

Digital Currency: Prospects And Challenges

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Abstract

The barter system is a long-established method of trading goods and services. Despite Amsterdam's rise to become Europe's largest and wealthiest city, the Amsterdamsche Wisselbank (Amsterdam Bank) pioneered the banking idea in 1609. Online banking, often known as net banking or online banking, is a payment system that allows bank or financial institution clients to make financial and non-financial transactions through the internet. A wallet, often known as a mobile wallet or a wallet, is a gadget that allows you to save money on your phone in digital form. Digital money exists only in digital form and has no physical properties. Computers or electronic wallets linked to the Internet or specific networks are used to perform transactions. A Central Bank Digital Currency (CBDC) is an electronic banking system that may be used to make payments by both individuals and companies. The Reserve Bank of India has the option of launching its digital currency. Because the majority of Indians do not have bank accounts, cash must be constantly circulated. According to the author, CBDCs will require further clarification in the coming days, and much will depend on how the notion originated in India. CBDCs should not be structured in such a way that they obstruct the RBI's capacity to carry out its current responsibilities.

Keywords: Barter system, Currency, Digital Currency, CBDC

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1. INTRODUCTION

1.1 Concept of Bartering

Bartering has a long and illustrious history that dates back to 6000 BC. Mesopotamian tribes invented bartering, which the Phoenicians embraced. Goods were exchanged for food, tea, swords, and spices. Salt was another product that was regularly traded. During the Middle Ages, Europeans went all over the world, swapping crafts and furs for silks and perfumes. Colonial Americans exchanged musket balls, deer hides, and wheat (Mint, 16 Dec. 2014). A barter system is an old-fashioned way of exchanging products and services. This method has been used for millennia, long before money was invented. Bartering used to be restricted to persons who lived in the same geographical area, but it is now a global phenomenon. The opposite side might decide on the value of bartering commodities. You may buy things by swapping something you already have but don't want or need. Today, much of this trade is done through internet auctions and swap marketplaces. Bartering revived during the Great Depression of the 1930s due to a lack of cash. It was carried out in groups or by individuals acting as bankers. If something is sold, the owner's account is credited and the buyer's account is debited.

1.2 Merit and Demerit of Bartering

Without spending any money, two parties can receive what they desire or need from one other through bartering. Determining how trustworthy the person he is negotiating with is a complexity of bartering. Because excellent bartering needs expertise and experience, it may be a good idea to limit deals to family and friends at first.

1.3 Concept of Money

The term "money" can apply to a wide range of things. On the one hand, someone who claims they have a lot of money usually means they are wealthy. On the other hand, for economists, money has a very specific meaning. According to the authors, money is defined as "something that is commonly accepted in return for goods and services or in the repayment of debts," according to the authors. Mishkin (Mishkin, 1992). Money, whether it is made of gold, silver, or other metals; paper; beads; or diamonds, performs three functions in every economy. It's a monetary unit, a means of exchange, and a store of value (Mankiw, 1999 & Michael McLeay, Amar Radia, and Ryland Thomas, 2014).

1.4 Classification of Money

The following are the different types of money that circulate in an economy:

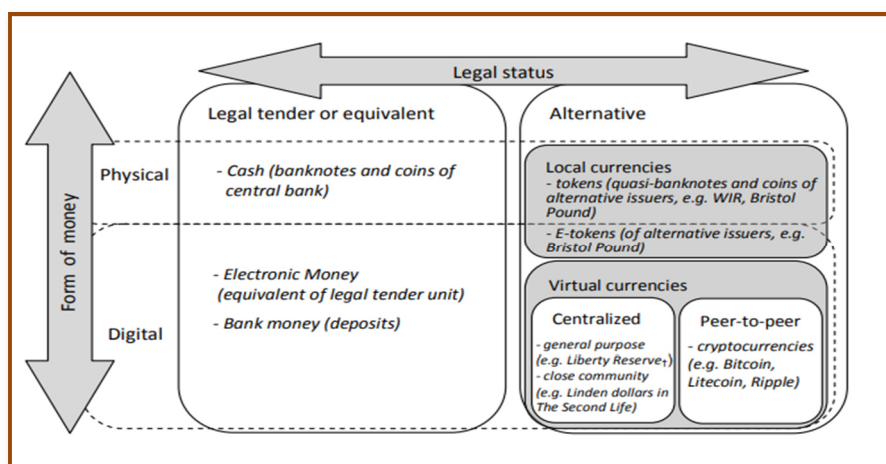


Figure 1. Classification of Money; Source: Geoffrey Lightfoot (2015)

- 1.4.1 Money with a lot of oomph
It is a sort of money whose value as money is the same as its value as a commodity, such as gold coins.
- 1.4.2 Token Money/Credit Money/Paper Money
The value of money is far higher than the value of a commodity. – Printed Money
- 1.4.3 Representative full-bodied money
It's a type of token money, but it's backed by an equivalent amount of bullion from the issuing authorities (gold and silver in bulk).
- 1.4.4 Legal tender money is issued by the central bank (Reserve Bank of India) and is in the form of cash, banknotes, and coins.
- 1.4.5 Local currencies include quasi-banknotes, WIR¹, and other forms of paper money.
- 1.4.6 Virtual currencies, such as Bitcoin, Litecoin, and Ripple, are both centralized and peer-to-peer digital currencies.

1.5 Concept of Currency

For more than 3,000 years, some type of currency has been in use. Money, often in the form of coins, proved to be critical in allowing cross-continental commerce. Currency is a unit of account that may be used to purchase and sell goods and services. In a nutshell, it's paper or metal money that's commonly issued by a government and widely recognized as a form of payment at face value. Currency has long since supplanted bartering as the principal way of exchanging goods and services in the contemporary world (Jake Frankenfield, 2020). Currency is a widely used method of payment that is usually issued by a government and distributed within its borders. In respect to other currencies, the value of every currency varies continually. The purpose of the currency exchange market is to benefit from these movements. Many nations accept the US dollar as a form of payment, while others have their currencies pegged to the US dollar.

1.6 Concept of Bank Money

The growth of trade and commerce necessitated the creation of convenient exchangeable forms of money. The Amsterdamsche Wisselbank (the Bank of Amsterdam) created the notion of bank money in 1609, amid Amsterdam's rise to prominence as Europe's biggest and wealthiest city. It functioned as an exchange bank, allowing people to deposit money or bullion and retrieve the money or bullion's value (George A. Selgin 2020). The initial decree that formed the bank also stipulated that any invoices of 600 guildens or more had to be paid through the bank—that is, by transferring deposits or credits to the bank.

1.7 Concept of Online/Internet Banking

Internet banking, sometimes referred to as net banking or online banking, is a payment system that allows the bank or financial institution clients to conduct financial and non-financial transactions through the internet. Customers can use this service to do almost every banking operation that was previously only available at a local branch, such as cash transfers, deposits, and online bill payments. An active bank account holder or who is a member of a financial institution who has registered for online banking at a bank is entitled to use it. A client who has signed up for online banking no longer has to go to the bank every time he or she needs financial services.

¹ The WIR Bank, formerly the Swiss Economic Circle (German: Wirtschaftsring-Genossenschaft), or WIR, is an independent complementary currency system

1.8 Concept of Mobile Wallet

A mobile wallet is also known as m-wallets, digital wallets, and e-wallets. It's a mobile wallet that works like a traditional wallet. A mobile wallet is a payment service that enables customers to send and receive money using their smartphones. It's a type of e-commerce model designed specifically for mobile devices to deliver ease of doing banking transactions and access to banking information. A mobile wallet, also sometimes referred to as a mobile money wallet or a mobile money transfer wallet, is a device that allows you to save money in digital form on a mobile phone.

1.9 Digital Payments in India

Table 1 shows the volume and value growth of digital payments. The data was obtained from the table below, and the trend percentage was computed using 2015-16 as the base year.

Over five years, from 2015-16 to 2019-20, the volume of digital payments increased by 578.59 percent. Over five years, from 2015-16 to 2019-20, the value of digital payments increased by 176.35 percent. However, the average value (Rs in Cr) is decreasing. The average value in 2015-16 was 1550.48 Cr, which fell to 1156.72 Cr in 2016-17, 938.90 Cr in 2017-18, 699.21 Cr in 2018-19 472.57 Cr in 2019-20. This is evidenced by the mean trend percentage.

Year	Volume in lakhs	Volume Trend Percentage	Value in Rs Crore	Value Trend Percentage	Mean value per payment Rs in Cr	Mean Trend Percentage
2015-16	59361	100	92038330	100	1550.48	100
2016-17	96912	163.26	112099726	121.80	1156.72	74.60
2017-18	145901	245.79	136986734	148.84	938.90	60.56
2018-19	234340	394.77	163852286	178.03	699.21	45.10
2019-20	343455	578.59	162305934	176.35	472.57	30.48

Source: RBI Handbook of Indian Statistics (2020)

1.10 Banks on UPI – Volume - Value

Table 2 shows the number of banks using the Unified Payments Interface (UPI), the volume of transactions in millions, and the value (in Rs Cr) during the most recent 13 months, January 2021 to January 2022.

Month	No. of Banks live on UPI		Volume		Value (in Rs Crore)	
	No. of Banks live on UPI	No. of Banks Growth Percentage	Volume (in Mn)	Volume in (Mn) Growth Percentage	Value (In Rs Crore)	Growth Percentage
Jan-21	207	100	2302.73	-	4,31,181.89	-
Feb-21	213	2.90	2,292.90	-0.43	4,25,062.76	-1.42
Mar-21	216	4.35	2,731.68	18.63	5,04,886.44	17.09
Apr-21	220	6.28	2,641.06	14.69	4,93,663.68	14.49
May-21	224	8.21	2,539.57	10.29	4,90,638.65	13.79
Jun-21	229	10.63	2,807.51	21.92	5,47,373.17	26.95
Jul-21	235	13.53	3,247.82	41.04	6,06,281.14	40.61
Aug-21	249	20.29	3,555.55	54.41	6,39,116.95	48.22
Sep-21	259	25.12	3,654.30	58.69	6,54,351.81	51.76
Oct-21	261	26.09	4,218.65	83.20	7,71,444.98	78.91
Nov-21	274	32.37	4,186.48	81.81	7,68,436.11	78.22
Dec-21	282	36.23	4,566.30	98.30	8,26,848.22	91.76
Jan-22	297	43.48	4,617.15	100.51	8,31,993.11	92.96

<https://www.npci.org.in/what-we-do/upi/product-statistics>

Each of the variables was estimated independently, including the number of banks that adopt UPI, the volume of transactions in millions, and the value of transactions (in Rs crore). From 207 in January 2021 to 297 in January 2022, the number of banks using UPI has increased by 43.98 percent. The total number of UPI transactions has doubled (100.51% Growth). UPI transaction value has increased by 92.96 percent.

1.11 Reserve Bank-Digital Payments Index (RBI-DPI)

The RBI-DPI contains five broad parameters that allow for the depth measurement and input of digital payments into the country at different times. These are: (i) Payment (25% weight), (ii) Payment Infrastructure-Needs (10%), (iii) Payment Infrastructure-Supply Chain (15%), (iv) Performance Payment (45%) and (v) Consumer Centre (5%). Each parameter has sub-parameters that contain various measurable indicators. Larger, smaller parameters under each parameter as described below (RBI, 2021):

- 1.11.1 Payment services include - internet connection, mobile connection, Aadhar cards, bank accounts, participants, and merchants or merchants.
- 1.11.2 The demand side of Payment Infrastructure includes - debit cards, credit cards, other advance payment tools, registered mobile customers, and online banking.
- 1.11.3 Payment side of the supply chain includes - bank branches, business contacts, ATMs, POS terminals, QR codes, Mediators.
- 1.11.4 Payment processing includes - digital payment systems; volume and quantity, different users, paper extensions, currency circulation, and cash withdrawals.
- 1.11.5 Consumer focus includes - awareness and education, downgrades, complaints, fraud, and system downtime.

The Reserve Bank of India (RBI) has called for the establishment of India's Integrated Reserve Bank-Digital Payments Index (RBI-DPI), which will be established in March 2018 to reflect the level of digital payments in the country. The September 2021 index is at 304.06, up from 270.59 in March 2021. The use of digital payments and immigration continues to rise, according to the RBI-DPI index. The following is a list of references made since the company's inception shown in table 3 (RBI, 2022).

Table 3. Growth of RBI-DPI Index

Period	RBI-DPI Index
March 2018 (Base)	100
March 2019	153.47
September 2019	173.49
March 2020	207.84
September 2020	217.74
March 2021	270.59
September 2021	304.06

Source: <https://www.rbi.org.in/Scripts/BSPressRelease>

1.12 Concept of Digital Currency

Digital currencies are only available in digital form and have no physical qualities. Digital currency transactions are carried out using computers or electronic wallets connected to the internet or specific networks. Digital currencies also enable cross-border transactions to be completed quickly. A person in the United States, for example, can send digital money to a counterparty in any nation as long as they are both connected to the same network.

1.12.1 Digital currency

Only digital or electronic forms of regulated or uncontrolled money are accessible.

1.12.2 Virtual currency

An unregulated digital currency that is controlled by its developer(s), its founding organization, or its defined network protocol.

1.12.3 Cryptocurrency

Cryptography is used to safeguard and verify transactions as well as govern and control the generation of new currency units in a virtual currency.

1.12.4 Central Bank Digital Currencies

A Central Bank Digital Currency (CBDC) would be an electronic form of central bank money that could be used by people and businesses to make payments (Tobias Adrian & Tommaso Mancini-Griffoli, 2019). CBDCs are digital currencies that are controlled and issued by a country's central bank. CBDCs can be used in addition to or instead of traditional fiat currency. A CBDC is solely available in digital form instead of fiat currency, which is available in both physical and digital forms. The United Kingdom, Sweden, and Uruguay are among the countries contemplating the introduction of a digital form of their national currency (Bank of England, 2020).

1.12.5 Design of CBDC

The March 2020 CBDC discussion paper lays forth an example of a CBDC platform for storing value and facilitating UK payments by families and enterprises depicted in Figure 2.

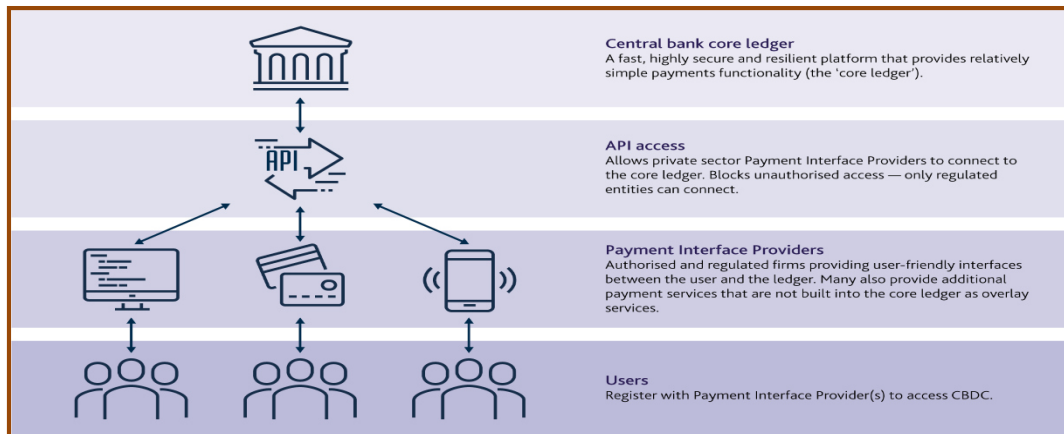


Figure 2. Proposed design of CBDC of Bank of England; Source: Bank of England (2020)

1.12.6 Types of digital central bank money

CBDCs are available in two designs: cash-like and token-based access and payment anonymity. Individual users would be able to access the CBDC using a password similar to a digital signature employing private-public key cryptography without having to identify themselves.

The alternative option, which would be based on a digital identification scheme, is based on validating users' identities is depicted in Figure 3.

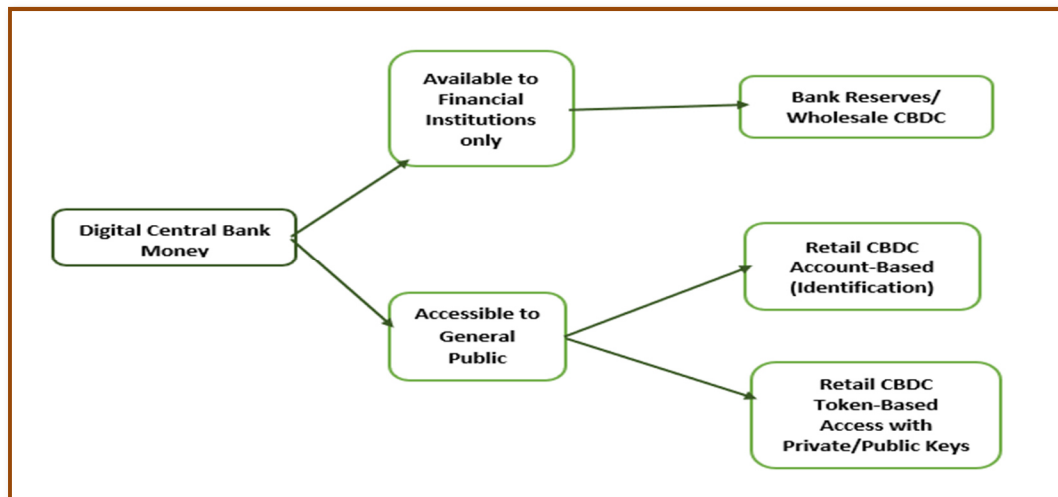


Figure 3. Forms of digital currency

Source: BIS Annual Economic Report (2021) BIS elaboration

1.12.7 Features of CBDC vis-à-vis Traditional Currency

The Bank of International Settlements (BIS) produced a paper on central bank digital currencies in January 2019, noting the currency's four important characteristics: issuer (central bank or not), form (digital or virtual), accessibility (wide or limited), and technology. It distinguishes three kinds of CBDC. The features of CBDC and options of its introduction in comparison with a traditional currency are presented in Table 4.

Table 4. Features of CBDC vis-à-vis Traditional Currency					
Features	Existing Central Bank currency/money		Central Bank Digital Currencies		
	Cash	Reserves and Settlement balances	General Purpose		Token for Wholesale
			Token-based	Account-based	
24/7 availability	Yes	No, but possible	Yes	Yes	Yes
Anonymity Vs Central Bank	Yes	No	Yes	No	Yes
Peer-to-Peer transfer	Yes	No	Yes	No	Yes
Interest Bearing	No	Yes, but subject to central bank policy	Yes	Yes	Yes

Browsed from Ashok K Nag (2021)

Source: BIS paper (No: d174) by Market Committee Central bank digital currencies, March 2018: P6

The central bank acts as a bank that allows people to open large bank accounts and transfer prices between account holders. "This will be widely available and targeted for sale (but also available for general use." This is called account-based CBDC. The second variation will be similar to cash — a "normal" purpose based on a different token. A token-based system is also called a "value-based system" as each token represents a certain amount of cash available in an existing bank. The final form for the CBDC will be a "complete," "token-or value-based token"—that is, a limited digital token to pay for supermarket sales (e.g., bank payments, or securities payments). The BIS Market Payments and Infrastructure Committee summarised the features of these different types of CBDC in the previous table.

1.12.8 Interoperability between some key CBDC roles and functions

Collaboration, programming, or data transmission across several operational units requires the user to have little or no understanding of the unique features of those units, as well as technical or legal compliance that permits the system or technique to be used in combination with other systems or methods (Bank for International Settlements 2021) and the rest is self-explanatory in Figure 4.

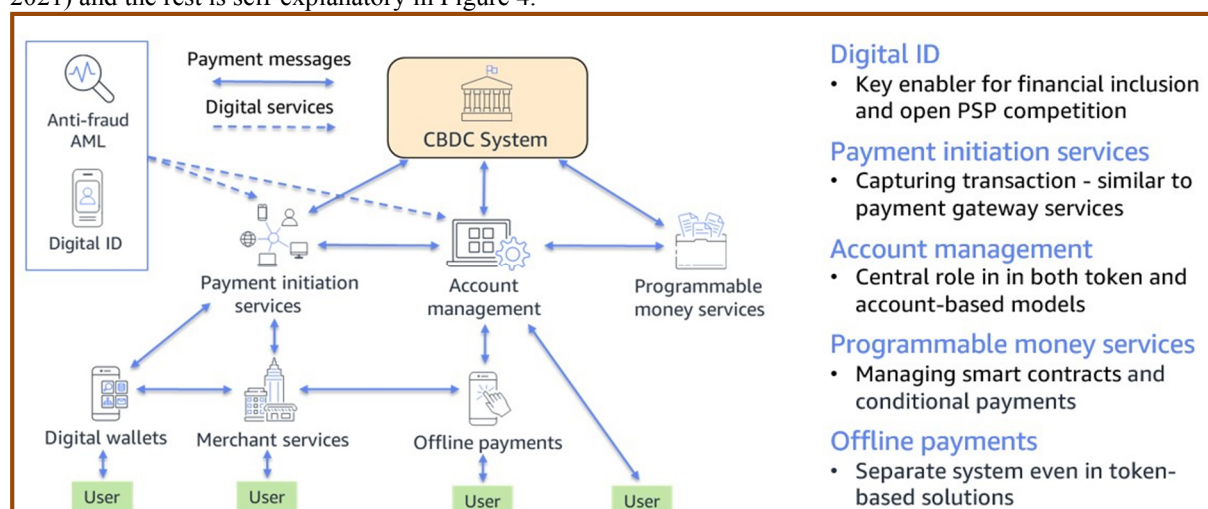


Figure 4. Interoperability between some key CBDC roles and functions
 Source: David MacKeith (2020)

2. ROLE OF DIGITAL CURRENCY

CBDCs can be utilized by people and businesses (retail CBDCs) or in interbank transactions (wholesale CBDCs), with the former lauded as a smoothing element in global finance since it allows universal access to digital money. Eighty-one (81) nations are studying CBDCs, accounting for over 90% of global GDP. Pilots have been tried in 14 nations, and similar currencies are being developed in 16 countries and researched in 32 countries. The Bank of England is also promoting a trial program for bitcoin. China has plans to implement digital Yuan at the Winter Olympics next year. In the next few weeks, the Bank of England intends to launch a bitcoin trial program (Abhinav Singh, 2021). Henri Arslanian, a PwC partner, and global crypto lead remarked, "and that is a big milestone in the evolution of money." Only two countries now employ CBDCs, with the Bahamas' 'Sand Dollar' starting in October 2020 and Nigeria's 'e-Naira' launching in October of this year. The digital currency has a clear set of goals: to improve payment speed, efficiency, and security; reduce the cost of financial services and increase investment in people of all ages and socioeconomic backgrounds; and tighten control over money laundering, fraud, and other money laundering fraud.

The Reserve Bank of India (RBI) is considering launching India's currency experiment system, which might be a significant step forward in the future management and spending of money. It's critical to keep in mind that the goal isn't to raise money or to imitate cryptocurrencies. They are known as "central bank digital currencies" (CBDCs), and they will function similarly to the current system. CBDCs are particularly appealing to growing economies such as India. Unbanked persons continue to make up a significant portion of the population. The CBDC can help with national economic investment. The RBI can create the CBDC using either its centralized ledger system or the decentralized blockchain idea. A centralized system, on the other hand, provides greater control, whilst a decentralized system is said to be greater efficient. Experts recognize that digital currencies have all the internal benefits of fiat currencies such as being strong, portable, frustrated, and fragmented. As it is digital, it will make it easier to secure, more secure, and trackable. Therefore, to enhance the existing benefits of paper money (Abhinav Singh 2021).

In addition, the RBI must decide whether the CBDC will be wholesale, retail, or a combination of both. A wholesale CBDC is a digital currency used by financial institutions, whereas a retail CBDC is used by the general

public. The objective behind a wholesale CBDC is for financial institutions to use it to settle their accounts by transacting with one another in central bank money. Much of wholesale business has already been digitized in numerous ways, with institutions settling transactions using central bank reserves. As a result, even if the RBI switches from digital reserves to wholesale CBDC, the overall trend may not alter significantly.

A major challenge is the construction of a commercial or retail CBDC, which presents a wide range of complexities related to distribution, bank stability, and technology platforms. The RBI distributes real banknotes through its large cash register and bank branch network. Although the current CBDC distribution system can be monitored, there is another very effective way in which the central bank distributes CBDC to the public directly.

CBDC might give a variety of options for the Bank to pursue its goals of monetary and financial stability which is depicted in Figure 5.

The merits of CBDC are:

- a) Assists in maintaining a stable payment environment.
- b) Prevents the creation of new forms of private money.
- c) Promote payment efficiency, competitiveness, and innovation.
- d) It satisfies future payment expectations in a digital economy.
- e) Increase the availability and usability of central bank money.
- f) dealing with the consequences of a cash shortfall.
- g) Assists in the improvement of cross-border payments.
- h) Less reliance on the tangible currency.
- i) Cost savings on printing actual cash.
- j) It is possible to develop a reliable and fast settlement system
- k) In (forex) currency transactions, the time zone difference is eliminated.

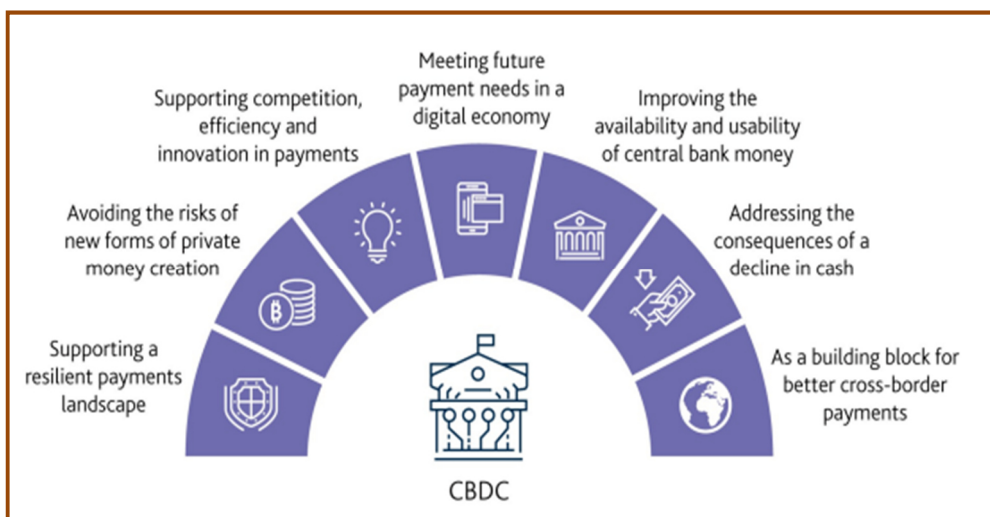


Figure 5. CBDC - Opportunities; Source: Bank of England, (2020)

3. TIMELINE OF CBDC RESEARCH ANNOUNCEMENTS IN INDIA

The research on CBDC and the official announcements of the RBI are stated as follows:

- 3.1 The Government Committee highlights the advantages of CBDC implementation in 2016.
- 3.2 In 2018, the RBI banned regulated firms from trading in digital currencies.
- 3.3 The Government Committee is undecided on whether or not the CBDC should be adopted.
- 3.4 The governor of the Reserve Bank of India remarked that it is too early to discuss CBDC implementation in 2020.
- 3.5 In the year 2021, CBDC is included in the RBI's Payment Systems Booklet as part of the RBI's roadmap. Legislation requiring the Reserve Bank of India to issue an official digital currency is listed on the Lok Sabha agenda. The RBI's Deputy Governor indicates that an internal committee is due to announce the CBDC conclusion.

For the 2022-2023 financial year, which runs from April 1, 2022, India's central bank will issue a digital rupee. Nirmala Sitharaman, India's finance minister, said the implementation of the digital rupee would be based on "blockchain and other technologies." If its plans are successfully followed, India will become one of the world's leading economies in developing the so-called central bank digital currency (CBDC), following in the footsteps of China, which is exploring the digital yuan. CBDC's main objectives and objectives Several projects are underway to achieve India's payment system policy. The RBI is trying to import. The currency management system works

very well and is very inexpensive. In addition, the digital economy will prosper.

4. POTENTIAL ISSUES IN CBDC

The RBI's physical cash is currently in circulation. Everyone can hold physical currency, ensuring privacy and anonymity in transactions. People also have access to online banking, which includes RTGS (Real-time Gross Settlement), NEFT (National Electronic Fund Transfer), and IMPS (Instant Payment Service). Many business organizations, such as Google Pay, Phonepe, Amazon Pay, and so on, also provide mobile wallet money services. The Reserve Bank of India has the possibility of launching its wallet. In this instance, the wallet service providers are no longer active. Because the majority of Indians do not have bank accounts, the usage of digital money is questionable, necessitating the continued circulation of physical cash. Even after two decades of mobile phone use in India, a significant portion of the population is still without one, and internet usage penetration is yet to be improved.

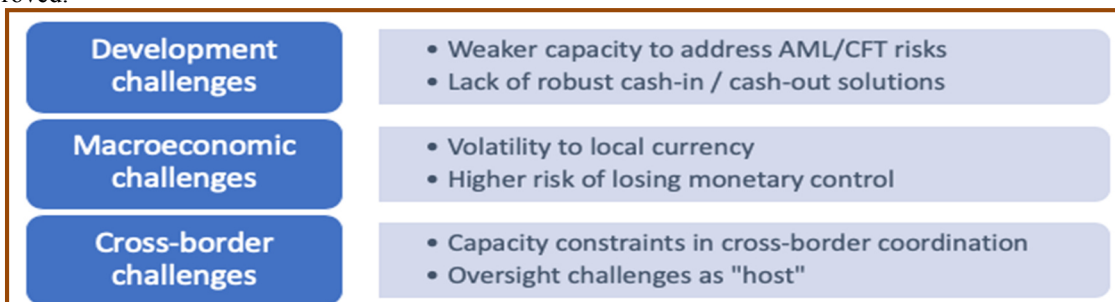


Figure 6. Digital Money – Challenges

Source: Erik Feyen, Jon Frost, Harish Natarajan (2020)

Figure 6 depicts six major development, macroeconomic, and cross-border challenges as perceived by analysts. Anti-money laundering (AML) and counter-terrorist funding (CFT) are two development issues.

CBDCs may have some drawbacks also. Bringing digital currency to the market is contrary to the concept of segregation. More digital currencies without supporting gold reserves if issued by the central bank, possibly leading to higher inflation which harms the development of the economy.

The main challenges will always be user adoption, acceptance, and security. If governments use technology and find a way to control the flow of digital payments, we can expect more competition in the years to come. Cryptocurrencies will continue to provide a variety of business application cases from the arts, finance, advertising to the supply chain. Some point out that user adoption could be a major setback for the smooth rollout of CBDC in India.

5. PRINCIPLES OF EFFECTIVE USE OF DIGITAL CURRENCY

The following are the principles to make CBDC effective and successful:

5.1 CBDC with support of gold, equities, bonds, and other financial assets

CBDC is a digital currency created by the Reserve Bank of India that supports assets like gold, equities, bonds, and other financial assets recognized by the RBI. With CBDC risk is reduced, flexibility is increased, and worldwide adoption is facilitated by the central bank guarantee (Abhinav Singh, 2021).

5.2 Speedy money transfers for investment purposes & financial inclusion

CBDC has the potential to significantly enhance money transfers from the central bank to commercial banks while also eliminating clients considerably more quickly than the existing method. It can also be integrated into the CBDC, especially if it happens as an investment, benefiting millions of citizens who need money but are currently unbanked or have restricted access to banking services.

5.3 Monetary policy development

The RBI move to roll out CBDC could significantly boost India's monetary policy development. Experts point out that improved monitoring and real-time monitoring of digital funds by the central bank could go a long way in promoting these processes. The central bank's efforts to be at the forefront of digital innovation can help to develop an environmentally friendly system such as UPI that will reduce end-customer inefficiency and create greater opportunities for entrepreneurs.

5.4 Design of CBDC to curb illegal money transfers

The CBDC can allow governments to deal effectively with illegal activities, such as payment fraud, to give people a greater sense of security with their money. Digital currencies create huge barriers to illegal activity, as tangible money can help hide and transfer funds without regulated financial systems. With the increasing discovery of CBDCs, payments and referrals will make it easier to identify and track previous sources, significantly reducing the risk of fraud and money laundering.

5.5 Retail CBDCs will strong and secure

The RBI is not clear yet whether the CBDC of India will be accounted for or based on tokens. Retail CBDCs will strengthen the digital payment system in India by making it more robust and accessible. As a fixed currency, the digital rupee should be used for service and transportation charges first. CBDCs should work with existing payment methods such as cash and digital payments. CBDCs is an effort to make independent digital money accessible to the general public and rely on the banking system, just as it is a digital fiat currency.

5.6 CBDC for international payments

In the context of cross-border payments, India can earn through the digital rupee, especially in countries like Bhutan, Saudi Arabia, and Singapore, where the National Payments Corporation of India (NPCI) has plans in place for digital payments. The effectiveness of CBDCs will depend on factors such as the *structure of confidentiality and order*. The CBDC for general-purpose must have the same anonymity as cash and be recognized as a valid tender to gain acceptance.

5.7 CBDC is a forward-thinking move toward a cashless economy

Experts say that the central bank's digital money is a direct responsibility of the central bank. There is less volatility in CBDCs compared to private blockchain-based funds. This helps to prevent fraudulent activities and is a continuous step towards a cashless economy. Besides, it will certainly make the banking system more efficient.

5.8 Rethink and revise the RBI's role.

For the time being, the general public only has access to central bank money in the form of cash. With the rise of digitalization and the reduction of currency, the CBDC might assist the RBI in maintaining a direct relationship between central banks and individuals (retail CBDC), which could aid public awareness of central banks' functions and the need for independence. This is especially important if the RBI wishes to maintain its independence in a key sector, such as retail payments.

5.9 Cross-border payments should be improved.

India may take the lead in developing potential CBDC use cases for improving cross-border payment efficiency. The current correspondent banking paradigm results in a time-consuming and costly procedure. The development of essential standards to ensure interoperability would necessitate international cooperation. This will also necessitate a re-evaluation of each country's legislative system, which may be difficult.

5.10 CBDC design should be able to prevent financial crimes.

CBDC has the potential to increase a country's capacity to tackle financial crimes such as money laundering and tax evasion, among other things. It has been suggested that an account-based CBDC, rather than a token-based architecture, might be more suited to enabling this traceability. CBDC might create a new route for financial crimes if these elements aren't present. Separately, the impact on privacy will have to be examined depending on the degree of traceability incorporated into the CBDC architecture.

5.11 Private digital currency backed by the risk-free central bank.

If privately produced digital currencies outperform conventional payment systems in terms of usefulness and efficiency, they will be widely accepted. A *well-designed CBDC with improved payment facilities backed by risk-free central bank money should help to diminish the demand for alternative currencies*. This must be supplemented by measures to guarantee that domestic payment systems can support the population's payment demands, both domestically and internationally.

6. CONCLUSION

With the large-scale distribution and acceptance of digital currencies, India has a unique opportunity to lead the world. CBDCs will need more clarification on the concept in the coming days, and much will depend on how the concept evolves in India, which is primarily a paper and physical currency market. A well-considered regulatory plan for CBDC issuance in India is required, and a consultation approach with relevant stakeholders. Regardless of the benefits and use cases outlined by the RBI, CBDC research in India must adhere to the key principles. CBDCs should not be designed in a way that limits the Reserve Bank of India's (RBI) ability to carry out its current mandate. CBDC issuance must yield an increased payment efficiency in India; its issuance should not be influenced primarily by the emergence of privately created currencies like cryptocurrencies and stable coins.

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