How Are Payment Accounts Special?” *Payments Innovation Symposium*, Federal Reserve Bank of Chicago, October 12–13 (2016).

⁵⁴ Bossu et al., “Legal Aspects of Central Bank Digital Currency”.

⁵⁵ “*Money is the measure of value, but to regard it as having value itself is a relic of the view that the value of money is regulated by the value of the substance of which it is made and is like confusing a theatre ticket with the performance*”. Keynes, quoted in Randall Wray, “From the State Theory of Money to Modern Money Theory: An Alternative to Economic Orthodoxy,” *Working Paper No. 792*, The Levy Economics Institute of Bard College (2014).

barrier, where the deposited money remains to be a token or 'thing' owned by depositors, as illustrated in the following **Diagram 7**.

Diagram 7: Common 'psychological barrier', where money is viewed as a 'thing' rather than a 'relation'

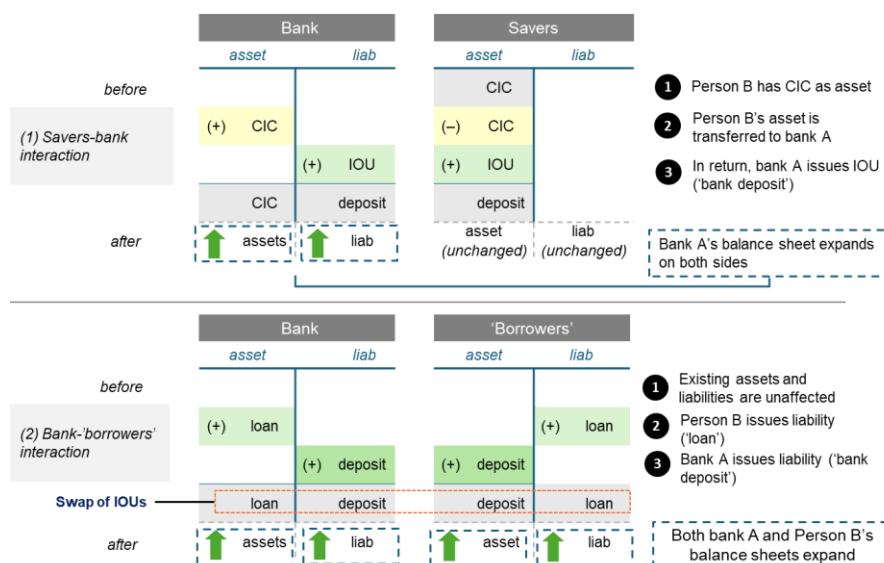


Source: Authors' illustration

1.9 Banks are intermediaries of credit, not intermediaries between savers and borrowers⁵⁶

The question "where does money come from?" may not be accurately answered if we view banks as intermediaries that pass depositors' money to borrowers. In practice, banks are actually intermediaries of credit via exchange of IOUs between parties during transactions. For ease of understanding, this is depicted in the **Diagram 8** below. Please refer to **Appendix 1-2** for the full explanation, illustration and logic of the different type of payments including other examples of exchange of IOUs.

Diagram 8: Exchange of IOUs in 'savers-bank' and 'bank-borrowers' interactions



Source: Authors' illustration. Loan does not come from existing savings or deposits.

⁵⁶ As the monies we use today are central bank money and commercial bank money, it is essential to understand the banking system to comprehend the fundamentals of modern money.

A proper understanding of money must answer at least two questions: (1) Where does it come from? (2) How does it get into society?⁵⁷ For modern money, an additional question must be asked: who is the debtor (i.e., the issuer)?⁵⁸ Bank deposits come from commercial banks themselves⁵⁹ in exchange for the customers' IOU,⁶⁰ the central bank's IOU,⁶¹ or other commercial banks' IOU.⁶² Commercial banks can also create new bank deposits (i.e. issue new IOU) as payments to their staff and vendor. In other words, any payment from a commercial bank to anyone who has an account with the bank can be made by issuing an IOU, as the commercial bank's IOU is widely recognised as a means of payment. The logic that underpins the issuance of IOU are: (1) anyone can create an IOU,⁶³ (2) the issuance of IOU does not need any prior savings or resource⁶⁴ (3) the issuer must accept the IOU back as payment to itself,⁶⁵ (4) when the IOU is paid back to

⁵⁷ Geoffrey Ingham, *The Nature of Money* (Polity, 2004). In the original text, Ingham posed a third question: where does money get its value? This section will address the first two, as the third question is beyond the scope of this paper.

⁵⁸ Chambers, "The Money Array".

⁵⁹ i.e., as issuers of bank deposits, it is always and can only come from commercial banks themselves. Similarly, central bank money, in the form of currency or reserves, can only come from the central bank. This point may seem obvious, but misconceptions regarding CB reserves are widely held, leading to an inadequate understanding of how money currently 'works'. See Garrath Rule, "Understanding the Central Bank Balance Sheet," *Centre for Central Bank Studies*, Bank of England (2015).

⁶⁰ This is usually called 'loan', although the bank is not 'lending' anything. Yet both the bank and the customer are funding each other. As the 'deposit' created in exchange for the 'loan', it is said that 'loan creates deposits'. See **Appendix 2, scenario 2 (a)**.

⁶¹ This is the deposit process that most people are familiar with. What is not generally understood is that bank deposits are not the same money (currency) deposited.

⁶² This can be done via interbank balances, correspondent banking or acceptance of private banknotes. Some countries such as Scotland, Northern Ireland and Hong Kong still allow the private banks to issue their own banknotes. See McLeay et al., "An Introduction", Mona Naqvi and Jessie Southgate, "Banknotes, Local Currencies and Central Bank Objectives," *Bank of England Quarterly Bulletin Q4* (2013) and "Notes", HKMA, accessed June 23, 2025 at <https://www.hkma.gov.hk/eng/key-functions/money/hong-kong-currency/notes/>

⁶³ As Minsky pointed out: anyone can create an IOU, the problem is to get it accepted. To be more precise, as money is a credit relation between a creditor and debtor, money cannot exist until a creditor accepts a debt from a debtor. To rephrase Minsky, anyone can make promises to pay, the 'problem' is finding a creditor. See Stephanie Bell "The Role of the State and the Hierarchy of Money," *Cambridge Journal of Economics* 25, no. 2 (2001): 149–163.

⁶⁴ Claudio Borio and Piti Disyatat, "Capital Flows and The Current Account: Taking Financing (More) Seriously". *BIS Working Paper No. 525* (2015). As per Cencini: "One does not need any prior deposit to create a claim against oneself". See Alvaro Cencini, *Money, Income and Time: A Quantum-Theoretical Approach* (Bloomsbury Academic Collections: Economics, 1988)

⁶⁵ This is the logic which underpins the acceptance of state money, as it can be used to pay taxes. See Carolyn Wilkins, "Money: A Question of Purpose and Trust," *speech at OMFIF global annual Digital Monetary Institute Symposium* (2023). For a historical and logical explanation of the concept of 'tax-driven money', see Mathew Forstater "Tax-driven Money: Additional Evidence from the History of Thought, Economic History and Economic Policy," *CFEPS Working Paper No. 35* (2004). Hence, state money is also a form of credit, not 'fiat'. See Perry G. Mehrling "Modern Money: Fiat or Credit?" *Journal of Post Keynesian Economics*, Taylor & Francis Journals, vol. 22(3) (2000): 397-406, Perry G. Mehrling, "Payment vs. Funding: The Law of Reflux for Today," *Institute for New Economic Thinking Working Paper Series No. 113* (2023), and "Let's All Please Stop Calling Dollars 'Fiat Money'," *Financial Times*, accessed June 16, 2025, <https://www.ft.com/content/5e5b2afb-c689-4faf-9b47-92c74fc07e66>.

its issuer, it is destroyed,⁶⁶ and (5) an entity who can make other agents make payments to it (the said entity), will have its liabilities widely accepted.⁶⁷

As stated by many global monetary authorities⁶⁸ and empirical studies⁶⁹, most monies in the economy⁷⁰ come from commercial banks themselves when a loan is originated⁷¹ as illustrated in **Diagram 8**. It does not come from any 'loanable funds'⁷² or existing assets

⁶⁶ Hence money is destroyed when loan repayments are made. This includes commercial bank loans to customers or the central bank loan to the commercial banks. Credit creation, as the expansion and contraction balance sheets, can be understood by its fluxes and refluxes. See Mehrling "Payment vs. Funding".

⁶⁷ This is the reason why the state has the best quality money (it sits on top of the domestic hierarchy). It can force its citizens to make payments to itself (in the form of taxes). Central bank money is just another form of government liability, as it is a claim on the state, via the central bank. See Ricardo Reis, "Can the Central Bank Alleviate Fiscal Burdens?" in *The Oxford Handbook of the Economics of Central Banking*, ed. Mayes, Siklos and Sturm (Oxford University Press, 2019) and Andrew Bailey, "The Importance of Central Bank Reserves," *lecture in honour of Charles Goodhart*, London School of Economics (2024). Although it must be noted that, the power to tax is not unlimited, as unlike a colonial government, a democratic government can only tax only to the extent the public allows it to. See Mehrling, "Modern Money".

⁶⁸ For example, McLeay et al., "Money in the Modern Economy", McLeay et al., "An Introduction", Central Bank of UAE, "How the Monetary System Works," accessed June 16, 2025, <https://www.centralbank.ae/en/our-operations/monetary-policy-and-domestic-markets/how-the-monetary-system-works/>, Banque De France, "How is Money Created?" accessed June 16, 2025, <https://www.banque-france.fr/fr/publications-et-statistiques/publications/comment-est-creee-la-monnaie>, Deutsche Bundesbank "The Role of Banks, Non-Banks and the Central Bank in the Money Creation Process," *Monthly Report April 2017*, Reserve Bank of New Zealand, "Money creation in New Zealand," *Bulletin Vol. 86, No. 1* (2023), Michael Kumhof and Zoltán Jakab, "The Truth About Banks," *Finance and Development*, IMF, vol. 53, no. 1 (2016), Banco De España "How is Money Created?" *Banco De España FAQs*, accessed June 16, 2025, <https://www.bde.es/wbe/en/areas-actuacion/politica-monetaria/preguntas-frecuentes/definicion-funciones-del-dinero/como-se-crea-el-dinero.html> and ECB "What is Money?" accessed June 16, 2025, https://www.ecb.europa.eu/ecb-and-you/explainers/tell-me-more/html/what_is_money.en.html.

⁶⁹ See Bala Shanmugam et al., "The Endogenous Money Hypothesis: Empirical Evidence from Malaysia (1985 – 2000)", *Journal of Post Keynesian Economics*, Vol. 25, No.4 (2003): 599-612 and Sabri Nayan, *Post Keynesian Money Supply Endogeneity in Malaysia: An Empirical Investigation*, (PhD diss., Universiti Utara Malaysia, 2010).

⁷⁰ In this context, 'money' is deemed to be money from the public's perspective (i.e, central bank notes and coins as well as bank deposits)

⁷¹ As stated earlier, banks are credit intermediaries, at the same time they can create deposits. These two concepts of 'credit creation' and 'financial intermediation' are not mutually exclusive. This contrasts Werner's 'theories of banking' that reject the financial intermediation view due to the perceived contradiction with the credit creation view. See Richard A. Werner, "Can Banks Individually Create Money Out of Nothing? The Theories and The Empirical Evidence," *International Review of Financial Analysis* 36 (2014): 1-19, Richard A. Werner, "A Lost Century in Economics: Three Theories Of Banking and The Conclusive Evidence," *International Review of Financial Analysis* 46 (2016): 361-379, and "Great And Mighty Things Which Thou Knowest Not," Perry G. Mehrling, 27 January 2016, <https://sites.bu.edu/perry/2016/01/27/great-and-mighty-things-which-thou-knowest-not/>.

⁷² Zoltán Jakab and Michael Kumhof "Models of Banking: Loanable Funds or Loans that Create Funds?" https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2474759 and Michael Kumhof and Zoltán Jakab, "Banks are Not Intermediaries of Loanable Funds – and Why This Matters," *Bank of England Working Paper no. 529* (2015).

of the bank, either in the form of reserves,⁷³ excess reserves⁷⁴ or currency.⁷⁵ As such, commercial banks do not intermediate between savers and borrowers.⁷⁶ This misconception can be attributed to intermediation of loanable funds (ILF) model of banking, where bank loans represent the intermediation of ‘real’ savings, or loanable funds, between non-bank savers and non-bank borrowers.⁷⁷ Money is not a ‘real’ resource that banks intermediate as barter institutions,⁷⁸ rather banks are ‘monetary’ institutions which function as intermediaries in liabilities between ultimate creditors and ultimate debtors in the economy.^{79 80}

This ‘money creation’ process is not generally understood by the public or even stakeholders in the banking and finance sector.⁸¹ Commercial banks create credit, not ‘money’ for themselves which they ‘lend’ out. Furthermore, they issue their own liabilities in exchange for other agents’ liabilities, which means they do not create net assets to the economy.^{82 83} One possible reason that contributes to the confusion is the terminologies used for the credit creation process is more suited to a commodity money-based framework. Hence reserves cause deposits,⁸⁴ deposits cause loans (the typical fractional

⁷³ Kumhof and Jakab, “Banks are Not Intermediaries” and Paul Sheard, “Repeat After Me: Banks Cannot and Do Not ‘Lend Out’ Reserves,” *Standard and Poor’s Economic Research, Ratings Direct* (2013): 1-15.

⁷⁴ Claudio Borio and Piti Disyatat, “Unconventional Monetary Policies: An Appraisal,” *BIS Working Papers no 292* (2019).

⁷⁵ The question that is rarely asked is: how does currency gets into society? Currency is issued by the central bank, but it does not get into society via a helicopter drop. One way or another, central bank notes come from a commercial bank’s ATM. But if the same notes come from deposits from non-banks, where money originates from will lead us into a circular chicken-and-egg situation. Unless, of course, deposits are first created by commercial bank themselves. See Andrew Hook “Examining Modern Money Creation: An Institution-Centered Explanation and Visualization of the ‘Credit Theory’ of Money and Some Reflections on its Significance,” *The Journal of Economic Education*, Vol. 53, No. 3 (2022): 210–231.

⁷⁶ i.e, banks do not accept money and ‘passes’ them over to someone else. See Adair Turner “Credit, Money and Leverage: What Wicksell, Hayek and Fisher Knew and Modern Macroeconomics Forgot,” *Towards a Sustainable Financial System Conference*, Stockholm School of Economics, Kumhof and Jakab, “Banks are Not Intermediaries” and Marco Gross and Christoph Siebenbrunner, “Money Creation in Fiat and Digital Currency Systems,” *IMF Working Paper 19/285* (2019).

⁷⁷ Jakab and Kumhof, “Banks Are Not Intermediaries”.

⁷⁸ Ibid.

⁷⁹ See **Appendix 2: comparison between scenario 2 and 2(a)**, for explanation.

⁸⁰ Banks are institutions that deal in debts. See Ralph Hawtrey, *Currency and Credit* (University Press, 1919) and Allyn Young, “Money and Credit,” in *The Book of Popular Science* (The Grolier Society, 1924).

⁸¹ See Mohd Nazri Salleh & Miguel Borges, “Accounting Treatment of Bank Credit Creation: An Impersonation of Reality,” *Accountants Today Nov/Dec 2015*, Vol. 28, No.6, The Malaysian Institute of Accountants and Shamim Hossain, “Perceptions of Money Creation and Impact of Accounting Treatment for Commercial Banks’ Lending Activities in Malaysia” (Master thesis, Universiti Putra Malaysia, 2018).

⁸² As per Cencini: “*The nature of money has nothing miraculous to it. The principle of double accounting is all that is needed*”. See Cencini, *Money, Income and Time*.

⁸³ While credit money can be created *out of nothing*, it cannot be created *against nothing*. See Murau, “Credit Money Accommodation,” emphasis original. This apparent ‘magic’ is sometimes referred to as the ‘alchemy’ of banking. See Mervyn King, *The End of Alchemy: Money, Banking and the Future of The Global Economy* (Norton & Company, 2016) and Mehrling, “Financialization and Its Discontents”.

⁸⁴ This mainstream logic is in view that reserves are controlled by the central bank, hence reserves are the ones that cause deposits. However, many central banks today, including the Federal Reserve (since

reserve and money multiplier approach) sound more logical than the reverse (i.e., loans cause deposits, deposits cause reserves), although the latter is correct based on empirical evidence.^{85 86}

What must be appreciated is that credit/money creation (as an exchange of IOUs and the expansion of balance sheets) occurs at all levels of the hierarchy, horizontally as well as vertically.^{87 88} While regulated entities must comply with the regulatory requirements such as liquidity and capital requirements, what naturally and ultimately limits the credit/money creation is not a budget or resource constraint, but the settlement constraint.⁸⁹ This settlement constraint binds everyone, including non-regulated entities (e.g., offshore banks and shadow banks) as well as central banks and nation states.⁹⁰ Any economic agent or bank can create promises to pay, but when the payment is demanded, settlement must occur. Any agent within its own level in the hierarchy can create credit

2020) and Bank of England (since 1981), impose zero reserve requirements. By the logic of the traditional understanding, commercial bank credit creation will be unlimited, but this does not occur. Before the establishment of BNM, the commercial banks in the Federation of Malaya and Singapore also did not keep any minimum amount of reserves. See G. M. Watson and Sir Sydney Caine, *Report on the Establishment of a Central Bank of Malaya* (Government Press, 1956), Simon Gray, "Central Bank Balances and Reserve Requirements," *IMF Working Paper WP/11/36* (2011), Federal Reserve, "Press Release 15 March 2020: Federal Reserve Actions to Support the Flow of Credit to Households and Businesses," <https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315b.htm> and McLeay et al., "Money Creation".

⁸⁵ On the obsolescence of the money-multiplier approach, see Piti Disyatat, "Monetary Policy Implementation: Misconceptions and Their Consequences," *BIS Working Paper No. 269* (2008) and Seth Carpenter and Selva Demiralp, "Money, Reserves, and the Transmission of Monetary Policy: Does the Money Multiplier Exist?" *Finance and Economics Discussion Series*, Federal Reserve Board of Governors (2010) and Jane Ihrig and Scott Wolla, "Teaching the Linkage Between Banks and The Fed: R.I.P. Money Multiplier," *Page One Economics*, Federal Reserve Bank of St. Louis (2021). See also: Nayan "Money Supply Endogeneity in Malaysia" and Shanmugam et al. "Endogenous Money Hypothesis" on the causal flow of loans to deposits, and deposits to reserves.

⁸⁶ As some authors has pointed out, the mechanism is very different that they should be given different names. See Chambers. *Money Has No Value* and Éric Tymoigne, "An Inquiry into the Nature of Money: An Alternative to the Functional Approach," *Working Paper No. 481*, The Levy Economics Institute of Bard College (2006).

⁸⁷ This includes exchange of IOUs between central banks, central banks and their respective government treasury, commercial banks with each other (between small and large banks, between onshore and offshore banks), commercial banks with shadow banks and money market funds. See **Appendix 2: Illustration of horizontal and vertical interactions**, for some examples of horizontal and horizontal relations between banking institutions.

⁸⁸ An exchange of IOUs can also be imagined between the government and its citizens, in this case the governments IOU (bonds, intermediated by the central bank and commercial banks), is offset by the citizens' IOU (obligation to pay the government in the form of taxes). Visualising this political relation as a balance sheet operation, the public's tax obligation is an asset to the government. See Mehrling, "Modern Money," and Kapadia, *A Political Theory of Money*.

⁸⁹ The settlement constraint comes from Minsky's concept of the survival constraint, where the cash outflow of all economic agents must not exceed cash inflow at all times and hence need some form of outside money to make settlements. This, to some extent, may be related to Keynes' idea of liquidity preference and liquidity supply in the General Theory. See Hyman Minsky, "The Financial Instability Hypothesis: An Interpretation of Keynes and an Alternative to 'Standard' Theory," *Nebraska Journal of Economics and Business*, vol. 16, no. 1, (1997): 5 – 16, Perry G. Mehrling, "The Vision of Hyman Minsky. *Journal of Economic Behavior and Organization*," vol. 39 (1998): 129–158 and John M. Keynes. *The General Theory of Employment, Interest and Money* (London: Palgrave Macmillan, 2018)

⁹⁰ See for example, Mehrling, "A Money View of FX".

(‘inside money’) but not money (‘outside money’).⁹¹ Hence sufficient liquidity⁹² must be maintained at the individual and aggregate level. As such, the entity situated above in the hierarchy can relax or tighten the settlement constraint of the entities below it.⁹³ In the case of commercial banks, sufficient reserves must be kept for settlements to other commercial banks or to meet the public’s demand for central bank money (i.e., cash).

1.10 Modern money is simultaneously a means of payment and funding

As modern money is simultaneously both ‘money’ and ‘credit’, ‘inside’ and ‘outside’, it works simultaneously as a means of payment and means of funding, depending on which level of the hierarchy and which institutions are involved.

While payment is usually understood as coming from a payer or buyer’s existing assets, it can also be made via issuance of liability or IOU (as illustrated in **Diagram 9** below). If an individual buys a car on credit, such individual’s IOU is not regarded by the car dealer as payment, i.e., the IOU is not a means of payment. In other words, the car price has yet to be paid. IOUs between members of the same level in the hierarchy (i.e., horizontal payments) are generally not regarded as money.⁹⁴ However, there are instances where horizontal issuance of IOU are regarded as payment. Interbank or correspondent balances between commercial banks or central banks and central bank swap lines or bilateral swap agreements⁹⁵ between central banks are regarded as ‘money’, not ‘credit’.

⁹¹ Money is endogenous at all levels in the hierarchy. As per Hicks: “*the market makes its money*”. See John Hicks, *A Market Theory of Money* (Oxford: Clarendon Press, 1989).

⁹² This includes monetary liquidity, funding liquidity and market liquidity. See Aldasoro et al., “A Money View of Stablecoins”.

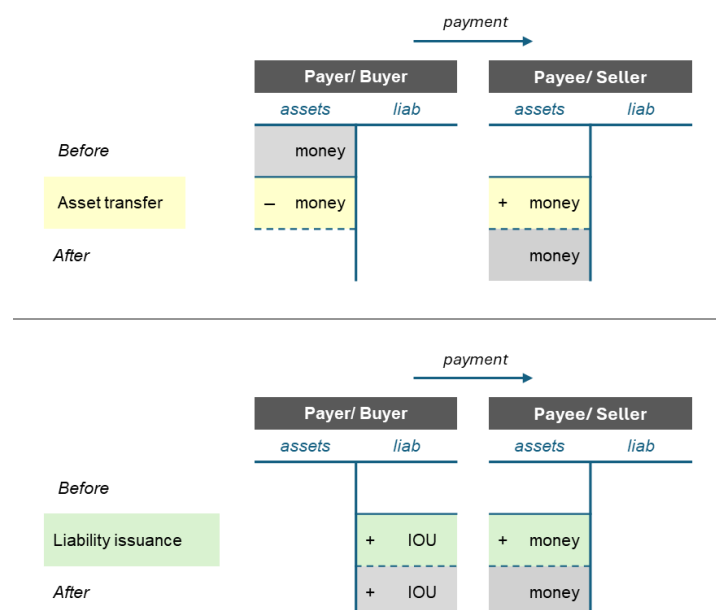
⁹³ Hence the central bank, as the sole issuer of reserves (with which the banks use to make payments to each other), can indirectly control credit creation via its monetary policy. In fact, this is the very reason central banks have some control via its chosen policy tool. See McLeay, “An Introduction”. Historically, many central banks’ liabilities evolved to be the asset for interbank clearing and settlement due to their role as clearinghouses. See Ben Norman et al., “The History of Interbank Settlement Arrangements: Exploring Central Banks’ Role in the Payment System,” *Bank of England Working Paper no. 412* (2011).

⁹⁴ Sometimes even between central banks. Examples include the Interdistrict Settlement Account (ISA) used between different branches of the Federal Reserve system and the Trans-European Automated Real-time Gross Settlement Express Transfer System (TARGET2) balances used between different national central banks in the Eurosystem. See Alexander Wolman “Federal Reserve Interdistrict Settlement,” *Economic Quarterly*, vol. 99, no. 2 (2013): 117 – 41, ECB, “What are TARGET2 Balances?” accessed June 14, 2025, https://www.ecb.europa.eu/ecb-and-you/explainers/tell-me-more/html/target2_balances.en.html and Cecchetti et al., “Interpreting TARGET2 Balances,” *BIS Working Papers no. 393* (2012).

⁹⁵ Swap arrangements between central banks may involve exchanging central bank liabilities between each other or asset from one side and liability from the other (if a reserve currency is involved). In the case of liability issuance, it may be regarded as another type of central bank money, as it does not impact the domestic interbank liquidity. See ECB “What are Currency Swap Lines?” accessed June 14, 2025, [19](https://www.ecb.europa.eu/ecb-and-you/explainers/tell-me-more/html/currency_swap_lines.en.html#:~:text=A%20currency%20swap%20line%20is,monetary%20policy%20instruments%20for%20decades,Central Bank of Egypt, “The Treatment of Currency Swaps Between Central Banks: Egypt Experience,” Thirtieth Meeting of the IMF Committee on Balance of Payments Statistics, BOPCOM-17/25a (2017). For an</p>
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On the other hand, in the case of payments between different levels of the hierarchy (vertical payments), generally an issuance of IOU from an entity at an upper level to the level below is considered to be payment (i.e., money). If a central bank purchases bonds or foreign currency from a commercial bank for its monetary policy operations, the central bank issues its own IOU in the form of CB reserves. Since CB reserves are money for commercial banks, the price of bonds or foreign currency is considered ‘paid’. The same goes to payments from a commercial bank to its account holders.

Diagram 9: Payment via transfer of asset vs via issuance of liability



Source: Authors' illustration, based on Clavero, "Four Ways to Discharge a Payment Obligation".

Funding is also usually understood by transfer of asset. For example, a non-bank money lender extends loan by transferring its asset (either CIC or bank deposits) to the borrower. This, however, is only limited to transactions among parties within the same level of the hierarchy.

For transaction between different levels, funding occurs by accepting the issuance of IOU (as illustrated in **Diagram 10** below). As long as the IOU is not redeemed for a higher-level credit from the issuer's balance sheet, the entity holding the IOU (i.e., creditor) will continue to fund the issuer (i.e., debtor). For example, when a commercial bank issues new bank deposits (bank's IOU) in exchange for mortgage loans (customer's IOU), the borrower is funding the loan (bank's asset) as long as it is not withdrawn for cash.

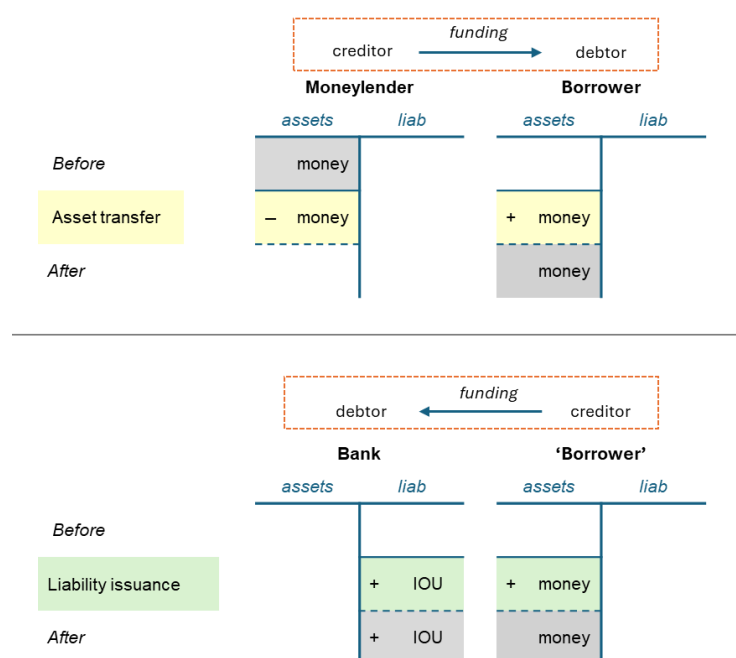
If the new bank deposits are transferred to another customer with the same bank, funding continues to occur, this time from a different source. As long as the bank does not have

accessible balance sheet visualisation, see Aldasoro et al., "Central Bank Swap Lines and Cross-Border Bank Flows," *BIS Bulletin No. 34* (2020). As of December 2024, BNM has about RM170 billion in total bilateral swap commitments with five central banks. See BNM, *Annual Report 2024*.

to transfer its asset, either in the form of CB reserves or CIC (i.e., no cash outflow), it is able to issue IOUs to acquire assets. As such, the IOU issued by an entity from an upper level serves as simultaneously (1) means of payment from the view of the level below and (2) funding for the issuer.

If the deposits are withdrawn or transferred to another bank, there is an outflow of cash, necessitating the bank to find new depositors (i.e., creditors) to continue funding its asset. This explains why banks still need funding, even with the ability to ‘create money’.

Diagram 10: Funding via transfer of asset vs via issuance of liability



Source: Authors' illustration, based on Clavero, "Four Ways to Discharge a Payment Obligation"

To fully grasp money's 'behaviour' in its entirety, we must move beyond the transactional level and look from a system's perspective. Especially, to view money, bank credit monies, and the monetary system as a (1) **payment system**⁹⁶, (2) one that resembles a Wicksellian '**pure credit**' **economy**⁹⁷ and (3) **global system**⁹⁸. Money in the modern economy is constantly created ('efflux') and destroyed ('reflux'), throughout the course of

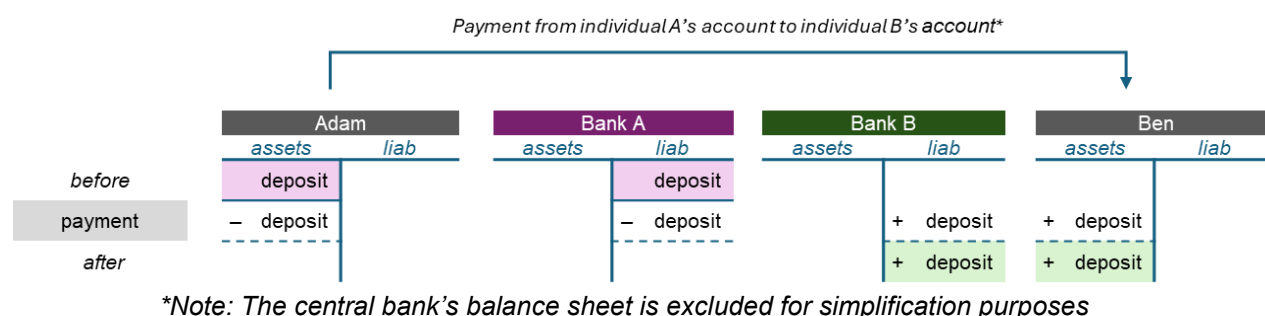
⁹⁶ Which unfortunately has often taken for granted. See Claudio Borio, "On Money, Debt, Trust and Central Banking," *BIS Working Papers No 763* (2019).

⁹⁷ Claudio Borio, "Central Banking Post-Crisis: What Compass for Uncharted Waters?" *BIS Working Papers No. 353* (2011).

⁹⁸ The global banking system does not only consist of 'traditional' banks but also includes non-bank financial intermediaries (NBFIs), also known as 'shadow' banks. As of December 2024, the share of NBFIs' assets is almost half of the total global financial assets, within which there are 'shadow' monies. See Financial Stability Board "Global Monitoring Report on Non-Bank Financial Intermediation" (2024) and Pozsar, "Shadow Banking". In Malaysia, shadow banking accounts for a much smaller share of the total credit intermediation. See Muhamad Amar Mohd Farid, "Monitoring Shadow Banking and Its Challenges: The Malaysian Experience," *IFC Bulletins chapters, in: Bank for International Settlements (ed.), Proceedings of the Sixth IFC Conference on Statistical Issues and Activities in A Changing Environment* (2012), vol. 36, 99-122 and BNM. *Financial Stability and Payments Report 2011*, 43-48.

payments, production, funding and repayments, by virtue of its nature as credits and debits of double-entry bookkeeping.⁹⁹ This could be understood by actually ‘seeing’ how money ‘moves’ between agents, within and across ‘money spaces’.¹⁰⁰ The ‘movement’ of money can be illustrated in a simple deposit transfer between two individuals who use different banks as the **Diagram 11** below shows:

Diagram 11: Money ‘moves’ by ‘appearing’ and ‘disappearing’ between agents



Source: authors' illustration

Say Adam, who has an account with Bank A, makes a payment to Ben, who has an account at Bank B. For visual purposes, different colours are used to denote both the issuer and the money instrument. Before the payment occurs, money exists in the account of Bank A (i.e., what currently exists is ‘**purple money**’). Upon payment, Adam’s account balance is reduced while Ben’s account balance increases. After the completion of payment, money now exists in the account of Bank B (i.e., ‘**green money**’). The money is not actually ‘transferred’, rather the purple money ‘disappears’ (destroyed) while the green money ‘appears’ (created). The bank deposits destroyed and created are not the same ‘things’, ‘flowing’ or ‘circulating’ between agents.¹⁰¹ This is precisely because money is an IOU, and when the ‘I’ (debtor) and the ‘U’ (creditor) are different, there will be different monies.

To use an analogy, imagine a series of lightbulbs, each with its own energy source. If each bulb is switched on and off in succession, one might get the impression that the light is ‘flowing’. In reality, light ‘appears’ and ‘disappears’, within each bulb. This distinction may look trivial as both conceptions effectively look alike, especially in normal

⁹⁹ Ingham (2004), following Cencini and the ‘monetary circuit’ approach.

¹⁰⁰ One might assume that a ‘currency area’ naturally follows the geographic boundaries of the sovereign state. Although it can be a useful simplification, it does not accurately reflect the global monetary architecture. The apparent shared boundary of (1) the economic area/ GDP boundary, (2) the decision-making unit and (3) the currency area is a coincidence. See Stefan Avdjiev et al., “Breaking Free of the Triple Coincidence in International Finance,” *BIS Working Paper No 524* (2015).

¹⁰¹ Of course, in everyday transactions or even policy making, a ‘physicalist’ intuitive conception of ‘circulation’, ‘transfer’ or ‘velocity’ of money as ‘things’, can be a useful shorthand. But to properly understand money, one must map out and follow the balance sheets. It is not at all surprising that most, if not all monetary authorities use the balance sheet approach to explain money creation after the financial crisis.

times.¹⁰² But this is only achieved by robust developments and deliberate maintenance of the underlying infrastructure to support the monetary system in place, ensuring that liquidity and elasticity are properly monitored and carefully managed.¹⁰³ Outside normal times, understanding where liquidity or elasticity comes from and how it dries up is crucial to locate any ‘blockage’ and ensuring the system ‘flow’ is smooth again.

1.11 Framing of CBDCs and digital assets in modern money framework/ taxonomy

Money is one of the most foundational elements of society and central banks have to ensure that money always ‘works’.¹⁰⁴ In the face of future developments and innovation in payment systems and instruments, is imperative to understand what already works, how it works and why it works, as a blueprint to improve the old, and enable the new.¹⁰⁵ Additionally, understanding the monetary architecture ensures that risks that can undermine monetary stability can be properly identified and regulated in a proper and effective manner, as parallels can be drawn between the past and existing structures to new innovations which have yet to stand the test of time.¹⁰⁶

Linking back to the types of money in current operation, CBDC is a digital form of central bank-issued money that can be used for everyday transactions by individuals (retail CBDC), and interbank transfers or related wholesale transactions by regulated financial institutions (wholesale CBDC), which can exist in either token or account-based forms. In general, it is reflected in the money taxonomy in **Diagram 12** below. The taxonomy distinguishes between three potential forms of CBDC (i.e., two are token-based and another one is account-based) where (i) wholesale CBDC has restricted access for wholesale payment and settlement transactions in tokenised form; and (ii) retail CBDC being a widely available payment instrument can exist in both account and token form.

¹⁰² Similar to the previous example, if each light bulb emits light of different colour, one can easily see that there is no ‘flow’.

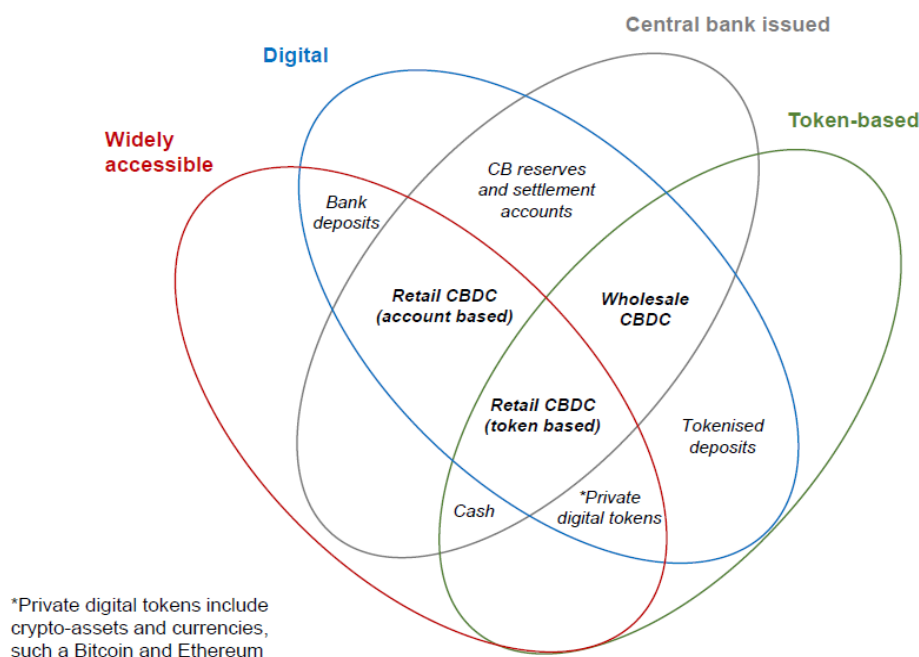
¹⁰³ i.e., liquidity cannot be assumed or taken as given.

¹⁰⁴ Cunliffe, “A ‘Black Ships’ Moment?”.

¹⁰⁵ BIS, “Blueprint for the Future Monetary System”.

¹⁰⁶ For example, Frost et al. draws parallels between stablecoins and 18th century Bank of Amsterdam, while Aldasoro et al. suggests that the mechanism of stablecoin’s promise to redeem USD at par is analogous to the mechanism of the offshore USD and the onshore USD. See Jon Frost et al., “An Early Stablecoin? The Bank of Amsterdam and the Governance of Money,” *BIS Working Paper No. 902* (2020) and Aldasoro et al., “A Money View of Stablecoins”.

Diagram 12: The money flower - a taxonomy of money



Source: Bech and Garratt, “Central Bank Digital Currencies”. CBDCs can be either token-based or account-based.

(b) Theoretical and historical perspectives of money and banking

1.12 Traditional (mainstream) conceptions of money

The usual convention is that the medium of exchange function is what makes money ‘money’.¹⁰⁷ This conceptual understanding stems from the belief that (1) money originated from the commercial exchange of commodities between individuals (i.e., the market)¹⁰⁸ and (2) money is a thing, a commodity which evolves as the most liquid, exchangeable commodity (i.e., it has some positive value).

The other functions naturally follow from the medium of exchange function. In the modern conception, money as the universal commodity may take the form of a numeraire, an arbitrary¹⁰⁹ denominator which serves as a standard of value for all other commodities to be denominated in, as per the Walrasian model of an exchange economy.¹¹⁰

¹⁰⁷ This conception originated from Carl Menger, “On the Origins of Money,” *Economic Journal* 2 (1892): 239–255, trans. C.A. Foley.

¹⁰⁸ The difference between this and the modern endogenous money is that the former is the exchange of commodities, while the latter is the exchange of credit. As such, in the former, money is a commodity while in the latter, money is credit.

¹⁰⁹ Mervyn King, “Challenges for Monetary Policy: New and Old,” speech on 27 August 1999. Available at www.bankofengland.co.uk/publications/Pages/speeches/default.aspx

¹¹⁰ Walras created a hypothetical numeraire, a symbolic representation of existing commodity values, to enable a model of an exchange economy in which the market ‘clears’ under conditions of equilibrium. See Ryan-Collins et al., “Where Does Money Come From?”

1.13 Logical origins of the traditional (mainstream) conception

Money emerges from the rational-utility-maximising individual, where through a market exchange process, a commodity as the transaction-cost-minimising medium of exchange rises.¹¹¹ Although the medium of exchange function is the most important in this narrative, it does not necessarily entail that this function is logically prior to other functions.¹¹² For the medium to function as a medium, it must first be of value to the individual,¹¹³ hence the quality of value precedes market exchange. Before money has an exchange value, it has a use value.¹¹⁴ As such, before market exchange happens, there is no ‘medium of exchange’, since all commodities are exchangeable to some degree and may turn out to be the medium. In a sense, all commodities are already money.¹¹⁵ In short, money is commodity and commodity is money.¹¹⁶

The traditional conception of money as a commodity (i.e. the ‘commodity theory of money’)¹¹⁷ can be traced back to Aristotle¹¹⁸ and continued to be held by philosophers and economists of the Enlightenment and modern times.¹¹⁹

¹¹¹ Ingham, *The Nature of Money*, Geoffrey Ingham. *Money: What is Political Economy?* (Polity, 2022) and Randall Wray, “Introduction to An Alternative History of Money,” *Working Paper No. 717*, The Levy Economics Institute of Bard College (2012).

¹¹² Einzig, *Primitive Money*.

¹¹³ Whether value is derived from labour or marginal utility is secondary, as long as it has some positive value. See Christine Desan “The Key to Value: The Debate Over Commensurability in Neoclassical and Credit Approaches to Money,” *Law and Contemporary Problems*, vol. 83 (2022): 1–22 and Chambers, *Money Has No Value*. Schumpeter considers the marginal utility explanation of money’s value as ‘circular’: money has use-value because it has exchange-value and has exchange-value because it has – precisely the *former* – use value (emphasis original). See Joseph A. Schumpeter, “Money and Currency,” *Social Research*, John Hopkins University Press, vol. 58, no.3, (1991): 499–534. See also Mehrling, “Credit Theory of Money”.

¹¹⁴ This distinction of ‘use value’ and ‘exchange value’ can be traced back to Aristotle. See Ingham, *The Nature of Money*.

¹¹⁵ Mehrling, “Credit Theory of Money”.

¹¹⁶ Chambers, “The Money Array”.

¹¹⁷ Schumpeter, *History of Economic Analysis*.

¹¹⁸ In his *Politics* and *Nicomachean Ethics*. See Robert Skidelsky. *Money and Government: The Past and Future of Economics* (Yale University Press, 2018), Dan Fitzpatrick, “Economic Reality: The Ontology of Money and Other Economic Phenomena,” (PhD diss., London School of Economics, 2014), Stefan Eich. *The Currency of Politics: The Political Theory of Money from Aristotle to Keynes* (Princeton: Princeton University Press, 2022) and Joel Kaye. *Economy and Nature in the Fourteenth Century: Money, Market Exchange and the Emergence of Scientific Thought*. Cambridge Studies in Medieval Life and Thought, Fourth Series (Cambridge: Cambridge University Press, 2014).

¹¹⁹ Such as Locke, Hume, and Smith. See Eich, *The Currency of Politics*, Ingham, *The Nature of Money* and Fitzpatrick, “The Ontology of Money”. Marx is widely considered to be a commodity theorist, although a different reading of Marx may categorise him differently. See Eich, *The Currency of Politics* and Chambers, *Money Has No Value*.

1.14 Historical origin of money from mainstream economists' perspective (commodity theorists in particular)

From the mainstream historical perspective, before money exists, people used to barter things with each other.¹²⁰ For example, a farmer trades his grain for a shepherd's goats. But this barter system is inefficient, as it requires the 'double coincidence of wants'.¹²¹ After a while, precious metals such as gold and silver started to be used, and because it has certain special properties such as durability, portability, divisibility, and intrinsic value, it emerges as the most exchangeable commodity. Money reduces transaction costs and maximising trading options, as no intermediate barter exchanges need to happen for a person to get the goods he wants.

Then problems arise from the difficulty to determine the fineness and weight of the precious metals, hence authorities start to mint coins to standardise and ensure the uniform metal content of the coins.

1.15 Alternative view: Historical origin of money as credit

The belief that money emerges from a barter economy is a myth.¹²² Historians may have different explanations of how money emerges, but they all agree that it does not originate from barter,¹²³ but rather as a social and governmental phenomenon.¹²⁴ For clarity, what is rejected is not that barter never happened at all, but that an economic system based on 'pure and simple'¹²⁵ barter never existed.¹²⁶ People in the past (and even the present) did exchange commodities with each other, but (1) the exchange is priced in a money of

¹²⁰ Commonly attributed to Smith, where individuals have the propensity to 'truck and barter'. See Ingham, *The Nature of Money* and David Graeber, *Debt: The First 5000 Years* (Brooklyn, NY: Melville House Publishing, 2011).

¹²¹ This concept is coined by Jevons, citing Wallace, the British naturalist's difficulty obtaining food in the Malayan Islands in the 18th century. See Glyn Davies, *A History of Money, From Ancient Times to The Present Day*, 3rd ed. (Cardiff: University of Wales Press, 2022) and Einzig, *Primitive Money*.

¹²² Innes, "What is Money?", A. Mitchell Innes "The Credit Theory of Money," *The Banking Law Journal*, vol. 31 (194): 151–168, Graeber, *Debt* and Christine Desan "Creation Stories: Myths About the Origins of Money," *Public Law & Legal Theory Working Paper Series*, Paper No. 13–20, Harvard Law School (2013). The barter narrative assumes spot trade between individuals in a primitive exchange economy, although a small community usually do not operate on a commercial exchange basis and if they do, exchange does not need to happen on the spot, as the members live in the same community. Contrast the explanation of Federal Reserve Bank of Dallas, "Money – Everyday Economics," accessed June 16, 2025, <https://www.dallasfed.org/~media/documents/educate/everyday/money.pdf>. vs McLeay, "An Introduction", (exchange by credit). In the 'primitive' as well as the modern economy, most exchanges occur through credit. See Hicks, *A Market Theory of Money*.

¹²³ Davies, *A History of Money*.

¹²⁴ C. A. E. Goodhart, "The Continuing Muddles of Monetary Theory: A Steadfast Refusal to Face Facts," *Economica*, vol. 76, suppl. 1 (2009): 821–30.

¹²⁵ A pure and simple barter is where individuals exchange commodities bilaterally, each commodity is priced in terms of the other commodity, and the ratio is negotiated on the spot. An exchange of commodities priced in a money of account, is not 'pure' barter but rather 'in-kind' exchanges. See Graeber, *Debt* and Chambers, *Money Has No Value*.

¹²⁶ Graeber, *Debt*.

account (in-kind payments),¹²⁷ (2) confined to limited bilateral exchanges¹²⁸ with fixed or pre-determined prices,¹²⁹ or (3) the exchange is not commercial in nature, but rather embedded¹³⁰ in social customs of reciprocity and gift-exchange.¹³¹ Barter occurs after a society has developed money, not before it.¹³² The traditional conception of money ignores historical reality in favour of formal modelling,¹³³ while a proper understanding of money requires a multidisciplinary approach of the various social sciences.^{134 135}

The history of money is primarily told through coins,¹³⁶ although money predates and lies behind coinage.¹³⁷ Credit system and banking practices precedes coinage by more than thousands of years¹³⁸ and continue to exist in parallel to the metal coinage system.

¹²⁷ Ingham, *The Nature of Money*.

¹²⁸ This can be either local or international trade. See Einzig, *Primitive Money*, Robert S. Wicks, *Money, Markets, and Trade in Early Southeast Asia: The Development of Indigenous Monetary Systems to AD 1400* (Ithaca, NY: SEAP Publications, 1992)

¹²⁹ Einzig, *Primitive Money*.

¹³⁰ Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Times* (Beacon Press, 1957)

¹³¹ Marcel Mauss, *The Gift: Forms and Functions of Exchange in Archaic Societies* (Routledge & Kegan Paul, 1954)

¹³² Graeber, *Debt*.

¹³³ Goodhart, *Debt* and C. A. E. Goodhart "The Two Concepts of Money, and the Future of Europe," *European Journal of Political Economy*, vol. 14, issue 3 (1998): 407–432. Mainstream approaches use deductive reasoning to enable constructions of abstract models, i.e., it looks at the 'form' by abstracting from the specificity of each individual, society or economic agents and institutions. See Ryan-Collins, *Where Does Money Come From?*

¹³⁴ See Schumpeter "Money and Currency", John Smithin, "Requirements of a Philosophy of Money and Finance," in *Financial Crises and the Nature of Capitalist Money*, edited by Jocelyn Pixley and Geoffrey Harcourt, 25–41 (London: Palgrave Macmillan, 2013) and Geoffrey Ingham, ed. *Concepts of Money: Interdisciplinary Perspectives from Economics, Sociology and Political Science*, Critical Studies in Economic Institutions (Cheltenham: Edward Elgar Publishing, 2005). This sentiment was also shared by Al-Ghazali. Although what we recognise today as sociology or economics are yet to take shape, he recognises the need to look beyond jurisprudence to understand the phenomenon of money. For a full picture of Al-Ghazali's economic thought, see Abdul Azim Islahi and Shaikh Muhammad Ghazanfar, *Economic Thought of al-Ghazali*, (Islamic Economics Research Series, King Abdulaziz University Press, 2011).

¹³⁵ Natural phenomena are studied through the natural sciences (e.g, physics, biology), but money is a human phenomenon, hence requires the study of how society 'works', in terms production, distribution, exchange, consumption and its institutions. Money is a social institution. See Samuel A. Chambers, *Capitalist Economics* (Oxford University Press, 2022) and Mervyn King "Trusting in Money – from Kirkcaldy to the MPC," Adam Smith Lecture (2006). Available at <https://www.bankofengland.co.uk/-/media/boe/files/speech/2006/trusting-in-money-from-kirkcaldy-to-the-mpc.pdf>

¹³⁶ Graeber, *Debt* and Chambers, *Money Has No Value*.

¹³⁷ Phillip Grierson, "The Origins of Money," *Research in Economic Anthropology*, vol.1 (1970): 1–35.

¹³⁸ Michael Hudson, "Origins of Money and Interest: Palatial Credit, Not Barter," in *Handbook of the History of Money and Currency*, edited by Battilosi et al. (Springer, 2020), Neil Ferguson, *The Ascent of Money: A Financial History of the World*, (Penguin Press, 2008) and Davies, *A History of Money*.

1.16 Modern money is reflective of credit theory of money i.e., the credit or promise to pay itself is money

The common conception of credit/debt is implicitly based on the monetary theory of credit,¹³⁹ in contrast to the **credit theory of money**, upon which modern money is built.

Monetary theory of credit conceptualises money starting from the coin or legal tender¹⁴⁰, from which credit is built upon.¹⁴¹ In other words, credit and money are two different things – credit is a claim on ‘money’, either in the form of coin, precious metals, commodities, or ‘fiat’ money. As a result, the existence of ‘credit’, without ‘money’ first existing, is logically impossible.¹⁴²

Modern money, as a promise to pay abstract value or ‘outside money’, is based on the credit theory of money. Based on this view, ‘the promise to pay’ itself is money.¹⁴³ The outcome on this analytical framework is that debt can conceptually exist without prior existence of money. Hence, there is no distinction between money and credit (in their nature or essence).¹⁴⁴

1.17 Money as the measure of value is abstract in nature (nominalist account of money)

To understand money as promises to pay abstract value, it is helpful to first understand the nature of the unit of account. In contrast to the traditional understanding, where the unit of account (i.e, the measuring unit of value) is derived from a commodity (in the form of actual or conceptual commodity), a nominalist account asserts that the measuring unit is abstract in nature, similar to how the inch and the pound are abstract measuring units of length and weight.¹⁴⁵ In other words, a standard of measure of value does not depend on the material of which the money is made of (e.g. metals). Rather, the nominal value (money of account) acts as the title/ description, to which money is the thing that answers the description.¹⁴⁶

¹³⁹ The distinction between the monetary theory of credit and the credit theory of money originated from Schumpeter, *History of Economic Analysis*.

¹⁴⁰ Legal tender refers to a legally valid means to settle debts to a creditor. This does not mean that one is forced to pay or accept payments using legal tender. See Dror Goldberg, “Legal Tender,” *Working Paper No. 2009-14*, Bar-Ilan University, Department of Economics, Ramat-Gan (2009), Federal Reserve Board of Governors, “FAQs: *Is It Legal for a Business in the United States to Refuse Cash as a Form of Payment?*” Last modified July 21, 2020. https://www.federalreserve.gov/faqs/currency_12772.htm, McLeay et al., “An Introduction”, Bank of England, “What is Legal Tender?”, *Bank of England Explainers*, last modified February 26, 2025. <https://www.bankofengland.co.uk/explainers/what-is-legal-tender>, and BNM (@BNM_official), June 1, 2023. https://x.com/BNM_official/status/1664114693324308480

¹⁴¹ Schumpeter, *History of Economic Analysis*. In simple terms, there is an absolute distinction between ‘money’ and ‘credit’. See also Chambers, *Money Has No Value*.

¹⁴² Murau, “Private Credit Money Accommodation”.

¹⁴³ Kapadia, *A Political Theory of Money*.

¹⁴⁴ Murau, “Private Credit Money Accommodation”.

¹⁴⁵ As per Keynes: “*money of account, that in which debts and price lists are expressed, is the primary concept of a theory of money*”. See John Maynard Keynes, *A Treatise on Money*, in the Collected Writings of John Maynard Keynes, volume V, Royal Economic Society (Cambridge: Cambridge University Press, 1930).

¹⁴⁶ Ibid.

The nominalist account criticises the commodity theory's conception of the unit of account, where it is assumed that the unit of account or standard of value spontaneously emerges from the most exchangeable commodity, i.e., the activity of comparison produces money unproblematically.¹⁴⁷ As stated, before market exchange happens, each commodity possesses some positive value. Throughout the process of exchange, the value of a commodity is expressed in terms of another commodity, i.e., the exchange ratio. As the number of commodities increases, the exchange ratios will increase at a faster rate. For example, an economy with 100 different commodities will have 4950 exchange ratios.¹⁴⁸ The number may be larger, considering a pair of commodities might have different exchange ratios across time and individuals. If a commodity appeared to be used as the standard of value, it must already have a fixed exchange ratio with other commodities, as looking from a logical standpoint, it is unlikely that a single and stable unit of account emerges from these myriads of bilateral exchange ratios.¹⁴⁹ Unless a unit of account already exists,¹⁵⁰ the commodity medium will continue to have multiple and variable exchange values.¹⁵¹ As per the Walrasian model, if we assume ratios of value, commensurability – comparability of goods in a common unit – appears.¹⁵²

The nominalist account separates the function of unit of account function from the means of payment. As evidenced by the monetary history of early and medieval Europe, the pence-shillings-pound unit of account system¹⁵³ persists for centuries, although the pound was never minted as a coin.¹⁵⁴ Another example is the Guineas, which continued to be used a unit of account although the coins ceased to be used in circulation.¹⁵⁵ This phenomenon of 'imaginary money'¹⁵⁶ or 'ghost money' occur where the unit of account is

¹⁴⁷ Ingham, *The Nature of Money* and Desan, "The Key to Value".

¹⁴⁸ Davies, *A History of Money*.

¹⁴⁹ Ingham, *The Nature of Money*.

¹⁵⁰ Complex multilateral indirect exchange presupposes a money of account. See Cencini, *Money, Income and Time*, Ingham, *The Nature of Money* and Graeber, *Debt*.

¹⁵¹ Ingham, *The Nature of Money*. Radford's cigarette money in a prison economy is a popular example used to represent the emergence of a unit of account from the most exchangeable commodity, based on the commodity's exchange value. In this prisoner of war camp, Radford observes that objects are exchanged for cigarettes. But unless the exchange value cigarettes are already fixed to a certain standard of value, it is merely a "*convenient medium of exchange on the spot*", and the economy has "*scarcely emerged from the state of barter*". See Keynes, *A Treatise on Money*.

¹⁵² Desan, "The Key to Value".

¹⁵³ Charlemagne imposed a money of account system, using pounds, divided into 20 shillings and 240 pennies. All three were used for the denomination of debts and prices, but the pound and shilling coins were never minted. Pounds and shillings were *nominal* values, and the *coinage* consisted of silver pennies. See Ingham, *Money: What is Political Economy?*

¹⁵⁴ Luigi Einaudi "The Theory of Imaginary Money from Charlemagne to the French Revolution," in *Luigi Einaudi: Selected Economic Essays*, edited by Paolo Fauci and Roberto Marchionatti (London: Palgrave Macmillan, 1936).

¹⁵⁵ Ingham, *The Nature of Money*.

¹⁵⁶ For numerous examples of the imaginary monies and the mechanisms to which the plethora of coins are priced in the imaginary unit of account, see Peter Spufford, "Handbook of Medieval Exchange," in *Currency Exchange (Spufford)*, Medieval and Early Modern Data Bank, (Rutgers University Libraries, 1986).

no longer tied to any physical commodity or metals, but exist only in the abstract sense, to which the actual means of payment (in-kind or with metal coins) are denominated in.¹⁵⁷

(c) Implication: The need to reassess modern money from Shariah perspective

Given the updated understanding on fundamentals of modern money as an IOU or credit relation, the need to re-assess the concept of modern money from Shariah perspective arises. Any normative ruling on money will have its own underlying implicit theory of money¹⁵⁸ ¹⁵⁹, and Muslim scholars implicitly conceptualises money from the Aristotelian¹⁶⁰ or commodity theory perspective.¹⁶¹ Furthermore, the existing fatwa on modern money seems to be based on the mainstream understanding of money as a 'thing' or 'commodity' which is not the case for modern money that represents credit relation in its nature, as deliberated earlier in the part 1(a-b).

1.18 Existing fatwa/ Shariah rulings on modern money

Following the Nixon shock and the detachment of the US dollar from gold in 1971, prominent fatwa-issuing bodies (e.g., Council of Prominent Scholars of Saudi Arabia in 1970s and the OIC International Fiqh Academy in 1980s) convened and decided that paper money is regarded as 'money by itself' (*naqd qa'im bizatihi*) or 'socially accepted money' (*naqd `urfi/ istilahi*), They adopt the view of Maliki, Shafi'i, Ibn Taimiyyah and Ibn al-Qayyim that the ratio legis (*`illah*) of *riba* on gold and silver is *thamaniyyah* (moneyness). Anchored on this, they regard modern money as a *ribawi* item, analogous

¹⁵⁷ Examples of 'imaginary money' in the modern times are the (1) European Currency Unit (ECU, which was later replaced by the Euro in 1999, (2) the IMF's SDR (3) Keynes' bancor and (4) the Islamic Development Bank (IsDB)'s Islamic Dinar (ID). These units are not circulating currencies but used as monetary units to denominate money and credit balances.

¹⁵⁸ Perry G. Mehrling, "Cryptos Fear Credit," last modified September 29, 2017. <https://sites.bu.edu/perry/2017/09/29/cryptos-fear-credit/>. To illustrate this principle, consider the problem of inflation. What should be done to address inflation depends on one's theory of inflation, whether it is a monetary phenomenon, non-monetary phenomenon or even trying to manage without any working theory at all. See Giacomo Carboni et al. "The Role of Money in the Economy and in Central Bank Policies," in *Enhancing Monetary Analysis*, edited by Lucas D. Papademos and Jürgen Stark (Frankfurt: European Central Bank, 2010), Isabel Schnabel, "Money and Inflation," *Thünen Lecture at the Annual Conference of the Verein für Socialpolitik* (2023), C.A. E. Goodhart, "The Future of Inflation," in *Beyond the Pandemic: The Future of Monetary Policy*, Conference Proceedings, ECB Forum on Central Banking, 28–29 September 2021, Daniel K. Tarullo, "Monetary Policy Without a Working Theory of Inflation," *Hutchins Center Working Paper #33* (2017), and Peter Stella et al., "Some Alternative Monetary Facts." *IMF Working Paper WP/21/6* (2021).

¹⁵⁹ As stated by some classical Shariah scholars, "a prohibition implies conceptualisation, since it is intended for avoidance. And what is inherently impossible cannot be avoided," (لأن النهي يدل على التصور، لكونه يراد للامتناع، والممتنع في نفسه المستحيل في ذاته لا يمكن الامتناع منه). See Ibn Qudamah, *Raudhah al-Nazir wa Junnah al-Munazir* (Muassasah Risalah, 2015).

¹⁶⁰ Muhammad Nejatullah Siddiqi, *Nuqud wa Bunuk* (Jeddah: King Abdulaziz University, 2017).

¹⁶¹ See Rafiq al-Misri, *Al-Islam wa al-Nuqud* (Jeddah: King Abd Aziz University Press, 1981). Although a definitive claim cannot yet be made, it is quite possible to trace a transmission of ideas from Aristotle to medieval Muslim scholars and onwards to Smith. The first part is traced in Ayman Alwishah and James G. Hayes, eds., *Aristotle and the Arabic Tradition* (Cambridge: Cambridge University Press, 2015) while Graeber, *Debt* suggested al-Ghazali and al-Tusi's influence on Adam Smith's ideas.

to gold and silver (*qiyas `ala al-zahab wa al-fiddhah*)<sup>162</sup> due to the same *`illah thamaniyyah*.¹⁶³

Paper money, therefore, takes the Shariah rulings of gold and silver in the rules of *riba* zakat, and other transactions such as *bai` salam* and *musyarakah*. Multiple currencies from different countries are regarded as different types of money (*ajnas mukhtalifah*), just as gold and silver are considered to be different types.

1.19 Gap in the existing fatwa: viewing money as ‘single’ and as a ‘thing’, not as credit relation with multiple types in a hierarchy

The fatwa was made based on the view that the monetary space as a flat world, as if the paper money represents all other types of money (e.g., CB reserves, bank deposits), comingling to each other. This does not correspond to the full picture of modern money that is much more complex.

For instance, viewing money as a hierarchy, the immediate gap can be clearly observed. At the very least, a Shariah ruling is required on other types of money along the hierarchy. Secondly, the fatwas viewed paper money as a ‘money- thing’, similar to gold and silver, missing its credit nature. In addition to the Shariah gaps, the subject of the original fatwas must also be reviewed.¹⁶⁴

1.20 Conflation of two different conceptions of ‘money’ may lead to inaccurate Shariah ruling on modern money

The opinion adopted by the said fatwa-issuing bodies and majority contemporary Shariah scholars¹⁶⁵ is that gold and silver are *ribawi* items¹⁶⁶ because of their attribute (*`illah*/ratio legis) as ‘money’¹⁶⁷ (*thaman or naqd*). Hence anything which is considered to be ‘money’, is subject to the Shariah rules of *riba* (i.e., becomes *ribawi* item).

However, the nature of modern money as a credit relation cannot be equated with the concept of ‘money (*thaman or naqd*)’ in the classical Shariah sense, as the latter arises from a different linguistic and conceptual origins (which will be deliberated in the part 2 of this paper). Conflation occurs by equating modern money conception and the classical

¹⁶² This fatwa is supported by the majority, if not all, prominent Shariah scholars across the globe.

¹⁶³ **Appendix 3** further explains the components and methodology of *qiyas* which is one of the specific Shariah jurisprudential mechanisms.

¹⁶⁴ Similar calls have been made, albeit not necessarily for the same reasons. See International Shari’ah Research Academy for Islamic Finance (ISRA), *Islamic Financial System: Principles & Operations*, 3rd ed. (Kuala Lumpur: INCEIF University, 2023), Yusuf Jha, “From Goldsmiths to Modern Banking: A Frank Look at the Money Creation Process and its Relevance to Islamic Banking,” *ICR Journal* 4 (3) (2013): 349–70. <https://doi.org/10.52282/icr.v4i3.452> and Ahmed Belouafi, “Vital Issues for the Jurisprudential Adaptation of Cryptocurrencies,” *AQU Journal of Islamic Economics*, vol. 3, no. 2 (2023): 22–64.

¹⁶⁵ A small minority of contemporary scholars view that other classical *`illahs* applies, while another small minority attempts to derive a new *`illah*, diverging from the classical *`illahs*.

¹⁶⁶ *Ribawi* items refer to items that are subject to the rules of *riba* in exchange (*riba al-buyu*).

¹⁶⁷ As will be explained, this is a conflation of essences due to the paucity of terms.

Shariah conception of money based on mere similarity in the name 'money', but both conceptions actually have different or even opposite essences¹⁶⁸. The concept of modern credit money, a promise to pay nominal abstract value does not exist in the classical Shariah literature, nor in the modern Shariah discussion, which is based on commodity framework (i.e., money as a 'thing' or commodity).

Part 2 of this paper will deliberate classical Shariah conception of money to examine its similarities and/or differences with the modern money conception. This serves as a critical foundation before exploring and ascertaining the appropriate Shariah ruling on modern money.

¹⁶⁸ This may be explained by the social convention to name things based on resemblance, rather than by strict biconditional logic (e.g. a thing is considered to be thing P if and only if it has certain attribute(s), X and Y. If thing Q possesses only X or Y, it is not P and if thing R possesses neither, it must not be P, otherwise X and Y are not the defining attributes). Wittgenstein's 'family resemblance' illustrates that siblings are considered to be belonging in the same family, although there are no common attribute(s) present in each sibling. However, each sibling does have common attribute(s) with another sibling, i.e., they 'resemble' each other. In this configuration, there can be a pair of siblings that do not have any common attribute at all. See Steven Pinker, *Rationality: What It Is, Why It Seems Scarce, Why It Matters* (Penguin Books, 2022).

Part 2: Classical Shariah Deliberation on Money

(a): The classical Shariah nomenclature(s) of money

2.1 Definition of money (*naqd* and *thaman*) from Shariah perspective

'*Thaman*' and '*naqd*' are the two terms, usually used interchangeably in classical Shariah literature, to denote the meaning of money (i.e., refers to commodity-based money). Both however have distinct but non-mutually exclusive meanings, as follows:

- a) *Thaman* is a term combining two meanings: (1) price, in which goods and labour are denominated in, and (2) the countervalue which the buyer is offering in exchange of the seller's goods.
- b) The term *naqd* also combines two meanings: (1) spot settlement during contract session and (2) gold and silver¹⁶⁹. This stems from the practice of the early Arab economy, where spot payments were made with gold or silver. The term *naqd* is also used in modern Arabic to denote the term for money¹⁷⁰, but in the plural form, i.e., *nuqud*. For example, *nuqud wara'iqiyah* (paper monies).

During the period of prophet Muhammad (PBUH), his companions and the classical Shariah scholars, goods and labour are usually priced in, and paid with, gold and silver coins (dinar and dirham). Both dinar and dirham are the 'measurer of value', while goods and labour are the 'measured' thing (*muthman*). Hence, according to the majority of classical Shariah scholars¹⁷¹, *thaman* is the dinar and dirham.¹⁷²

Notwithstanding the above, in a case where (1) goods are exchanged with other goods (e.g., food with cloth); or (2) gold coin is exchanged with silver coin (e.g., dinar with dirham), the buyer's countervalue is considered as '*thaman*'. This implies that –

- a) *thaman* can also be goods other than gold/silver coins (in case 1); and
- b) gold or silver coin can also be the 'measured' thing instead of the *thaman* (measurer of value), as in case 2.

These two cases, however, are exceptions rather than the default form of commercial exchange (i.e., money with goods). In plain English, *naqd* and *thaman* may be translated as 'cash' and 'price' respectively.

The Hanafi school has a different definition of *thaman*. According to them, *thaman* is debt,¹⁷³ in the sense that the means of payment stipulated in an exchange contract (i.e.,

¹⁶⁹ This includes all forms, be it bullions, coins, utensils or jewellery.

¹⁷⁰ The derivation of the term for money from precious metals is not exclusive to Arabic. For example, the modern French term for money is 'argent', from silver.

¹⁷¹ i.e., the Maliki, Shafi'i and Hanbali school. See Samir Jabullah, *Dhawabit al-Thaman wa Tatbiqatuhu fi 'Aqd al-Bai'*, *Bath Manhaji Muqaran* (Dar Kunuz Ishbiliya, 2005).

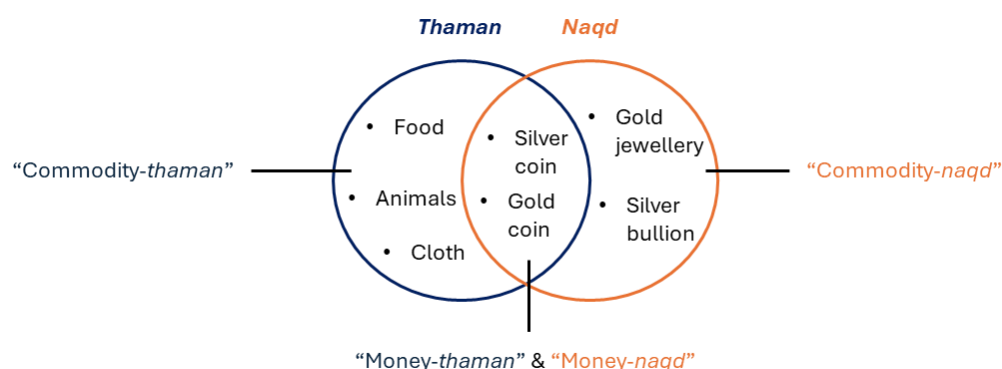
¹⁷² Jabullah, *Dhawabit al-Thaman*. From this angle, the authors observe that the functions of means of payment and measure of value (unit of account) are not yet separated in the classical Shariah conception of money. This is different from modern account-based money that exists as credit/debt, denominated in an abstract unit of account, without actual circulating means of payment or medium exchange.

¹⁷³ Jabullah, *Dhawabit al-Thaman*.

gold and silver coins) is not specified to any specific coin. Upon settlement (either spot or deferred), any coin can be used as payment, according to the amount agreed upon by both parties.

The **Venn Diagram 13** below visualises *thaman* and *naqd* and how both partially overlap to give the meaning of ‘money’ from Shariah perspective. Looking at this diagram, one may better appreciate as to why money, *naqd* and *thaman* are usually used interchangeably:

Diagram 13: Taxonomy of *naqd* and *thaman*



Source: Authors' illustration. These terms and categorisation are inspired by Chambers and Schumpeter's distinction of 'money-gold' (gold as money) and 'commodity-gold' (gold as commodity). They are two different things – each nature, role and value are independent of the other.¹⁷⁴

Part 2 (b): Shariah rules relating to *naqd* and *thaman* (commodity-based money)

2.2 Money is a *ribawi* item and subject to the rules of all types of *riba*.

Riba – literally means excess – can be broadly categorised into three types, (1) *riba* on debt deferment, (2) *riba* on loan and (3) *riba* in sale/ exchange contract (*riba al-buyu`*). The first type, known as *riba jahiliyyah*, is where a debt due is extended for a consideration. The second type refers to the excess on loan, i.e. simple interest. The last type (*riba al-buyu`*) is where an exchange of monies or commodities has an excess either in the spatial dimension (e.g. quantity or weight) or the temporal dimension (e.g. deferred delivery).

For example, an exchange between old 999 gold and new 999 gold has to observe parity in weight, otherwise the difference is considered to be *riba fadhli* (a type of *riba al-buyu`*). Another example is the exchange of barley and salt has to be made on spot for both items (no weight requirement to be observed in this case), else an excess in time makes the transaction falls into *riba nasi'ah* (another type of *riba al-buyu`*).

¹⁷⁴ See Chambers, *Money Has No Value*, "The Money Array" and Schumpeter, "Money and the Social Product", translated by A. W. Marget, in *International Economic Papers* No.6, (1956): 148 – 211.

The six (6) commodities mentioned in the following prophetic hadith (narrated by Ubadah ibn al-Samit) are usually referred to as ‘*ribawi* items’, which are subject to the rules of *riba al-buyu`*:

*Exchange of (1) gold for gold, (2) silver for silver, (3) wheat for wheat, (4) barley for barley, (5) dates for dates, and (6) salt for salt [shall be] in equal quantities and hand to hand (spot). If they differ in type, you may trade them as you wish, provided it is hand to hand (without deferment on either side).”*¹⁷⁵

The understanding of six *ribawi* items is a good starting point to understand *riba al-buyu`*. However, this does not comprehensively reflect the complete classical scholars’ understanding and methodology in arriving at their conclusions – for *riba al-buyu`*, according to the majority classical scholars, may extend beyond *ribawi* items.

For example, the Maliki school prohibits the exchange of one piece of cloth today for two pieces of cloths on the next day, despite that cloth is not considered to be a ‘*ribawi* item’ according to them. In fact, the majority classical scholars (Hanafi, Maliki and some views in the Hanbali school) opined that *riba al-buyu`* may also occur in the exchange of non-*ribawi* items of the same type, on deferred terms (with slight differences in detailed rules), as summarised in **Diagram 14**.¹⁷⁶

Diagram 14: Rules of *riba* in sale (*riba al-buyu`*) in non-*ribawi* items of the same type

Hanafi			Maliki		
	Equal ¹	Inequal ²		Equal ¹	Inequal ²
Spot	Allowed	Allowed	Spot	Allowed	Allowed
Deferred	Prohibited	Prohibited	Deferred	Allowed	Prohibited

Syafi’i & Hanbali			Some views in Hanbali		
	Equal	Inequal		Equal	Inequal
Spot	Allowed	Allowed	Spot	Allowed	Allowed
Deferred	Allowed	Allowed	Deferred	Prohibited ³	Prohibited ³

¹ Equal = Exchange of two items of same weight, volume or quantity or (e.g., 1kg–1kg)
² Inequal = Exchange of two items of different weight, volume or quantity (e.g., 3kg – 1kg)
³ Even both items are from different types (*ajnas mukhtalifah*)

Source: Authors’ illustration, based on al-Hudaif, al-`Ilal al-Ribawiyyah. Some classical Shariah scholars prohibit the exchange of items of similar types, even though they are not *ribawi* items.

The scholars’ different views above are attributed to their differences in deriving ‘*illah*’ (ratio legis) of *riba* on the six *ribawi* items (refer to **Appendix 4** for detailed different views on ‘*illah*’).

¹⁷⁵ Muslim, hadith no: 1587.

¹⁷⁶ To properly understand this, we need to understand how the classical scholars deduced the *riba* rulings from the revealed divine sources as a whole. This requires a comprehensive induction analysis (*istiqla`*) of their Shariah deliberation which will not be covered in this paper.

In summary¹⁷⁷, the reason why the classical Shariah scholars have different views on the `illah of *riba al-buyu* is due to different logical reasonings on how to arrive at a suitable `illah which is coherent¹⁷⁸ to all prophetic traditions that allow or prohibit the exchange of certain commodities with each other.¹⁷⁹

The majority of modern Shariah scholars adopt the view of Maliki, Shafi'i, Ibn Taimiyyah and Ibn al-Qayyim, where the `illah *riba* on gold and silver is *thamaniyyah* (moneyness), hence consider modern money as *ribawi* item, analogous to gold and silver due to the same `illah *thamaniyyah*.

2.3 Money can be in any form, not restricted to gold and silver

Money can be constructed from any material that is lawful (*halal*). This is the view of many classical Shariah scholars including Imam Malik¹⁸⁰, Imam Ahmad¹⁸¹, Ibn Taimiyah¹⁸² and Ibn Hazm¹⁸³, as well as majority contemporary Shariah scholars¹⁸⁴, based on the following justifications:

- a) There is no specific text from the Quran and Sunnah that prohibits another form of money (other than gold and silver); and
- b) Statement ('*athar*) of caliph Umar where he contemplated to make money from camel skin. However, his intention was not implemented due to external factors as advised by his fellow companions in that it may cause shortage of camels¹⁸⁵ and sudden increase in money supply.¹⁸⁶

¹⁷⁷ For a detailed and comprehensive discussion, see al-Hudaif, *Al-'Ilal al-Ribawiyyah, Dirasah Fiqhiyyah Tatbiqiyyah fi Tahqiqiha Wa 'Athariha Wa Mustathnayatiha*, (Dar al-Maiman Publishing & Al Rajhi Bank, 2022).

¹⁷⁸ In very simple terms, the `illah has to satisfy the biconditional logic (*al-ittirad wa al-in'ikas*) between it and the cases mentioned in the prophetic traditions. See al-Hudaif, *Al-'Ilal al-Ribawiyyah* for a detailed discussion.

¹⁷⁹ For example, the prohibition of selling an animal with another animal on deferred terms, or the allowance of forward sale (spot payment in *naqd* against crops to be delivered in a year or two's time, also known as *bai' al-salam*).

¹⁸⁰ Imam Malik, *Al-Mudawwanah*, vol.3 (Dar al-Kutub al-Ilmiyah 1994), 5.

لو أن الناس أجازوا بينهم الجلود، حتى تكون لها سكة وعين، لكرهتها أن تباع بالذهب والورق نظرة.

¹⁸¹ Abu Ya'la al-Farra', *Al-Ahkam al-Sultaniyyah*, 2nd ed. (Dar al-Kutub al-Ilmiyah, 2000), 179.

إن كل شيء اصطالحوا عليه فيما بينهم مثل الفلوس التي اصطالح الناس عليها، أرجو أن لا يكون به بأس.

¹⁸² Ibn Taimiyah, *Majmuk al-Fatawa*, vol.19 (Majmak al-Malik Fahad, 2004), 251.

أما الدرهم والدينار فلا يعرف له حد طبيعي ولا شرعي، بل مرجعه إلى العادة والاصطلاح.

¹⁸³ Ibn Hazm, *Al-Muhalla*, vol.7 (Dar al-Kutub al-Ilmiyah 1988), 115.

كل شيء يجوز بيعه فهو ثمن... ولا ندري من أين وقع لكم الاقتصار بالثمين على الذهب والفضة، ولا نص في ذلك، ولا قول أحد من أهل الإسلام، وهذا خطأ في غاية الفحش.

¹⁸⁴ Majma' Fiqh Rabitah al-Alam al-Islami, 5th session:

قرار رقم (6): وبما أن الثمنية لا تقتصر عند الفقهاء على الذهب والفضة، وإن كان معدنهما هو الأصل.

¹⁸⁵ Al-Baladhuri, *Futuh al-Buldan* (Beirut: Dar wa Maktabah al-Hilal, 1988), 659.

¹⁸⁶ Adam, *Islamic Currency* (International Council of Islamic Finance Educators, 2016), 49.

On the other hand, al-Maqrizi emphasised the importance of money to be in the form of gold or silver (as both means of payment and unit of account).

One could argue that al-Maqrizi's disagreement of *fulus* was probably influenced by the economic crisis in Egypt during his period (15th century AD). Such a crisis was caused by several factors, among others, the excessive issuance of *fulus* money in the form of copper coins).¹⁸⁷ On this note, al-Maqrizi said:¹⁸⁸

"Everyone endowed with discernment and knowledge has noticed that since the circulation of fulus, the region has perished and the Egyptian people's wealth has declined... God had established silver as money (naqd), but had never done so with fulūs, which resembled 'a thing without a thing'."

It is also worth highlighting that some contemporary Shariah scholars are of the view that money should be backed either by precious metals or other tangible materials with intrinsic value (e.g. gold, silver or any natural resources of a particular country). This is in view that the money supply should be constrained to avoid undesirable inflation, and this can only be achieved by using natural materials – matter which is limited by nature – as money.¹⁸⁹

2.4 Money shall not be treated as commodity, rather, as medium of exchange and standard measure of value

Unlike commodity, money should not be desired for its own sake.¹⁹⁰ It only serves as a medium of exchange and measure of value. This implies that money should not be hoarded, nor can it be used to generate more money (i.e., surplus value by itself). Deviating from this principle will be considered as tantamount to *riba* as the surplus value is generated without any justifiable consideration from Shariah perspective.¹⁹¹

Al-Ghazali clarifies the function of money by saying that¹⁹² –

"...Allah Almighty has, therefore, created dirhams and dinars (money) as judges and mediators between all commodities so that all objects of wealth are measured through them... and their being the measure of the value of all commodities is based

¹⁸⁷ See Norbert Oberauer, "Money in Classical Islam: Legal Theory and Economic Practice," *Islamic Law and Society* 25 (2018).

¹⁸⁸ Al-Maqrizi, *Rasail al-Maqrizi* (Cairo: Dar al-Hadis, 1998), 172. English translation in Oberauer, "Money in Classical Islam".

وقد علم كل من رزق فهما وعلمنا أنه حدث من رواجها خراب الإقليم، وزهاب نعمة أهل مصر وأن هذا في الحقيقة كعكس للحقائق، فإن الفضة هي نقد شرعي، لم تنزل في العالم، والفلوس إنما هي أشبه بلا شيء.

¹⁸⁹ See Al-Qarahdaghi, *Haqibah al-Duktur Ali al-Qarahdaghi al-Iqtisodiyah*, 2nd ed., vol. 2 (Qatar: Ministry of Endowments and Islamic Affairs, 2021), 518.

¹⁹⁰ Ibn Qayyim, *I'lam al-Muwaqqi'in*, vol.2 (Dar al-Kutub al-Ilmiyah, 1991), 105.

¹⁹¹ For any profit to be justifiable from Shariah perspective, a person must either (a) bear the risk associated with an asset; (b) bear the risk associated with capital investment; (c) be liable to perform a duty; or (d) provide a service ('amal). See Abu Ghuddah, *Tatbiq al-Mafhum al-'Am li al-Ahadiith al-Nubuwwah al-Sharifah wa al-Ahkam al-Fiqhiyyah wa Tahqiq al-Manat 'ala al-Mu'amalat al-Maliyyah wa al-Tijarah al-Mu'asirah* (Jeddah: Nadwah al-Barakah li al-Iqtisad al-Islami, 2016).

¹⁹² Al-Ghazali, *Ihya' 'Ulumuddin*. vol. 4 (Labuan: Saqifat Al-Safa Trust, 2020). English translation by Mufti Taqi Usmani.

on the fact that they are not an objective in themselves. Had they been an objective in themselves, one could have a specific purpose for keeping them which might have given them more importance according to his intention while the one who had no such purpose would have not given them such importance and thus the whole system would have been disturbed. That is why Allah has created them, so that they may be circulated between hands and act as a fair judge between different commodities and work as a medium to acquire other things...”

Affirming the function of money as a medium of exchange, Sheikh Mufti Taqi Usmani stated that Shariah treats money differently from commodities, especially on two aspects, as follows:¹⁹³

- a) Money (of the same denomination) is not held to be the subject matter of trade, like other commodities. Its use is restricted to its basic purpose i.e., to act as a medium of exchange and a measure of value; and
- b) If for exceptional reasons, money has to be exchanged for money or it is borrowed, the payment on both sides must be equal, so that it is not used for the purpose it is not meant for i.e. trade in money itself.

Among Shariah evidence (*dalil*) of the above is the following hadith which signals the function of money as a medium of exchange, in which the Prophet Muhammad SAW ordered his companion to first exchange dates with money, prior to exchanging such dates with other dates of different quality:

*“Narrated Abu Sa’id Al-Khudri and Abu Huraira, Allah’s Messenger (PBUH) appointed somebody as a governor of Khaibar. That governor brought to him an excellent kind of dates (from Khaibar). The Prophet (PBUH) asked, “Are all the dates of Khaibar like this?” He replied, “By Allah, no, O Allah’s Messenger (PBUH)! But we barter one Sa’ (a type of measurement) of this (type of dates) for two Sa’ of dates of ours and two Sa’ of it for three of ours.” Allah’s Messenger (PBUH) said, “Do not do so (as that is a kind of usury) but sell the mixed dates (of inferior quality) for money, and then buy good dates with that money.”*¹⁹⁴

While the above-mentioned function of money (as medium of exchange) was adopted by modern economists, it is not truly crystalised in the current reality in which modern money seems to be treated like commodity or consumption goods by allowing interest on borrowed money.

2.5 Coin minting is the unique role of government or monetary authority

Majority classical Shariah scholars opined that money (coin) shall only be minted and governed by the ruler (in the past was done by” *Dar al-Dharb*” or *“Dar al-Sakk”* i.e., government’s mint). This is, according to Ibn Khaldun, to ensure the fineness of the

¹⁹³ See: The text of the historic judgement on *riba* by the Supreme Court of Pakistan dated 23 December 1999, a section written by Supreme Judge Mufti Taqi Usmani.

¹⁹⁴ Narrated by Al-Bukhari, hadith no: 2302.

عن أبي هريرة أن رسول الله صلى الله عليه وسلم استعمل رجلاً على خيبر، فجاءه بتمر جنيب، فقال رسول الله صلى الله عليه وسلم: «أكل تمر خيبر هكذا؟»، قال: لا والله يا رسول الله إنا لناخذ الصاع من هذا بالصاعين، والصاعين بالثلاثة، فقال رسول الله صلى الله عليه وسلم: «لا تفعل، بع الجمع بالدراهم، ثم ابتع بالدراهم جنيباً».

money containing pure gold or silver so as to avoid the counterfeiting and debasement of money.¹⁹⁵

Al-Bujayrimi further explained that an individual (non-government or non-authorised individual) is prohibited to mint *dinar* and *dirham* even if both monies are pure gold and silver:

*“It is prohibited for a person other than imam (ruler/ government) to struck dinar and dirham even both are pure gold and silver (not mixed with other materials) because such struck is the sole role of imam. (Those, other than imam, who struck dinar and dirham) are considered trespassing the right of imam.”*¹⁹⁶

2.6 The stability in the value of money is a must

In preserving justice and maintaining purchasing power for the public, the value of money must be constant and does not fluctuate like commodities, for money is merely the standard measurement of value of commodities.¹⁹⁷

The constant value of money protects the interest of all contracting parties in a transaction involving future financial obligation (e.g., deferred payment sale, repayment of loan). An increase in the value of money (i.e., deflation) increases the burden on the debtor to settle his or her debt. On the other hand, the devaluation of money harms the creditor. The same goes to other financial contracts such as deferred payment in *ijarah* (lease), *mahr* (dowry) and *zakat*.¹⁹⁸

According to Rafiq Al-Misri, the value of money (which is equivalent to purchasing power) can be maintained if the ratio between (a) money supply and (b) commodities and services is fixed. This implies that any increase in money supply should be proportional to the increase of commodities and services in the economy.¹⁹⁹ This is in line with Choudhury's view that the increasing money supply beyond the level served by actual demand fuels consumer expectations, while excess demand pushes up prices.²⁰⁰

¹⁹⁵ Ibn Khaldun, *Tarikh Ibn Khaldun*, vol. 1 (Beirut: Dar al-Fikr, 1981), 323.

وهي وظيفة ضرورية للملك إذ بها يتميز الخالص من المغشوش بين الناس في النقود عند المعاملات ويتقون في سلامتها الغش بختم السلطان عليها بتلك النقوش المعروفة.

¹⁹⁶ Al-Bujayrimi, *Tuhfatul Habib a'la Syarh al-Khatib*, vol. 2 (Dar al-Fikr, 1995), 335

ويكره لغير الإمام ضرب الدراهم والدنانير ولو خالصة لأنه من شأن الإمام ولأن فيه افتياتا عليه.

¹⁹⁷ Refer: Ibn Qayyim, *I'lam al-Muwaqqi'in*, vol.2 (Dar al-Kutub al-Ilmiyah, 1991), 105:

قال ابن القيم: فإن الدراهم والدنانير أثمان المبيعات، والتمن هو المعيار الذي به يعرف تقويم الأموال، فيجب أن يكون محدودا مضبوطا لا يرتفع ولا ينخفض.

¹⁹⁸ Rafiq al-Misri, *Al-Islam wa al-Nuqud* (King Abd Aziz University Press, 1990), 20.

¹⁹⁹ Rafiq al-Misri, *Al-Islam wa al-Nuqud*, 19:

وينتقق ثبات قيمة النقد بأن يكون له دائما نفس القوة الشرائية، أو يكون للسلع المقابلة له نفس مستوى الأسعار، ويتم هذا إذا كانت النسبة بين كمية النقود المتداولة (بما في ذلك سرعة التداول) وكمية السلع والخدمات ثابتة، فتزداد كمية النقود مع نمو الاقتصاد، وتخفض كميتها مع الانكماش والضمور.

²⁰⁰ Choudhury, Masudul Alam, *Money in Islam: A Study in Islamic Political Economy* (Routledge, 1997), 38.

During the period of past Islamic civilisations, several instances of severe inflation occurred. These are attributed to the debasement of money through mixing gold and silver coins with inferior metals, or shaving/ shedding of some of the gold and silver coins.²⁰¹

Based on the view of Imam Ahmad, Ibn al-`Arabi and Ibn Rushd,²⁰² counterfeiting money – which resulted in the erosion in money value – may be interpreted to be tantamount to corrupting the world due to its negative impact on social justice and general welfare, as alluded in the following Quranic verse:²⁰³

فَأَوْفُوا الْكَيْلَ وَالْمِيزَانَ وَلَا تَبْخَسُوا النَّاسَ أَشْيَاءَهُمْ وَلَا تُفْسِدُوا
فِي الْأَرْضِ بَعْدَ إِصْلَاحِهَا ذَلِكَ خَيْرٌ لَكُمْ إِنْ كُنْتُمْ مُؤْمِنِينَ

“So fulfill the measure and weight and do not deprive people of their due and cause not corruption upon the earth after its reformation. That is better for you, if you should be believers”
(Al-A`raf: 85).

Al-Ghazali further explained that the circulation of one bad dirham is worse than stealing 100 dirhams, as stealing is one sin (it finishes once committed). However, circulating bad money is an innovation (*bid`ah*) affecting many people who subsequently use it.²⁰⁴

Nonetheless, Al-Ghazali also viewed that in cases where adulterated coins are widely used in a particular country, their usage may be allowed due to general necessity (*hajah*). In such circumstances, the metal content is no longer the intended element of the coin, but rather its money-ness/ monetary function or face value.²⁰⁵

The above rules and conception of money had been applied and adopted throughout the past Islamic civilisations since the era of Prophet Muhammad (PBUH), the history of which is deliberated further in the subsequent part 2(c).

Part 2 (c): Historical perspectives: Money and credit systems in past Muslim civilisations

2.7 Money in the Islamic history was commodity-based

Historically, the conceptual Shariah understanding of money is based on the commodity framework. This is perhaps due to the fact that throughout the history of Prophet Muhammad (PBUH) and Islamic civilisations until the period of Ottoman Empire and Malay Archipelago, money was generally commodity-based in various forms including (1)

²⁰¹ See Islahi and Ghazanfar, *Economic Thought of Al-Ghazali*.

²⁰² See Abu Ya`la, *al-Ahkam al-Sultaniyah*, 2<sup>nd</sup> ed. (Beirut: Dar al-Kutub al-`Ilmiyah, 2000) 182, Ibn al-`Arabi, *Ahkam al-Quran*, 3<sup>rd</sup> ed., vol. 3 (Beirut: Dar al-Kutub al-`Ilmiyah) 23-24, Ibn Rushd, *Al-Bayan wa Al-Tahsil*, vol. 6 (Beirut: Dar al-Gharb al-Islami, 1988) 474-475,

²⁰³ See also: Chapra, Umer, *Towards a Just Monetary System* (The Islamic Foundation UK, 1985), 37

²⁰⁴ Al-Ghazali, *Ihya' `Ulum al-Din*, vol. 2, 141.

²⁰⁵ Al-Ghazali, *Ihya' `Ulum al-Din*, vol. 2, 129.

coins struck from precious metals (e.g., gold and silver) or base metals (e.g., copper), (2) metal bullion, (3) textile and (4) food.

During the time of Prophet Muhammad (PBUH), money in use were the gold dinar (from the Byzantine Empire), silver dirham (from the Sasanian Empire) and non-minted gold and silver, in addition to staple foods which were also used as means of payment.²⁰⁶

Dinar and dirham entered Mecca and Medina through trade with the Levant (*Bilad al-Sham*) and Yemen²⁰⁷. Both dinar and dirham's exchange for goods or services was determined according to their weight (the money pass by weight), rather than by their quantity (by tale). The element (value) of *sikkah* (sovereign minting) is also neglected/ignored. This is because dinar and dirham in those days have uneven weight with the existence of fraud dinar dan dirhams. For instance, there were three weight categories for dirhams i.e., 20 *kirat*²⁰⁸, 12 *kirat*, and 10 *kirat*.

Later, the Prophet (PBUH) standardised the weight of 1 dirham to equal 14 *kirat*²⁰⁹ and established that the weight of 10 dirhams was equivalent to the weight of 7 dinars.²¹⁰ The weight of one dirham is equivalent to 2.97 gram²¹¹ while for one dinar is 4.25 gram in today's measurement.²¹²

2.8 The value of gold and silver money as determinant in several Shariah laws

In addition to be medium of exchange, gold and silver money as standardised by the Prophet (PBUH) also serves as a determinant in the implementation of several Shariah laws such as zakat, *jizya* (tribute tax), *kharaj* (land tax on occupied territory), *diyat* (blood money), mahar (dowry), *hadd al-sariqah* (minimum value of theft to be punished in accordance with the Islamic penal ordinances called "*hudud*").²¹³

²⁰⁶ Rafiq al-Misri, *Al-Islam wa al-Nuqud*, 10-11.

²⁰⁷ Ahmad Hasan, *Al-Awraq an-Naqdiyyah fi al-Iqtisad al-Islami* (Dar al-Fikr, 1999), 63.

²⁰⁸ 1 *kirat* = 4 *habbahs* or 8 grains of barley (0.24 gram). Hence, 1 *habbah* = 0.06 gram. (Source: Husaini, Arab Administration, 6th Edition (1970).

²⁰⁹ Ahmad Hasan, *Al-Awraq an-Naqdiyyah*, 65.

²¹⁰ Al-Baladhuri, *Futuh al-Buldan*, 447-49. The authors notice that this is different from Al-Maqrizi's explanation on the weight of dirham (refer: *Rasail al-Maqrizi*, 159):

وكان الدينار يسمى لوزنه دينارا وإنما هو تبر ، ويسمى الدرهم لوزنه درهما، وإنما هو تبر ، وكانت زنة كل عشرة دراهم ستة مثاقيل. والمثقال زنة اثنين وعشرين قيراطا إلا حبة وهو أيضا بزنة اثنين وسبعين حبة شعير، مما تقدم ذكره.

Dr. Ali Al-Qarahdaghi, *Haqibah*, vol.2, 507 said:

وفي عهد معاوية ضرب تلك الدراهم السود الناقصة من ستة دوانق، وضرب منها زياد، وجعل كل عشرة دراهم سبعة مثاقيل.

²¹¹ Umar Natu, Muhammad, *Al-Nuqud al-Islamiyah Syahidun `ala al-Tarikh* (Maktabah al-Malik Fahd al-Wataniyah, 2011), 12.

²¹² Al-Sabhany views that, based on historical and archaeological studies, there are two records of weight of dinar in Shariah i.e., 4.25 gram or 4.45 gram of gold, while the weight of dirham is equivalent to 2.975 gram or 3.115 gram of silver. Therefore, in calculating the *nisab* of zakat, he adheres to lighter weights of 4.25 gram and 2.975 gram, while for determining the limit of hand-cutting punishment (*hudud*) for theft cases, he sticks to heavier weights of 4.45 gram and 3.115 gram of gold and silver respectively, in order to safeguard the *maslahah*. See Al-Sabhany, "Al-Nuqud al-Islamiyah fi `Usur al-Ijtihad," *Journal Al-Idarah wa al-Iqtisad* (1999): 4.

²¹³ See Adam Abdullah, *The Islamic Currency* (Kuala Lumpur: International Council of Islamic Finance Educators, 2016) and al-Misri, *Al-Islam wa al-Nuqud*, 20.

For instance, the minimum threshold for theft to be punished under *hudud* is $\frac{1}{4}$ dinar (1.06g gold) or its equivalent value of other items. In this regard, a person who steals a commodity worth of $\frac{1}{4}$ dinar and above is subject to *hudud* punishment.²¹⁴

2.9 The first reform of Islamic dinar and dirham was in 74 Hijri (late 7th Century AD)

In 74 Hijri during Umayyad period, the Caliph Abdul Malik bin Marwan reformed the Islamic coinage by introducing new design (epigraphy), totally replacing the Byzantine gold coin and Sasanid silver coin.²¹⁵

This initiative contributed significantly to the political and economic stability of the Islamic empire. Furthermore, the introduction of these Islamic dinar and dirham played a crucial role in reducing the circulation of counterfeit currency (mixed dinars), and limiting the exploitation of existing currencies.²¹⁶

It is also narrated that the first person who minted dinar was Prophet Adam (PBUH).²¹⁷ However, the authenticity of this narration cannot be proven.

2.10 Types of money throughout Islamic history

In the subsequent period of Islamic history, particularly during Mamluk dynasty in Egypt (in 784 Hijri/ late 14th century AD) Muslim rulers started to mint other metals (e.g., copper coin) as money, replacing the dinar and dirham. All these types of money can be categorised into two types with different treatments:²¹⁸

- a. *Nuqud Khilqiyyah* which is attributed to pure gold and silver coins (dinar and dirham) – generally traded based on its intrinsic value (weight); and
- b. *Nuqud Istilahiyyah* which covers other types of money including gold mixed other metals – generally traded based on face value.²¹⁹

The above two types of *nuqud* seem to have similarities with the two concepts of money i.e., metallism and nominalism respectively.²²⁰ The former was based on the notion that a coin's value derives from the purchasing power of the metal it contains (hence the focus on weight). The later by contrast, was detached from their metallic content, depending only on their face value.

²¹⁴ This Shariah rule is based on Prophet hadith narrated by Bukhari and Muslim:

عن عائشة رضي الله عنها قالت: قال رسول الله ﷺ: لا تقطع يد سارق إلا في ربع دينار فصاعدا. متفق عليه.

²¹⁵ Al-Baladhuri, *Futuh al-Buldan*, 449

²¹⁶ Ahmad Hasan, *Al-Awraq al-Naqdiyyah*, 67.

²¹⁷ Al-Maqrizi, *Rasail al-Maqrizi*, 157:

ذكر أبو بكر بن أبي شيبة في مصنفه عن كعب أن أول من ضرب الدينار والدرهم آدم عليه السلام وقال: لا تصلح المعيشة إلا بهما.

²¹⁸ Al-Sabhany, “*Al-Nuqud al-Islamiyyah fi ‘Usur al-Ijtihad*”, 2.

²¹⁹ The shortage in gold and silver is the main reason why the Islamic rulers used other metal (e.g., copper coin) as money.

²²⁰ See Oberauer, *Money in Classical Islam*, 429.

2.11 Nominalism in the past Islamic civilisation

While the concept of ‘imaginary money’, ‘ghost money’ or money as an abstract unit of account may not be as widespread or well-known phenomenon in the past Islamic civilisations (as compared to medieval Western Europe), there are some historical examples that may imply nominalism in practice, as follows:²²¹

- a) The ‘dinar of account’ used during the time of the Prophet (PBUH), where 1 dinar is equal to 4.25g, does not exist as physical coins but rather ‘theoretical’ in nature.²²² The Byzantine gold solidus at the time, weigh about 4.45–4.5g. The 4.25g coin was only ‘externalised’ during the reign of caliph Abdul Malik.²²³
- b) Al-Nawawi allows specifying adulterated dirhams as the price in debt contracts, even where the silver content is unknown. According to him, the objective of the transaction is the general circulation of the coins, not the silver content. Hence the mixture of copper in the coin is not detrimental.²²⁴
- c) Al-Maqrizi reported that the second caliph, Umar, reduced the weight of the silver dirham, effecting the increase of the money supply by 40% from the same fixed amount of silver²²⁵. i.e, the monetary value of the silver coin is imposed by the state, rather than its metal content, although the purity of the coin is not reduced.
- d) During Abd Malik’s monetary reform in the late 7th century AD, his gold dinar is considerably lighter in weight than the existing Byzantine gold solidus.²²⁶ Archaeological and hoard findings of coins during this era suggest that the Byzantine gold coins disappeared from circulation, possibly due to Gresham’s law, as the populace hoard or melt the heavier coin and use the lighter coin.²²⁷ This may suggest the usage of the gold coins as a uniform and abstract monetary unit, rather than bullion, measured by weight.

²²¹ These examples are not exhaustive by any means.

²²² This does not mean that the monetary standard does not exist. It existed in the form of weight units (*mithqal*), not in the form of coins themselves. See Al-Baladhuri, *Futuh al-Buldan*, 448.

²²³ See Abdullah, *The Islamic Currency*, 74-76. Some accounts go further and assert that the 4.25g standard did not exist in the Prophetic era at all. See Hishamuddin Mohd Kassim, “Revisiting the Gold and Silver Nisab for Zakat: A Numismatic Study of Prophetic Era Dinar and Dirham Weights and Measures,” *Malaysian Journal of Syariah and Law*, vol. 12, no. 1 (2024): 245–66.

²²⁴ لأن المقصود رواجها ولا يضر اختلاطها بالنحاس. See Oberauer “Money in Classical Islam” and al-Nawawi, *al-Majmu’ Syarh al-Muhazzab*, vol. 6, (Cairo: Matba’ah Al-Tadamun Al-Akhawi, 1929): 11.

²²⁵ See al-Maqrizi, *Shudhur al-‘Uqud fii Zikr al-Nuqud* (al-Hai’ah al-Misriyyah al-‘Ammah li al-Kitab, 2023), and Gene W. Heck, “First Century Islamic Currency: Mastering the Message from the Money,” in *Money, Power and Politics in Early Islamic Syria: A Review of Current Debates*, edited by John Haldon (Surrey, UK: Ashgate Publishing, 2010)

²²⁶ Abd al-Malik’s dinar gold coin weighs 4.25g, compared to the (approx.) 4.5g of the Byzantine gold coin. See Eliyahu Ashtor, *A Social and Economic History of The Near East in The Middle Ages* (Berkeley: University of California Press, 1976), Philip Grierson, “The Monetary Reform of ‘Abd al-Malik: Their Metrological Basis and Their Financial Repercussions,” *Journal of the Economic and Social History of the Orient*, vol. 3, no. 3 (1960): 241–64 and Heck, “First Century Islamic Currency”. Abd Malik also attempted to reform copper coinage, but this reform was not successful.

²²⁷ See Stefan Heidemann, “The Merger of Two Currency Zones in Early Islam,” *The British Institute Of Persian Studies* (1998), Jere Bacharach, “Signs of Sovereignty: The Shahada, Qur’anic Verses and the Coinage of ‘Abd al-Malik,” *Muqarnas Online*, 27(1) (2010): 1–30 and Fanny Bessard, *Caliph and Merchants: Cities and Economies of Power in the Near East (700 – 950)*, Oxford Studies in Byzantium (Oxford: Oxford University Press, 2020).

- e) In the early 15th century AD of Mamluk Egypt, during the famous famine and the influx of copper coins, it became standard practice to measure value not in terms of gold and silver as had previously been practiced, but rather in a money of account known as the *dirham min al-fulus* (a silver dirham's worth of copper coins). With the cessation of the minting of silver, dirhams became so rare that they were available only through auction. But people were accustomed to thinking in terms of dirhams and in effect it came to exist only as an abstract quantity of value used to measure copper coins.²²⁸
- f) A few years later, when silver has been reintroduced to the Egyptian economy, al-Maqrizi noted that people still used copper as the measure of value, as the mere re-introduction of silver coinage into circulation does not change the people's behaviour.²²⁹
- g) Ibn `Abidin reported in early 19th century Syria, the customary practice was to denominate their transaction in the Ottoman silver *qirsh*, but not according to the prevailing exchange rate of 1 silver qirsh to 50 Ottoman silver *misriyyah*, but to the 'imaginary' older rate of 1:40. Secondly, debts denominated in the silver *qirsh* are not necessarily paid in silver *misriyyah*, but may also be paid in other gold or silver coins. As such, the silver *qirsh*, became a mere measure of value, rather than the actual payment.²³⁰

Further deliberation on money throughout Islamic civilisations across different periods is deliberated in the **Appendix 5**.

2.12 Credit practices, instruments and institutions in medieval Islam

Apart from cash, economic activities in the medieval Islamic Near East also widely relied on the credit system. The use of credit money as a means of payment evolved along with the development of trade activities. The market in Baghdad and Alexandria plays a pivotal role in boosting trade and economic activities. Due to the safety of transferring funds/ physical money over distant countries, traders/merchants have used a financial instrument called '*suftajah*' (bill of exchange/ debt transfer mechanism) to facilitate their economic activities.

As early as the time of caliph Mu`awiyah in the late 7th century, a financial system including promissory notes had already developed.²³¹ In later times of the Umayyad period, the *bayt al-mal* played the role of an agricultural and commercial bank. Merchants from different provinces were able to borrow money to buy goods, sell the goods

²²⁸ John L. Melon, "The Merits of Economic History: Re-Reading al-Maqrizi's Ighathah and Shudhur," *Mamluk Studies Review*, vol. 7, no. 2 (2003).

²²⁹ Ibid.

²³⁰ See Ibn `Abidin, *Tanbih al-Nuqud `Ala Masa'il al-Nuqud*, 15th ed. vol. 2 (Majallah `Ilmiyyah Muhkamah, Kuliyyah al-Tarbiyyah li al-Banat, 2021).

²³¹ Nicolas Ray, "The Medieval Islamic System of Credit and Banking: Legal and Historical Considerations," *Arab Law Quarterly* 12 (1997): 43–90.

elsewhere, then repay the debts to the nearest branch of *bayt al-mal*.²³² Alongside the Near East, the *bayt al-mal* system also existed in Muslim Spain.²³³

In early 8th century, licensed merchant bankers (*jahbadh*), operated in the times of the Abbasid caliphs as administrator of deposits, remitter of funds via cheques (*sakk*) and bills of exchange (*suftajah*). In early 10th century, the state established banking institutions (*dawawin al-jahabidhah*) with branches in the main trade cities.

Tax farming practices also existed, where the tax farmers paid the caliph a certain fixed sum in advance. Later, the tax farmers will collect taxes from their respective provinces. Credit instruments such as cheques (*sakk*) and letters of credit/ promissory notes (*suftajah*) were also used for various purposes, such as transferring money, transferring tax payments to the treasury, and tax farming.²³⁴

In some circumstances, promissory notes were even treated as cash by traders²³⁵ and government offices.²³⁶ Credit transactions in trade were also widespread in retail and wholesale form.²³⁷ It is even used as trade capital in partnership arrangements, where trading partners buy goods on credit and sharing their profits afterwards.²³⁸

Some accounts reported that "every town there were banking firms, and in the big towns there were bankers' streets".²³⁹ It was estimated that in 11th century Isfahan alone, there were 200 bankers, while in Basrah, it is said that every trader had his banking account and paid only in cheques on his bank (*khatt-sarraf*) in the bazaar.²⁴⁰ In the time of the Abbasid caliph al-Muqtadir, the bankers also grant loans to the caliphs, viziers and other court officials.²⁴¹ These advances to the state was secured by future government tax revenues, in the form of letters of credit (*suftajah*).²⁴² In a sense, the court bankers (*jahbadh al-hadra*) can be considered early form of national bank or a central bank²⁴³.

²³² Ibid.

²³³ Although it must be noted that this is based on court documents rather than direct evidence. See Ray, *The Medieval Islamic System of Credit and Banking*.

²³⁴ Ashtor, *Economic History of The Near East* and Ray, *The Medieval Islamic System of Credit and Banking*. See also Stephen Quinn and William Roberds, "The Evolution of the Check as a Means of Payment: A Historical Survey," *Federal Reserve Bank of Atlanta Economic Review*, vol. 93, no. 4 (2008).

²³⁵ Ray, *The Medieval Islamic System of Credit and Banking*.

²³⁶ S. D. Goitein, "Bankers Accounts from the Eleventh Century A.D.," *Journal of the Economic and Social History of the Orient*, vol. 9, No. 1/2 (1966): 28–66.

²³⁷ Ibid.

²³⁸ Al-Kasani, *Badai' al-Sanai'*, 1st ed. vol. 6, (1910), 58. See also Abraham L. Udovitch, "Reflections on the Institutions of Credits and Banking in the Medieval Islamic Near East," *Studia Islamica*, No. 41 (1975): 5–21.

²³⁹ Ashtor, *Economic History of The Near East*, and Al-Misri (1980), 24:

"وكان الصرافون والوكلاء يقومون مقام المصارف"

²⁴⁰ Ashtor, *Economic History of The Near East* and Muhammad Nejatullah Siddiqi, *Role of the State in the Economy: An Islamic Perspective (Islamic Economics)* (Leicester: The Islamic Foundation, 2010).

²⁴¹ Walter Fischel, "The Origins of Banking in Medieval Islam: A Contribution to the Economic History of the Jews of Baghdad in the Tenth Century," *Journal of the Royal Asiatic Society*, vol. 65, Issue 2 (1933): 339-352 and Abdelkader Chachi, "Origin and Development of Commercial and Islamic Banking Operations," *Journal of Islamic Economics, King Abdul Aziz University*, vol. 18, no. 2 (2005): 3-25.

²⁴² Chachi, "Origin and Development" and Ray, *The Medieval Islamic System of Credit and Banking*.

²⁴³ Ashtor, *Economic History of The Near East*.

All these credit practices, as recorded in narrations, letters and other documentations, are mixed in terms of interest, as some are charged²⁴⁴ while some are not.²⁴⁵ After the 13th century AD, the bankers' functions were reduced to that of a money exchanger as a result of the decline of the Islamic empire, internal and external factors, as well as historical circumstances.²⁴⁶

2.13 Conclusion remarks

From the whole deliberation in the Part 1 and Part 2, it can be concluded that the concept money throughout the Islamic civilisation since the Prophet (PBUH) is different from modern money. The authors are of the view that the concept of money, as understood in the past (a 'thing' or commodity-based), cannot be equated to modern money which is a credit relation i.e., a promise to pay nominal abstract value. Hence, the need to reassess the basis of existing fatwa on modern money arises.

²⁴⁴ Goitein, "Bankers Accounts" and Ray, *The Medieval Islamic System of Credit and Banking*.

²⁴⁵ Ray, *The Medieval Islamic System of Credit and Banking* and Chachi, *A Social and Economic History of The Near East in The Middle Ages*.

²⁴⁶ Chachi, "Origins and Development".

Part 3: Exploratory Shariah analysis on modern money

This part attempts to explore and assess a few possible *takyif fiqhi* (*fiqh* adaptation) and Shariah views on modern money. The differences between modern money and existing concepts of money in classical Shariah will also be deliberated in further details. This seeks to determine whether the Shariah rules on money as deliberated by classical Shariah scholars can also be applied in the modern money, including CBDC.

Considering the credit nature of modern money, and its function as a means of payment, two (2) possible *takyif fiqhi* i.e., *dayn* (debt) and *naqd `urfi* (money by convention) are identified and will be analysed further. This will be followed by an exploratory analysis on a new approach on modern money from Shariah perspective for consideration.

Part 3 (a): Assessing *takyif fiqhi* of modern money as ‘*dayn*’ (debt)

At the first glance, the *takyif fiqhi* of ‘*dayn*’²⁴⁷ for modern money seems appropriate as it reflects the essence of modern money as a credit relation.²⁴⁸

Dayn is an obligation to be paid, delivered, or performed by the debtor (*al-madin*) to the creditor (*ad-da'in*),²⁴⁹ established either from (1) an exchange contract; (2) consumption (*istihlak*) e.g., utilising and damaging someone's property causing the wrong-doer to pay compensation; or (3) loan (*qard*).²⁵⁰

Authors view that both modern money and *dayn* share the same features, as follow –

- a) Modern money and *dayn* do not have external existence (*amr i'tibari*).²⁵¹ It cannot be pin pointed (*ghair mu'ayyan*) as it is a person's liability which is an obligation

²⁴⁷ *Dayn* – literally means debt/credit – refers to a liability or obligation of a debtor (*al-madin*) to a creditor (*ad-da'in*).

²⁴⁸ There are elements of claims (from holder's perspective) and 'promise to pay' (from issuer's perspective). The claim can happen in various scenarios e.g., claims to government assets like MGII, or paying the tax and etc.

²⁴⁹ The majority (*jumhur*) holds the view that debt can arise with or without muqabil (counterpart of consideration). Debt arising without muqabil is like obligation to pay zakat but yet to be paid by muzakki (zakat payer). School of Hanafi holds the view that debt only arises when there is a muqabil, see: Dubyan, *Al-Muamalaat al-Maliyah Asolatan wa Muasoroh*. 2nd ed. vol. 1(Maktabah al-Malik Fahd al-Wathoniyyah, 2013),150. Al-Mausu'ah al-Fiqhiyah al-Kuwaitiyah, vol. 21, 102 defines *dayn* as:

"الدين لزوم الحق في الذمة" فيشمل المال والحقوق غير المالية كصلاة فائتة وغير ذلك، كما يشمل ما ثبت بسبب قرض أو بيع أو إجارة أو إتلاف أو جنابة أو غير ذلك

"The obligation of a right in the person's liability which includes both financial asset and non-financial rights such as missed prayers and other similar duties. It also encompasses obligations arising from loans, sales, leases, damaging an asset/property, injuries or such other causes."

²⁵⁰ Al-Mausu'ah al-Fiqhiyah al-Kuwaitiyah, vol. 21, 102 define *qard* as:

القرض عقد مخصوص يرد على دفع مال مثلي لآخر ليرد مثله.

"Qard: is a specific contract that involves the lending of fungible asset (such as money or goods of the same type and quality) to another party, with the condition that the borrower will return the same"

²⁵¹ Usamah Bin Hammud, *Bai' ad-Dayn*, vol. 1(Dar al-Maiman, 2012), 73.

الدين أمر اعتباري محله الذمة وليس له وجود خارجي، بخلاف العين فهي مال ذو وجود خارجي ولا يتعلق بالذمة.

"debt is an abstract concept that exists in the debtor's liability (*zimmah*) and has no external existence, unlike tangible (and intangible) assets which are physical and do not relate to liabilities (*zimmah*)."

rather than a 'thing'. This is the opposite of *`ayn*<sup>252</sup> which can be specifically pinpointed (*mu`ayyanan musyakhassan*) like *nuqud istilahiyah* and merchandise/commodity (*`urudh*); and

- b) Modern money and *dayn* can be considered as '*mal hukmi*' (metaphorically as wealth) because it leads its holder to wealth (e.g., upon payment/ settlement).²⁵³

Though the underlying debt (*mahal al-dayn*) of modern money is an abstract value, it may be viewed as a valid *dayn* because it can be quantified (e.g., MYR 10). Furthermore, the creation of modern money itself is exactly the issuance of credit i.e., central bank's and commercial bank's liabilities (CB reserves and bank deposits respectively). This is different from the classical conception of money (*thaman* and *naqd*) which is an asset of the holder, and liability to no one.

However, looking at the whole principles and conditions of *dayn* based on the existing taxonomy of *fiqh* (Islamic jurisprudence), modern money may not be simply equated with *dayn*. Modern money **does not have the core pillar of *dayn*** i.e., the underlying obligation or subject matter of *dayn* (*mahal al-dayn*) that is **specific** – either fungible asset (*mal mithli*) or non-fungible asset (*mal qimi*) that can be defined by description (*ma yudhbatu bi al-wasf*).²⁵⁴

Unlike *dayn*, modern money's underlying obligation is **not specific**. For instance, CB reserves are claims on the central bank's assets of equivalent value, but such assets are not specified. i.e., it can be either foreign reserves, securities, gold, or other asset on the central bank balance sheet.

3.1 Further justification on the differences between modern money and *dayn*

Similar to common (mainstream) conception of credit/debt (as explained in section 1.15), classical Shariah concept on *dayn*²⁵⁵ is implicitly based on the monetary theory of credit, in contrast to the credit theory of money, upon which modern money is built.

Based on credit theory of money, 'the promise to pay' itself is money. Hence, the nature of modern money as credit/debt cannot immediately take the legal ruling of credit (*dayn*) in the classical Shariah sense, as what underlies the claim (in both modern money and *dayn*) is different.

Table below further explains the differences between modern money and classical Shariah concept of *dayn*:

²⁵² Refers to an asset or thing that has an external existence (the opposite of *dayn*).

²⁵³ Usamah Bin Hammud, *Bai' ad-Dayn*, vol. 1, 88.

²⁵⁴ Al-Mausuah al-Feqhiyah al-Kuwaitiyah, vol. 21, 102.

²⁵⁵ This context is specific to transactions involving a third-party credit. A credit sale or selling back a debt to the debtor are less relevant to the discussion of credit money as a general means of payment.

Aspects	Modern money	Dayn
1. Difference between money and credit	No distinction between money and credit, every money-credit is simultaneously money (from holder POV) and credit (from issuer POV)	From classical Shariah perspective, <i>dayn</i> (credit) and money (<i>naqd</i>) are two different things.
2. Where the money-ness is located	The promise to pay is money in itself	<i>Dayn</i> is a promise to pay money or commodities. <i>Dayn</i> is not the money (<i>naqd</i> or <i>thaman</i>) itself. In other words, <i>dayn</i> has a specific underlying subject matter.
3. What underlies the claim	Promise to pay abstract value, i.e, an unspecified but quantified money-credit or financial asset on the issuer's balance sheet.	The creditor has a claim on a specific 'real' or financial asset.

3.2 Avoiding a *takyif fiqhi* of 'dayn' based on *fiqh al-ma'alat* (understanding of implication)

Taking into consideration *fiqh al-ma'alat* (understanding of implication), applying *takyif fiqhi* of 'dayn' to the modern money may potentially have huge adverse impacts that should be carefully examined. As emphasised by Al-Shatibi, the implication of any *ijtihad* is important to be considered²⁵⁶. Among potential implications of *takyif fiqhi* of 'dayn' are as follows:²⁵⁷

- a) Classifying modern money as *dayn* (debt) may cause wealthy individuals refusing to pay zakat, based on justification that zakat on debt is not obligatory unless the debt payment has been received from the debtor. As the debt payment by the money issuer (debtor) has yet to occur, they might claim that the zakat is not due yet.²⁵⁸ If this happens, the right to receive zakat by '*asnaf*' might be neglected.
- b) From another perspective, if zakat is paid using modern money, the zakat payment will not be considered as completed upon payment until the zakat recipient (*asnaf*) uses such money to purchase goods or services. This is similar to the case where zakat is paid in the form of debt certificate.²⁵⁹
- c) Using modern money may trigger prohibited sales in the following circumstances:
 - i. Money exchange e.g., MYR to USD will be considered as sale of debt with debt (*bai' al-kali' bil al-kali'*) prohibited by the Prophet (PBUH);

²⁵⁶ Al-Shatibi, *Al-Muwafaqat*, vol.5 (Dar Ibn Affan, 1997), 177.

²⁵⁷ Taqi Usmani, *Buhus fi Qadhaya Fiqhiyah Mu'asarah*, Special ed. (Dar al-Qalam, 2013), 39

²⁵⁸ While some scholars argued the obligation of a creditor to pay zakat, some others view that the creditor should only pay zakat after receiving the debt payment from the debtor and for the period of the indebtedness.

²⁵⁹ Mufti Taqi Usmani, *Buhus fi Qadhaya Fiqhiyah Mu'asarah*, 142.

- ii. Deferred delivery of purchased goods – this will trigger the deferment of both countervalues (*ta'jil al-badalain*) which also prohibited by Prophet (PBUH); and
- iii. Purchasing gold and silver (*ribawi* items) does not fulfil the condition of spot settlement of countervalues (*taqabudh*), as '*dayn*' is not considered as spot payment in Shariah.
- d) *Mudharabah* contract cannot be executed because the *mudharabah* capital must be in cash form (not in the form of *dayn*).²⁶⁰
- e) *Bai' salam* contract cannot be executed according to those scholars who view *salam* capital must be in the form of cash.²⁶¹ Those who permitted *salam* capital in the form of *dayn* stipulate that the *dayn* in this situation must be on the seller's (*muslam ilaihi*) obligation to pay, whereby the *dayn* is considered settled when the seller delivers the goods (*muslam fihi*) to the buyer.²⁶²
- f) If modern money is *dayn* between creditor (money holder) and debtor (money issuer), the banknote in our hand will be considered as a debt certificate which has no value (i.e., the value lies not with the paper certificate, but with the future payment). The value of debt from shariah perspective is on the financial obligation of the debtor's liability that has yet to be paid. The same goes for the digits amount in our bank account. All of which are not considered as '*mal*' (wealth/ something valuable) from the Shariah perspective if modern money is assumed to be *dayn*.²⁶³ As such, if a person steals modern money, he/she will only be considered as stealing the record of debt. This can lead to a flaw in issuing fatwa, because no one can argue that such modern money is valuable from Shariah perspective.
- g) Ruling on *qard* (loan) may not apply to modern money as it is merely a *dayn*, not an asset that can be lent out to the borrower.

To conclude, considering modern money as *dayn* (debt) will create numerous challenges, leading to extensive harm, injustice, instability and significant hardship. Moreover, it will open the door to widespread *riba*, especially in the era where gold and silver are no longer used as the primary forms of money. Unless there are new approaches or expansion of *dayn* (beyond its existing *fiqh* taxonomy) that can address the above-mentioned adverse implications, the *takyif fiqhi* of *dayn* for modern money may not be appropriate at this juncture.

Part 3 (b): Assessing *takyif fiqhi* of modern money as '*nuqud/thaman istilahiyah*' (money by convention)

While modern money is credit in nature from an economics perspective, it is still functioning as a means of payment in the current reality. Similar to *nuqud khilqiyah* and *nuqud istilahiyah* in the past, the payment (using modern money) made by a contracting party gives effect to the settlement and completion of a particular transaction between a

²⁶⁰ Ibn Qudamah, *Al-Mughni*, 3rd ed. vol.7 (Dar al-'Alam al-Kutub, 1997), 182.

²⁶¹ Al-Kasani, *Badai' al-Sanai'*, vol. 5, 204

²⁶² Ibn Taimiyah, *Majmuk al-Fatawa*, vol.29, 172.

²⁶³ Usamah Bin Hammud, *Bai' ad-Dayn*, vol. 1, 73.

الدين أمر اعتباري محله الذمة وليس له وجود خارجي، بخلاف العين فهي مال ذو وجود خارجي ولا يتعلق بالذمة.

party and its counterpart. This is the defining feature of *nuqud*, contrary to the *dayn*, which may entail that the settlement does not take place.

Table below shows the similarities and differences between (1) modern money; and (2) *nuqud* as deliberated by classical and modern Shariah scholars:

Aspect	Modern Money	<i>Nuqud</i> (commodity-based money)
1) Function	(a) Means of payment; (b) standard of measurement; (c) store of value; and (d) standard of deferred payment	
2) Effect of payment	(e) Any transaction will be completed upon payment settlement using modern money and <i>nuqud</i> (e.g., transfer of money to the seller in consideration of a purchased goods). ²⁶⁴	
3) Form	Can be tangible (CIC) and intangible (CB reserve, bank deposit), but all of them are abstract measure of value.	Can be tangible (e.g., copper) and intangible (e.g., digital coin).
4) Credit relation	Liability on issuer and asset to holder.	No credit element. It is an asset to the holder.
5) Issuers	Central bank and licensed commercial banks	Rulers/ government and private entity authorised by the government.
6) Hierarchy	1. USD and Gold 2. CB Reserve and CIC 3. Bank Deposit	None
7) Main creation mechanism	Endogenous	Exogenous.

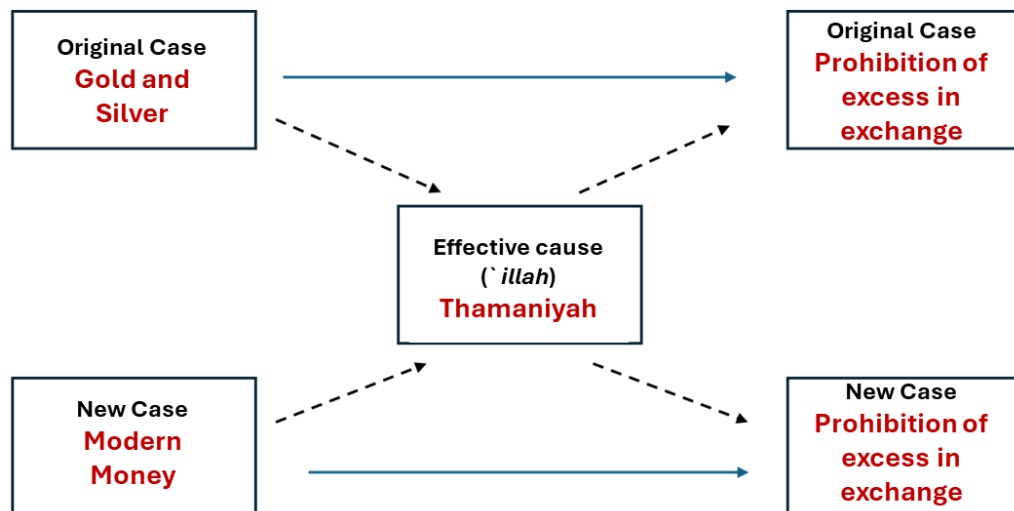
3.3 Establishing money as *nuqud istilahiyah* based on *qiyas 'illah*

The similarities above imply that modern money's *takyif fiqhi* is closer to *nuqud istilahiyah* as it has the *'illah thamaniyyah* (ratio legis of moneyness), hence the rules of *riba al-buyu`* apply, analogous to the gold and silver (as illustrated in **Diagram 15**).²⁶⁵ The existence of *'illah thamaniyyah* in the modern money is affirmed by the fact that it carries the implication of payment settlement in any modern transaction, just as *nuqud* as the means of payment in the classical transactions.

²⁶⁴ Modern money is widely accepted and recognized by the public at large, reflecting a strong level of trust and confidence in its value and functionality. Individuals and businesses are willing to use it as a medium of exchange in their everyday transactions, just like gold and silver money, as well as *nuqud istilahiyah* in the past.

²⁶⁵ Given that scholars hold different opinions regarding the *'illah*, we have adopted the view held by the majority which considers '*thamaniyyah*' as the *'illah* for gold and silver. This is also to align with the fatwa on fiat money held by the OIC International Islamic Fiqh Academy in the 1980s.

Diagram 15: Illustration of *qiyas* (analogy) of modern money to the gold and silver



Source: Authors' illustration, based on Laldin, *Islamic Law: An Introduction*. Modern money shares the same effective cause as gold and silver.

3.4 Establishing money as *nuqud istilahiyah* based on *qiyas shabah*

Even if modern money does not have *'illah thamaniyyah* according to its strict technical '*thaman*' definition, the reality shows that the functions of modern money may be considered similar (*shibh*) to *nuqud*. For instance –

- a) Malaysian Ringgit (MYR) is used as a unit of account (or standard measurement of value) where goods and services offered in the market are quoted in it, to provide its value;
- b) Given its relative stability in value, MYR also serves as a store of value, similar to dinar and dirham; and
- c) When a transaction between contracting parties entails deferred payment, MYR will be used as a standard measurement of value.

As the above roles played by modern money (e.g., MYR) are similar to *nuqud*, it may take the similar effect as *nuqud* in terms of *takyif fiqhi* and applicable Shariah rules on *ribawi* items (i.e., *riba al-buyu'* rules) based on *qiyas shabah* methodology.

3.5 The same *takyif fiqhi* of '*nuqud istilahiyyah*' can be applied to all types of money

Despite the differences in type and issuer,²⁶⁶ all types of money within a country share core similarities and have interdependency, as follows:

- a) They are all denominated in the same denomination (e.g., MYR) and are managed under the administration of the central bank (i.e., under the same monetary policy).
- b) The exchange rate between these types of money is also fixed at 1:1 (at par). Any changes to the value of any type of MYR will impact the value of MYR of all types.
- c) Money creation by commercial banks (e.g., via lending activity) seems not totally independent. There are regulations and guidelines imposed by the central bank²⁶⁷ to indirectly control such creation. In essence, the ability of commercial banks to create money stems from the authority given, and with regulatory framework established, by the central bank. All money in the market in reality is governed under one roof of the central bank.

Based on the above, it may be concluded that the same *takyif fiqhi* of '*nuqud istilahiyyah*' and its applicable Shariah rules can be applied to all types of money, which are considered as the same category (*jins wahid*) from Shariah perspective.

3.6 Concluding remarks on *nuqud istilahiyyah*

While modern money may be classified as *nuqud istilahiyyah* (money by convention) given it functions as the means of payment, similar to the classical money (*naqd/thaman*), this *takyif fiqhi* however is not reflective of modern money in its entirety. Credit nature of modern money is not reflected in this *takyif fiqhi*.

The following part 3(c) will provide an alternative view which attempts to explore a new Shariah view to better reflect and correspond with the dynamic and complexities of modern money in the current reality.

²⁶⁶ It was explained in part 1 that there are three main types of money within a country: (i) CB reserves; (ii) physical notes and coins; and (iii) bank deposits. Types (i) and (ii) are issued by the central bank, and type (iii) is issued by commercial banks.

²⁶⁷ For instance, on liquidity requirement, several regulations have been established namely: Statutory Reserve Requirement (SRR), Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR).

Part 3 (c): Alternative view: Proposed new Shariah approach on modern money

Based on the updated understanding on modern money as affirmed by experts and authorities from various central banks and its comparison with the classical Shariah deliberation on money, the authors view modern money as a peculiar concept of its own kind (*sui generis*²⁶⁸) and has no direct equivalent concept or terminology in classical Shariah nomenclatures and the existing *fiqh* taxonomy. The following table will paint some differences between the essence of modern money and the existing concepts of money (*nuqud*) in classical Shariah.

Aspect	Modern money	<i>Nuqud</i> (commodity-based money)
1. Nature of payment	Four (4) types of payment: assignment, issuance, set-off and novation.	Assignment is the only type of payment.
2. Nature of asset	Financial asset, i.e., it is a liability of an issuer.	‘Real’ asset, not a liability of any party.
3. Nature of transaction	Between two or more parties, usually five (payer, payee, payer’s bank, payee’s bank and the central bank)	Only between two parties.
4. Nature of settlement	Settlement may occur from the payee’s perspective, but liability remains on the issuer (in the case of outside money), or on the payer to redeem for outside money (in the case of inside money)	No liability remains on any issuer once settlement occurs.
5. Nature of operation	- Follows a credit logic of payment and funding – flux (creation) and reflux (destruction). - In the case of issuance, IOUs cannot be ‘owned’ before payment occurs and nothing is ‘delivered’ when payment occurs.	- Follows a commodity logic, no flux or reflux. - Must be owned by the payer and delivered to the payee to settle payments.
6. Nature of acceptance	Money is accepted because the issuer will accept it back as payment to itself.	- It is money by itself – or fiat nature - Accepted because of the state’s decree or society’s acceptance.

²⁶⁸ Kumhof et al. attempts to classify central bank money from a legal perspective, as a *sui generis* hybrid financial instrument, which could be described as a form of ‘social equity’ (i.e., it is neither an asset, liability nor equity). While the paper’s conclusion is still debatable, it illustrates the unique characteristics of modern money which cannot easily be fitted into an existing taxonomy. See Allen Kumhof et al., “Central Bank Money: Liability, Asset, or Equity of the Nation?” *Cornell Law School Research Paper*, (2020): 20–46.

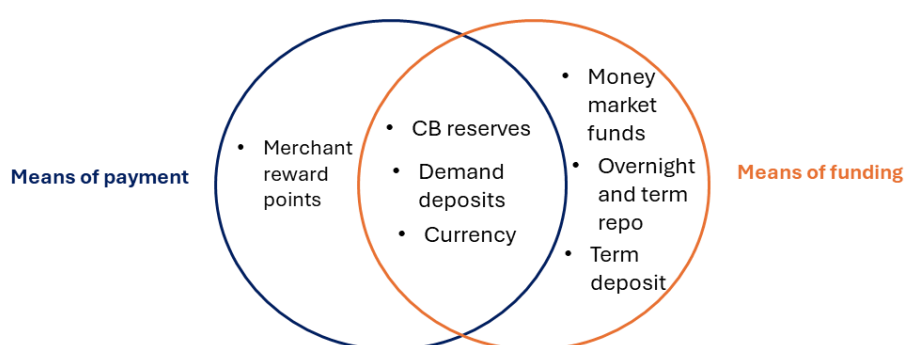
7. Nature of functions	• Separation of means of payment and unit of account. • Money-credits are denominated in an abstract unit of account, the unit of account itself is not money.	• Means of payment and unit of account are not separated. • The money-commodity-countervalue (<i>thaman</i>) is the unit of account.
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Based on the above-mentioned differences, any attempt to fit modern money into the classical *fiqh* taxonomy²⁶⁹ seems reductive and may lead to incoherence. A single *takyif fiqhi* as ‘*nuqud istilahiyyah*’ may explain the payment mechanism, but it cannot explain the credit nature of modern money and its funding mechanism.

On this note, what can be explored, in the authors’ view, is a hybrid *takyif fiqhi* (*bainiyyah* approach),²⁷⁰ given modern money functions as both means of payment and funding (credit), therefore it may take both the rulings of *nuqud istilahiyyah* and *dayn*.

The **Venn Diagram 14** below illustrates modern money (in the overlapping section) within a stylised taxonomy of payment and funding instruments.

Diagram 14: Stylised taxonomy of payment and funding instruments



Source: Authors’ illustration. A Shariah view needs to take into account the nature of both payment and funding.

In this regard, prescribing a definitive and fixed status of modern money as ‘*nuqud istilahiyyah*’ will lead to incoherence in the nature of payment and funding (credit). Moreover, it is also limiting the dynamic logic of money-credit (in a hierarchical monetary structure) to a fixed and mainstream logic of money-commodity (in a flat monetary structure).

²⁶⁹ Referring to the *naqd-thaman-dayn* taxonomy.

²⁷⁰ As used in the Maliki school. See Bin Bayyah, *Maqasid al-Mu`amalat wa Marasid al-Waqi`at* (Al-Muwatta Center, 2018).

As an example of this hybrid approach –

- a) In payments, while the nature of horizontal lending²⁷¹ and vertical ‘lending’²⁷² are different (i.e., money and credit respectively), we may consider both transactions to take the rulings of *nuqud istilahiyyah* – hence the rules of *riba al-buyu`* apply.
- b) In the same spirit, funding mechanisms take the rulings of *dayn* – hence the interest on deposits is prohibited (applying the rules of *riba* on debt).

3.7 Singleness (i.e., same real and nominal values) as the measure of homogeneity (*ittihad al-jins*)

By nature, monies of different issuers are qualitatively distinct and hence are different monies. However, taking into consideration the underlying wisdom of the prohibition of *riba buyu`* in certain commodities (i.e., it is an unlawful means to *riba qard*), we may prescribe any modern monies that have the same real and nominal values (in effecting payments) as homogenous (*ittihad al-jins*). In this regard, the exchange of RM100 banknote and RM100 bank deposit, for example, must observe parity in value (as both are homogenous), otherwise the difference is considered to be *riba fadhl* (a type of *riba al-buyu`*).

This applies to central bank money (including wholesale and retail CBDCs) and private commercial bank monies, and may also be applicable to stablecoins or any other possible innovation in payment instruments in the future. It is important to note that although the unit of account may be different, as long as it possesses the attribute of singleness (same real and nominal values in effecting payments), parity has to be adhered to avoid *riba*, by direct or indirect means.

Conclusion

This paper has proven that, based on current realities, the essence of modern money is credit and promise to pay abstract value, constituted by social and political relations between individuals, banks, central bank and the state. This is agreed by various monetary authorities across the globe.

Deliberation in the Part 1 and Part 2 has shown that the classical Shariah conception of money – and the nature of money throughout the Islamic civilisation since the Prophet (PBUH) – is different from the modern one. The authors opine that the concept of money, as understood in the past (i.e., a ‘thing’ or commodity-based), cannot be equated to the modern money which is credit relation (i.e., a promise to pay nominal abstract value).

This updated understanding on modern money triggers the re-assessment of existing Shariah view on modern money. Some potential *takyif fiqhi* (*fiqh* adaptation) of modern

²⁷¹ E.g., Individual A lends money to individual B via online bank transfer.

²⁷² E.g., Commercial bank provides financing to its customer (via issuance of its new liability).

money are explored and examined – whether it is ‘*dayn*’ (debt); or ‘*nuqud istilahiyah*’ (money by convention) from Shariah perspective due to the reality of modern money based on credit relation and means of payment.

Based on an in-depth assessment, this paper suggests that modern money cannot be simply equated with *dayn*. This is because modern money does not have the core pillar of *dayn* i.e., the underlying debt or subject matter of *dayn* (*mahal al-dayn*) which is specific – either fungible asset (*mal mithli*) or non-fungible asset (*mal qimi*) that can be defined by description. Considering this, modern money may therefore be classified as *nuqud istilahiyah* (money by convention) as it functions as the means of payment, similar to the classical commodity-based money (*naqd/ thaman*). Such *takyif fiqhi*, however, may not reflect modern money in its entirety.

As an alternative view, this paper attempts to explore a hybrid Shariah approach on modern money to comprehensively and accurately address the dynamic and complexities of modern money which are missing under the *takyif fiqhi* of *nuqud istilahiyah*. **A set of the hybrid rulings of *nuqud istilahiyah* and *dayn* (debt) is argued to be more appropriate to be applied in modern money, given its function as both (1) means of payment and (2) funding (credit). In this regard, generally all the rules of *riba* on debt deferment, *riba* on loan, and *riba* in exchange (*riba al-buyu`*) would also be applicable to the modern money.**

Way forward

This paper only attempts to explore some possibilities of the updated *takyif fiqhi* of modern money,²⁷³ and whether it can be classified as *ribawi* items and consequently subjected to the rules of all types of *riba*, including *riba al-buyu`*. This does not yet address the implications of the explored *takyif fiqhi* nor does it affirm whether modern money (and its creation) as well as the current monetary and banking system are fully aligned with Shariah principles.

Anchored on this paper’s findings, future research projects may further analyse and ascertain the most appropriated *takyif fiqhi* of, and applicable Shariah rulings on, modern money, before addressing Shariah views on the overall macroeconomic system which may cover modern money creation mechanism (e.g., its creation process and control/mitigating measures), money creation by commercial banks or other private entities, interest rate based monetary policy, and other related critical areas.

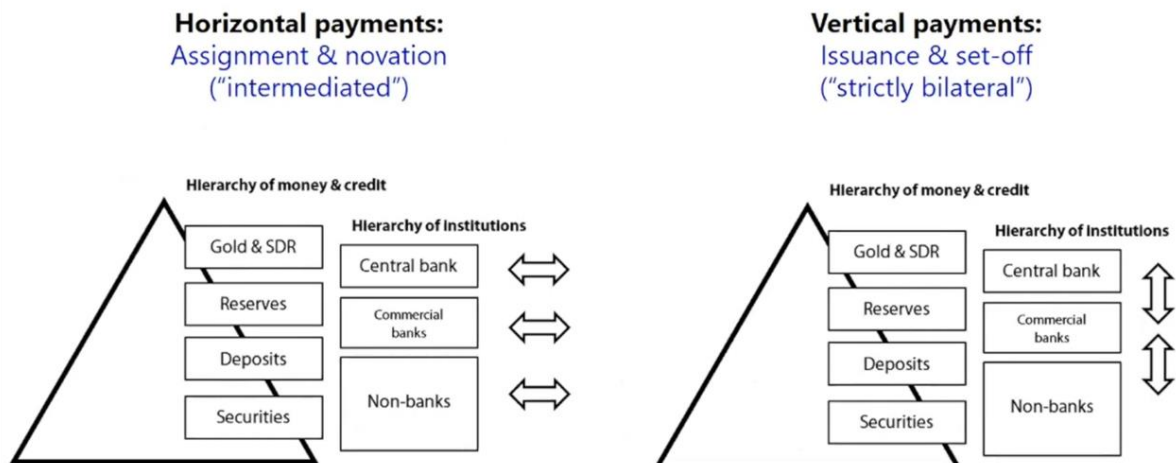
²⁷³ The proposed *takyif fiqhi* as deliberated in this paper does not exclude the possibilities of other *takyif fiqhi*, for example, *iltizam* (liability). *Iltizam* and *dayn* have similarities, but *iltizam* is more general, as it also includes self-imposed or Shariah-imposed obligations to pay, to perform or to not perform certain actions. See Mustafa Ahmad al-Zarqa, *al-Madkhal ila Nazariyyah al-Iltizam al-`Ammah fi Fiqh al-Islami* (Dar al-Qalam, 1999), 83-87.

Appendix 1

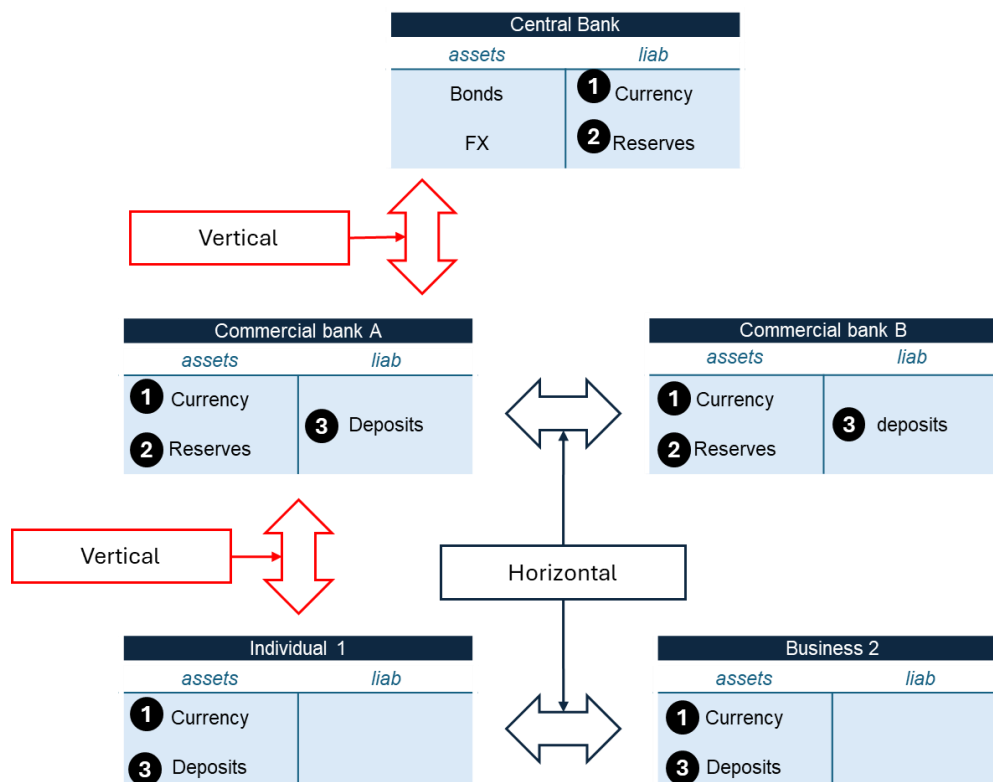
a. Illustration of horizontal and vertical interactions within the hierarchy of money

The two illustrations below show the difference between vertical and horizontal transactions. Vertical transactions are between the issuer of money and its user (e.g., commercial bank and its customer), while horizontal transactions are between users of money (e.g., a commercial bank with another commercial bank).

The payments framework & the hierarchy of money



Source: Clavero, "Four Ways to Discharge a Payment Obligation"



Source: Authors' illustration

b. Four ways to discharge a payment obligation

The illustration below serves as building blocks to understand banking as intermediaries in credit as illustrated in Diagram 8 in the main body of the paper. Each type of payment (assignment, issuance, set-off and novation) is illustrated via balance sheet mechanics of the payer and payee.

	Payer		Payee	
	assets	liab	assets	liab
Money/credit	A	B	C	D
	C : + 100		D : - 100	
A : - 100	Assignment		Set-off	
B : + 100	Issuance		Novation	

Before	Payer		Payee	
	assets	liab	assets	liab
	money			
Assignment	- money		+ money	
After			money	

Before	Payer		Payee	
	assets	liab	assets	liab
	money			IOU
Set off	- money		- IOU	
After				

Before	Payer		Payee	
	assets	liab	assets	liab
Issuance	+ IOU		+ money	
After	+ IOU		money	

Before	Payer		Payee	
	assets	liab	assets	liab
				IOU
Novation	+ IOU		- IOU	
After	IOU			

Source: Clavero, "Four Ways to Discharge a Payment Obligation"

Appendix 2

a. Illustration of different payment methods in various scenarios

The following scenarios will serve as a step-by-step process towards understanding banking as intermediaries in credit, starting from a simple real economic transaction, i.e., buying and selling goods.

Scenario 1: Purchase of goods by cash

	Retailer A		Wholesaler B		
	assets	liab	assets	liab	
<i>before</i>	money		goods		
(1) Asset transfer	+ goods		– goods		Swap of assets
(2) Asset transfer	– money		+ money		
<i>after</i>	goods		money		

Suppose a retailer, A, buys its supplies of goods from the wholesaler, B, in cash. In this simple cash transaction, the goods and money are exchanged. B transfers his assets (goods) to A, while A transfers his asset (money) to B. This type of payment is denoted in yellow, to denote asset assignment (different shades of yellow are used to differentiate the different pairing of balance sheet entries).

The balance sheet of both A & B is unchanged after the transaction – it neither expands nor contracts, either on the asset or the liability side.

Scenario 2: Purchase of goods on credit

	Retailer A		Wholesaler B		
	assets	liab	assets	liab	
<i>before</i>			goods		
(1) Asset transfer	+ goods		- goods		Credit flux (‘creation’)
(2) liability issuance		+ IOU	+ IOU		
<i>after</i>	goods	IOU	IOU		

Now, suppose the retailer buys the supplies on credit, instead of paying in cash. In this scenario, A promises to pay the sale price amount in the future. He receives the goods, while being in debt to B. In return, B has a claim on A. In other words, A pays for the goods by issuing a liability, a claim on himself, which B may demand for settlement or use to set off B’s own obligation to A in the future. A few important points must be made at this juncture:

- 1 A does not need existing assets, savings or money to issue this liability. He may even have some form of liquid assets or money on hand but decides to buy on credit for certain reasons. It is precisely the nature of a credit sale, that spot settlement does not need to be made.
- 2 The purchase of goods is funded by the issuance of liability. A’s liability to B is his source of funds, used to purchase the goods.
- 3 B is funding the purchase by not demanding spot settlement, instead accepting A’s promise to pay in the future.
- 4 B is the creditor, and A is the debtor in this transaction.
- 5 Although B is the creditor and funding the purchase, B is not lending any money to A, at the same time A is not borrowing money from B. At least, not in the normal understanding of lending and borrowing.
- 6 No money change hands or even needed for the credit sale to happen. This is payment by issuance of liabilities, **denoted in green**.

In this scenario, A’s balance sheet expands on both sides, while B’s balance sheet remains unchanged.

Scenario 2(a): Purchase of goods via an intermediating bank

	Retailer A		Bank		Wholesaler B		
	assets	liab	assets	liab	assets	liab	
<i>before</i>							
(1) Swap of IOUs	+ IOU ('deposit')	+ IOU ('loan')	+ IOU ('loan')	+ IOU ('deposit')			
(2) Asset transfer	+ goods				- goods		
	- deposit ('money')				+ deposit ('money')		
<i>after</i>	goods		loan	deposit	deposit		Liability intermediation

Suppose retailer wants to buy supplies on credit, but B does not accept A's IOU. Maybe B does not trust A's capability to pay in the future, or maybe A and B do not deal with each other frequently, hence B does not have the need for A's goods anytime in the future.

In this scenario 2(a), A may go to a bank, and exchange IOUs with the bank. Since B trusts the bank, A can use the bank's IOU as a means of payment. Similar to scenario 2, the same points can be made:

At point (1) – Exchange of IOUs

1. The bank does not need existing money, in the form of currency or reserves (central bank money) to issue the deposit.
2. A's purchase of goods is funded by the issuance of liability, this time to the bank.
3. The bank's asset (IOU from A which is the 'loan') is also funded by the issuance of liability to A.
4. Both A and the bank are funding each other, i.e., both are simultaneously debtors and creditors to each other, as both parties do not demand spot settlement.

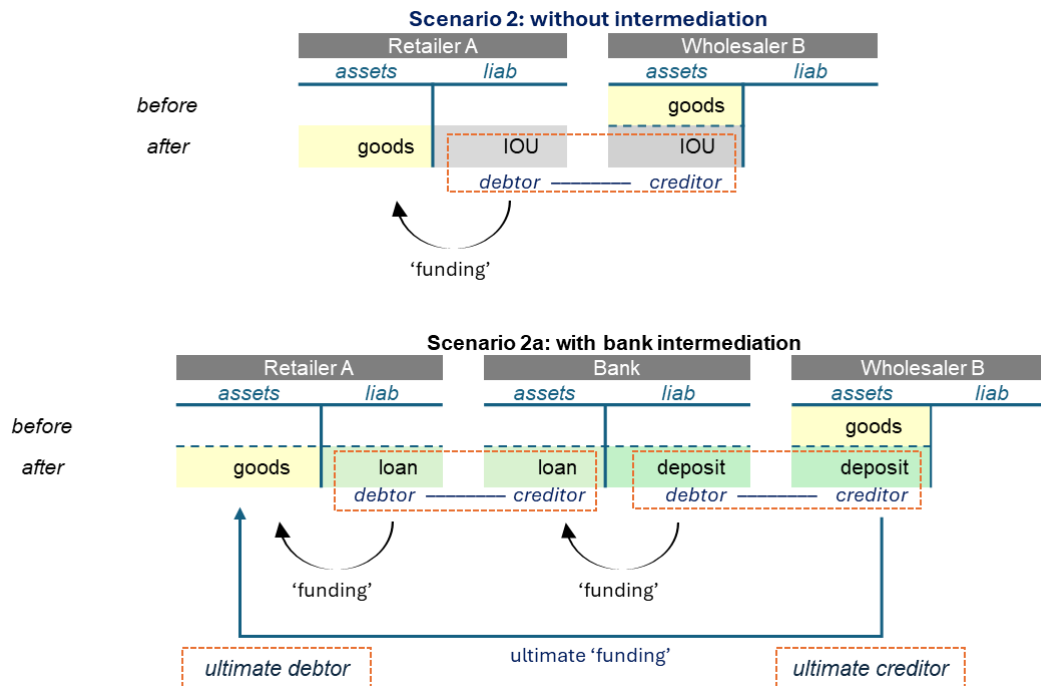
At this stage, both A & B's balance sheet expands on both sides (assets and liabilities).

At point (2), transfer of assets

1. A, as the deposit holder, is initially funding the bank's asset. When A transfers the deposit to B, B becomes the one funding the bank's asset.
 - In other words, A as the deposit holder, is the original creditor the bank. When A transfers the deposit to B, B becomes the creditor to the bank. If B demands settlement from the bank, i.e., by withdrawing currency, B ceases to be the creditor.
2. As long as B decides to hold deposit balances at the bank, B is funding the bank's asset and the bank is funding A's asset. B is the ultimate funder of A's asset (the purchase of B's own goods), similar to the original scenario 2.

Ultimately, the bank function as an intermediary in liabilities, as B receives the bank's liabilities as payment instead of A's.

**Comparison between Scenario 2 (without bank intermediation) vis-à-vis
Scenario 2 (a) (with bank intermediation)**



"To help the layperson appreciate how money is created by being lent by many banks and then cleared between them, we start with the "clearing" that occurs between two neighbors doing a job for each other. Assume I am a web designer. I create a web site for my neighbor, who is a gardener. Normally, I would charge £2000 for this, but it so happens that I need some landscaping done. My neighbor does this, and instead of charging me his fee of £2000, he suggests we cancel or 'clear' the payments.

Due to our proximity, we can settle the two transactions without taking money out of our pockets. If we didn't know each other, it would be harder for us to get the web site and the garden fixed, especially if we had no money. Banks are institutions that facilitate contacts such as ours, helping distant consumers, producers and merchants trade."

Source: Ib. Ravn, "Explaining Money Creation"

Scenario 3: Purchase of goods by setting off liabilities

	Retailer A		Wholesaler B		
	assets	liab	assets	liab	
<i>before</i>	goods	IOU	IOU		
(1) asset transfer	– goods		+ goods		
(2) set-off liabilities		– IOU	– IOU		
<i>after</i>			goods		Credit reflux (‘destruction’)

Suppose A owes B some money from past deal (in scenario 2), and now B wants to purchase some of A’s goods. In this transaction, instead of paying money or issuing his own liabilities/ IOU, B can use A’s IOU to B to purchase A’s goods.

In this transaction, the IOU disappears, i.e, it refluxes and destroyed. This type of payment, by set-off, is **denoted in orange**. What ultimately happened in scenario 2 & 3 is, as can be seen, an exchange of goods for goods, without any (outside) money at all, but the creation (flux) and destruction (reflux) of credit. i.e, ‘inside money’.

In this scenario, A’s balance sheet, which was expanded earlier in scenario 2 (when he purchased goods from B), contracts back to its original position.

Scenario 4: Without central bank intermediation

	Bank A		Bank B	
	assets	liab	assets	liab
before				
(1) Swap of IOUs	+ IOU from B	+ IOU to B	+ IOU from A	+ IOU to A
	Interbank balances	Interbank balances	Interbank balances	Interbank balances
(2) Payment (A to B)	- IOU			- IOU
after		Interbank balances	Interbank balances	

Scenario 4(a): With central bank intermediation

	Bank A		Central Bank		Bank B	
	assets	liab	assets	liab	assets	liab
before						
(1) Swap of IOUs	+ IOU from CB (reserves)	+ IOU to CB	+ IOU from A	+ IOU to A (reserves)		
(2) Payment (A to B)	- reserves				+ reserves	
after		IOU to CB	IOU from A	IOU to B (reserves)	reserves	

Comparison between Scenario 4 (without central bank intermediation) vis-à-vis Scenario 4 (a) (with central bank intermediation)

- Just as banks intermediate in liabilities between individuals and businesses, the central bank also intermediates between commercial banks, using its own balance sheet.
- Just as the balance sheets of individuals expands and contracts (scenario 2 & 3) in accordance with payments between each other, the balance sheets of the bank and central bank also expands and contracts in accordance with payments between individuals and between commercial banks.
- This ability for all parties' balance sheets to expand and contract provides elasticity of payments in the system.
- As such, the banking system, as a payment system, *is a credit system*. The credit element is a core feature, not a bug to be dispensed with.

b. Illustration on exchange of IOUs, lending and repayment reflected in balance sheets by different vertical and horizontal scenarios

Normal lending ('horizontal')				
	Lender		Borrower	
	<i>assets</i>	<i>liab</i>	<i>assets</i>	<i>liab</i>
before	money			
	– money		+ money	
	+ IOU			+ IOU
after	IOU		money	IOU

Example 1a: interbank loan				
	Lending commercial bank		Borrowing commercial bank	
	assets	liab	assets	liab
before	reserves			
	– reserves		+ reserves	
	+ Interbank loan			+ Interbank loan
after	Interbank loan		reserves	Interbank loan

Example 1b: moneylender loan						
Moneylender			Borrower			
	assets	liab	assets	liab		
before	currency/ deposits					
	– currency/ deposits		+	currency/ deposits		
	+	loan			+	loan
after		loan		loan		loan

Bank 'lending' / ('vertical')				
	"Lender"		'Borrower'	
	assets	liab	assets	liab
before		+ IOU	+ IOU	
	+ IOU			+ IOU
after	IOU	IOU	IOU	IOU

Example 2a: Central bank 'lending'					
Central bank			Commercial bank		
	assets		liab		
before					
			+	reserves	
	+	ICF/ RRP			
after					
		ICF/ RRP		reserves	
					+
					ICF/ RRP

ICF: Intraday credit facility
RRP: Reverse repurchase facility

Example 2b: Commercial bank 'lending'				
	Commercial bank		Customer	
	assets	liab	assets	liab
before		+ deposits	+ deposits	
	+ loan			+ loan
after	loan	deposits	deposits	loan

Normal loan repayment ('horizontal')			
Lender		Borrower	
assets	liab	assets	liab
before			
IOU		money	IOU
+ money		- money	
- IOU			- IOU
after			
money			

Example 1c: Interbank loan repayment			
Lending commercial bank		Borrowing commercial bank	
assets	liab	assets	liab
before			
interbank loan		reserves	interbank loan
+ reserves		- reserves	
- interbank loan			- interbank loan
after			
reserves			

Example 1d: Moneylender loan repayment			
Moneylender		Borrower	
assets	liab	assets	liab
before			
loan		currency/ deposits	loan
+ currency/ deposits		- currency/ deposits	
- loan			- loan
after			
currency/ deposits			

Bank repayment ('vertical')			
"Lender"		"Borrower"	
assets	liab	assets	liab
before			
IOU	IOU	IOU	IOU
- IOU	- IOU	- IOU	
after			- IOU

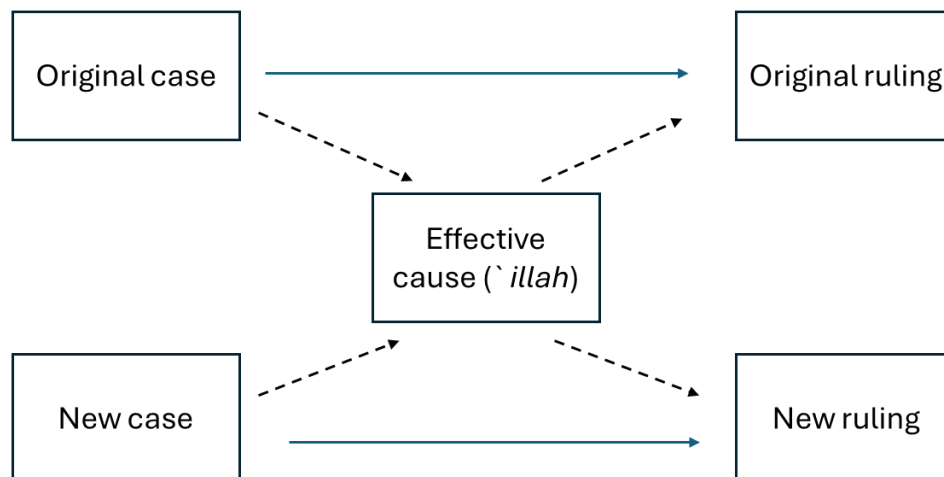
Example 2c: Central bank loan repayment			
Central bank		Commercial bank	
assets	liab	assets	liab
before			
ICF/ RRP	reserves	reserves	ICF/ RRP
- ICF/ RRP	- reserves	- reserves	
after			- ICF/ RRP

ICF: Intraday credit facility
RRP: Reverse repurchase facility

Example 2d: Commercial bank loan repayment			
Commercial bank		Customer	
assets	liab	assets	liab
before			
loan	deposits	deposits	loan
- loan	- deposits	- deposits	
after			- loan

Appendix 3: The methodology of qiyas

Application of juristic analogy (*qiyas*)



Source: Laldin, *Islamic Law: An Introduction*

Qiyas is a set of methods through which Shariah jurists arrive at normative legal Shariah rulings. Although it is usually translated as ‘analogy’ in English, *qiyas* is more of a relative term, whose definition and structure vary from one jurist to another²⁷⁴. However, analogy is the most prominent and common methods subsumed under *qiyas*. It consists of four elements (1) the original case (*al-‘asl*), (2) its legal ruling (*al-hukm*), (3) the new case (*al-far’*), and (4) the common attribute to both the original and new case, which is identified as the effective cause (*‘illah*, or *ratio legis*). Due to the similarity of *‘illah* in both cases, the legal ruling of the original case is transposed to the new case. For example, while there are no explicit revelation prohibiting drugs, there are many that prohibits consuming wine. Drugs and wine are connected by a common attribute (*‘illah*), namely the intoxication of the mind.

²⁷⁴ Wael B. Hallaq, “Non-Analogical Arguments in Sunni Juridical Qiyas.” *Arabica* 36, no. 3 (1989): 286–306.

Appendix 4: Classical Shariah scholars' views on `illah of *riba*

Mazhab	`illah (ratio legis) of <i>riba</i>	
	2 <i>ribawi</i> items (gold and silver)	4 <i>ribawi</i> items (wheat, barley, dates and salt)
Hanafi	1. Homogeneity (<i>ittihad al-jins</i>) and 2. measurable in weight or volume (<i>mauzun/ makil</i>)	
Maliki	widely used as <i>money</i> (<i>ghalabah al-thamniyyah</i>)	Staple & storable food (<i>al-iqtiyat wa al-'iddikhar</i>)
Shafi'i	1. Widely used as <i>thaman</i> (i.e., its 'gold-ness' or 'silver-ness'); and/or 2. Measure of value (<i>jawharah al-athman ghaliban wa qiyam lil mutlafat</i>)	Edibility (<i>al-tu'm</i>)
Hanbali	Measurable in weight or volume	
Ibn Taimiyyah and Ibn al-Qayyim	'Absolute' <i>money</i> (<i>mutlaq al-thamaniyyah</i>)	Edibility ²⁷⁵

Ratiocination (finding the `illah or *ratio legis*) in *riba al-buyu`* (riba in exchange) is one of the most complex issues among many classical Shariah scholars, leading some to describe it as the 'concealed' riba (*riba khafiy*). This is evidenced by the diverging opinions on many areas, including: (1) whether *riba al-buyu`* is even possible to be rationalised, (2) what type of *qiyas* is applicable, and (3) whether the `illah of *riba al-buyu`* is single or multiple. This can be attributed to the subtleness of jurisprudential sources (revealed/ divine and logical reasoning) and the fuzziness surrounding the `illahs and their underlying wisdoms (*hikmah*).²⁷⁶

²⁷⁵ This is derived from other prophetic traditions, as well as its logical suitability (*munasabah*) to be the *ratio legis*, as food is essential to the human life and hence needs to be safeguarded by certain restrictions. See Al-Hudaif, *Al-'Ilal al-Ribawiyyah*. In addition, according to al-Ghazali, food is created merely to be eaten and should not be traded with other food of the same category to avoid hoarding and depriving others who are in need of food.

²⁷⁶ Al-Hudaif, *Al-'Ilal al-Ribawiyyah*.

Appendix 5: Money throughout Islamic civilisations

1) Prophet and His companions Era

Ibn Khaldun said:²⁷⁷

"It should be known that since the beginning of Islam and the time of the Prophet's companion and the men of the second generation, the dirham by general consensus (ijma') is where 10 dirhams are equal to 7 mithqals of gold, and an ounce of gold is 40 dirhams. Thus, in Shariah, dirham is 7/10 of a dinar (in weight). A gold mithqal weighs 72 average-sized grains of wheat. Consequently, the dirham, which is 7/10 of a mithqal, has a weight of 50 2/5 grains. All these values are accepted by ijma' (consensus). The pre-Islamic dirham was of several kinds. The best quality was the Tabari, a dirham of four danaqs, and the Baghli, a dirham of eight danaqs. For the legal dirham, they took the mean, that is, six danaqs. The zakat on 100 Baghli dirhams and 100 Tabari dirhams was fixed at five such "mean" dirhams."

In terms of exchange rate, 1 dinar was equivalent to 10 dirhams, which derived from hadith on the *nisab* (threshold) of zakat on gold and silver.

The determination of the dinar and dirham weight by the Prophet is important as it relates to several Shariah rulings e.g., *nisab zakat*, doctrinal provision of theft (*had al-sariqah*), diyat rates (wergild/blood money for homicide²⁷⁸), fines (*urush*) of crimes and others²⁷⁹.

Another type of currency at that time was *fulus* (derived from "follis", the name of Byzantine bronze coin) struck from base metal, typically copper which served as supplementary currency and used for petty transactions²⁸⁰. It is usually exchanged by tale (i.e., by counting/ *ma'dud*) at a face value.²⁸¹ Later, the role of *fulus* evolved over time, shifting toward mainstream currency contributing different opinions by scholars on its *ribawi* status.

In 18 Hijri (639 AD), the Caliph Umar Ibn al-Khattab introduced the first Islamic dirham modelled on the Sassanian drachma, with the addition of monotheistic inscriptions.²⁸² The weight of the dirham was also standardised according to the Prophet's decree/ standard.²⁸³

Under the rule of Caliph Abdullah bin al-Zubair in Mecca, he struck the dirham in circular shape for the first time.²⁸⁴

²⁷⁷ Ibn Khaldun, 296.

²⁷⁸ The blood money for homicide of a free Muslim man, for instance, is fixed at 100 camels, or 1000 dinars, or 12.000 dirhams, alternatively (10.000 dirhams, according to Hanafi doctrine). See: Oberauer, *Money in Classical Islam*, 430.

²⁷⁹ Al-Sabhany, "Al-Nuqud al-Islamiyah fi 'Usur al-Ijtihad", 3; and Rafiq al-Misri, *Al-Islam wa al-Nuqud*, 93.

²⁸⁰ Al-Qarahdaghi, *Haqibah*, vol. 2, 508.

²⁸¹ Oberauer, "Money in Classical Islam", 429.

²⁸² Umar Natsu, *Al-Nuqud al-Islamiyah*, 14.

²⁸³ The scale set by Prophet Muhammad was based on the measurement and was later implemented by Saidina Umar in minting form. See: Ahmad Hasan, *Al-Awraq an-Naqdiyyah*, 65.

²⁸⁴ Al-Qarahdaghi, *Haqibah*, vol.2, 508.

2) Money in Umayyad Caliphate²⁸⁵

The minting of dirhams (struck in Sasanian design) continued during the Umayyad period, with the addition of monotheistic inscriptions, until the reign of Caliph Abdul Malik ibn Marwan. In the year 76 Hijri, he initiated the issuance of Islamic empire's dinar and dirham which were different from the Byzantine gold coin (solidus) and Sasanian silver coin (drachma).²⁸⁶

This initiative contributed significantly to the political and economic stability of the Islamic empire. Furthermore, the introduction of these Islamic dinar and dirham played a crucial role in reducing the circulation of counterfeit currency (mixed dinars), and limiting the exploitation of existing currencies.²⁸⁷

These efforts were later continued by Caliph Yazid bin Abdul Malik²⁸⁸ and Hisham bin Abdul Malik²⁸⁹. As a result, the Umayyad dinar and dirham became recognised for their authenticity, quality and precise weight.²⁹⁰

3) Money in Abbasid Caliphate²⁹¹

Caliph Abu al-Abbas Abdullah as-Saffah issued his first dinar in 132 Hijrah, making no changes to the Umayyad dinar except for the inscriptions engraved on it.²⁹²

As for the dirham, its weight was reduced to one or two grains of wheat making it lighter. This practice was continued by subsequent rulers, with the weight of dirham being gradually reduced over time. By the reign of Caliph Musa al-Hadi, the dirham has been reduced by approximately one *qirat* which is approximate to 0.21 grams. A similar trend occurred with the dinar, where its weight was also reduced but traded at face value.²⁹³

The debasement of dinars and dirhams was driven by several factors, including increased government expenditure, the need for additional financial resources, declining government revenues, and a shortage of dinars and dirhams in the market.

The debasement resulted in rising prices due to inflation, alongside harm to individual financial rights. In addition to reducing the weight of the currency, debasement was also achieved by mixing gold or silver with other metals (falsification).

Despite the widespread use of debased (*maghshush*) dinar and dirham, which led to negative consequences and economic harm, and were condemned by scholars, fatwas were not issued to prohibit or invalidate its use due to protecting individual rights within the economy²⁹⁴.

The debasement of dinars and dirhams was not universal across all ruling governments. Some governments regulated the minting of dinars and dirhams to maintain its value and quality. For

²⁸⁵ The year 41 hijri to 132 hijri / 611-749 AD.

²⁸⁶ Ahmad Hasan, *Al-Awraq Al-Naqdiyyah*, 67.

²⁸⁷ Ibid, 67.

²⁸⁸ Ibn Khaldun, *The Muqaddimah*, 337.

²⁸⁹ Hisham once made a spot check in the market and found that the dinar scale had decreased by 1 habbah (which is equivalent to 1/60 of a dinar), so he punished those involved. See: Ahmad Hasan, , *Al-Awraq an-Naqdiyyah*, 67.

²⁹⁰ Ibid, 67.

²⁹¹ The year 132 hijri to 656 hijri / 750-1258 AD.

²⁹² The words: *Allahu Ahad, Allah as-Somad lam yalid wa lam yulad wa lam yakun lahu kufuwan ahad* was replaced by: *Muhammad Rasulullah* . See: Umar Natu, *Al-Nuqud al-Islamiyah*, 35.

²⁹³ Al-Maqrizi, *Rasail al-Maqrizi*, 166.

²⁹⁴ Ahmad Hasan, *Al-Awraq an-Naqdiyyah*, 69

example, during the reign of Ahmad bin Tolun, governor of Egypt under Caliph Abbasi al-Mu'tadhid, a dinar known as "al-Ahmadiyah" was minted, with strict quality controls that ensured it matched its original weight.²⁹⁵

4) Money during the period of Fatimid Caliphate, Salahuddin Al-Ayubi and Mamluk

This contrasts with the situation during the **Fatimid Caliphate** under Caliph al-Mansur, when, in 399 Hijrah, the exchange rate of dirham fell drastically, reaching a point where 1 dinar was equivalent to 34 dirhams. This event triggered the economic crisis due to price instability which leads to disruption in the daily lives of the people. To address the situation, the government withdrew the dirham from circulation and replaced it with a new limited-quantity dirham.²⁹⁶

During the reign of **Salahuddin al-Ayubi**, the shortage of gold, primarily due to wartime conditions led to an insufficient supply for minting dinars. As a result, the dirham which was minted by a mixture of copper, became a primary currency. The practice continued throughout the Ayyubid dynasty.

In the era of **Mamluk** dynasty in Egypt, under Al-Zahir Barquq²⁹⁷, the government minted an excessive amount of *fulus*, which ultimately replaced the dirham as the primary currency. This shift occurred due to several factors, including the import of silver from Egypt by European traders and the export of copper to Mamluk Egypt, while silver was domestically used for manufacturing tools and equipment. As a result, *fulus* was no longer a subsidiary currency but became the main medium of exchange in trade and the broader economy. *Fulus* was used in every transaction, whether goods or services, and was also considered a form of store of wealth.²⁹⁸

The widespread circulation of *fulus* in Egypt led to severe economic crisis, as inflation skyrocketed and commodity prices soared. This event was documented by al-Maqrizi in his book "*Ighathah al-Ummah bi Kashf al-Ghumma*". Al-Maqrizi attributed the economic turmoil to the use of copper as currency instead of gold and silver²⁹⁹, arguing that had dinars and dirhams been the primary currencies, the crisis could have been averted.

During the reign of Sultan Mu'ayyad, *fulus* was used for purchasing low-value goods, while the main currency was the dirham, known as the "Mu'ayyadi Dirham". This was because Dar al-Sakk (the mint) had a stable/consistent supply of silver from weapon traders who sourced it from silver mines in Siberia, Bosnia, and other regions.³⁰⁰

Money in the Ottoman empire

During the Ottoman period, the official monetary system from 955 Hijrah (1534M) was based on a gold and silver currency standard, with an exchange ratio of 1 dinar equals to 15 dirham.

However in 1839, the Ottoman government introduced a new currency in the form of banknotes that were intended to represent a gold balance/reserve. Despite this, the value of the new currency rapidly depreciated resulting in a loss of public trust.

By the outbreak of World War I in 1914, the Ottoman empire was compelled to adopt paper currency and abandon the use of gold and silver. This shift in monetary policy extended across the Arab regions under Ottoman rule, lasting until the fall of the empire in 1924.

²⁹⁵ Al-Maqrizi, *Shudhur al-'Uqud*, 119-21.

²⁹⁶ Ibid, 122-23, Rafiq al-Misri, *Al-Islam wa al-Nuqud*, 22.

²⁹⁷ In the year 783 Hijri. Refer: Khalid al-Sayiqh, *Al-Nuqud al-Islamiyah*, (Al-Majma' al-Thaqofi, 2002),77.

²⁹⁸ Al-Maqrizi, *Shudhur al-'Uqud*, 133.

²⁹⁹ Ahmad Hasan, *Al-Awraq an-Naqdiyyah*, 71-72.

³⁰⁰ Ibid, 73-74.

Money in the 1st-15th Century AD of Malay Archipelago

The gold money was used as money throughout the Malay Archipelago since the first few centuries AD. The first Islamic coinage was issued by Sultan Muhammad, the ruler of Samudra-Pase in the northern Sumatra in 1320s which was struck to a standard in common use throughout the Malay archipelago, the 0.60 gram *kupang*.³⁰¹ It took almost 100 years for such *kupang* coin to be accepted as an international trading currency throughout the archipelago³⁰² until it lasted after the fall of Pase to the Portuguese in 1521.³⁰³ In addition to the coinage, lengths of cloth and other goods (such as human skulls, copper, bead and cowrie shells) were also used as media of exchange, measures of value, and means of payment in certain parts of the Malay peninsula.³⁰⁴

Alongside the above, the large scale of commercial trade between Malay peninsula and China in the 13th-14th century was carried on through barter.³⁰⁵

³⁰¹ Wicks, Robert S. *Money, Markets, and Trade*, 241.

³⁰² Ibid, 242.

³⁰³ Ibid, 237.

³⁰⁴ Ibid, 241. See also The Money Museum and Art Centre, *Malaysian Numismatic Heritage* (BNM, 2005), 17-47.

³⁰⁵ Wicks, Robert S. *Money, Markets, and Trade*, 238.

Glossary

No.	Terminologies	Definition
1.	<i>Fatwa</i>	A Shariah ruling issued by an authority.
2.	<i>Takyif fiqhi</i>	Finding the most similar concept from the existing concepts in Islamic jurisprudence.
3.	<i>'Illah</i>	Ratio legis, or effective reason of a particular Shariah ruling.
4.	<i>Dayn</i>	Debt.
5.	<i>Nuqud istilahiyyah</i>	Money accepted by social convention.
6.	<i>Qiyas</i>	Juristic analogy, a process where a new case is given the ruling of an existing case due to some similarity.
7.	<i>Thamaniyyah</i>	Money-ness
8.	Modern money	Money used in the current financial system. E.g., currency, bank deposits, central bank reserves.
9.	Credit/debt	Two opposite poles of the same relation between a creditor and debtor. Seen as credit from the creditor's perspective and debt from the debtor's.
10.	IOU (I owe you)	A promise to pay or repay at a later date.
11.	Currency-in-circulation (CIC)	Notes and coins issued by BNM less the amount held by banking institutions.
12.	Bank deposits/ commercial bank money	IOUs/ debts/ liabilities issued by a commercial bank.
13.	Central bank reserves (CB reserves)	IOUs/ debts/ liabilities issued by the central bank to commercial banks.
14.	Central bank money	IOUs from the central bank, consists of currency and reserves.
16.	Inside money (endogenous money)	Money issued from within an economy or payment area, i.e., by an intermediary as its liability. E.g. bank deposits are inside money within a domestic economy.
17.	Outside money (exogenous money)	Money issued from outside, the i.e., it is no one's liability within an economy or payment area. E.g. foreign currencies are outside money with respect to a domestic economy.

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