



CENTRAL BANK DIGITAL CURRENCIES – A PRIMER ON THE RBI'S CONCEPT PAPER

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INTRODUCTION



In recent years, digital currencies have gained popularity worldwide. Jumping on the bandwagon, the Indian government announced its plan to launch Central Bank Digital Currencies (“**CBDCs**”) in the Union Budget 2022-23 to further fillip the digital economy.¹ In continuation of this, the Reserve Bank of India (“**RBI**”) published a concept paper on October 07, 2022² followed by a press release on October 21, 2022 on operationalisation of the CBDC-Wholesale (e₹-W)³, the pilot launch of the digital rupee for specific use cases. The press release has brought to reality the RBI’s dream of having a centrally backed digital currency which can pave the way for global financial inclusion, however, it is key to

understand the differences between CBDC and other forms of digital currency and India’s preparedness to adopt digital currencies as a mode of payment. This article examines these questions as well as the RBI’s concept paper and lays out the benefits, shortcomings and other implications of CBDCs.

1. <https://pib.gov.in/PressReleasePage.aspx?PRID=1794160>.
2. <https://rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=1218>.
3. https://rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=54616.

WHAT IS CBDC?

The RBI has defined CBDC as *“the legal tender issued by a central bank in a digital form. It is akin to sovereign paper currency but takes a different form, exchangeable at par with the existing currency and shall be accepted as a medium of payment, legal tender and a safe store of value.”* Also, named the **“Digital Rupee”** or e-Rupee, CBDC will serve as another form of sovereign currency that can be used even in the absence of a bank account. CBDCs being a sovereign currency, would appear as a liability on the RBI’s balance sheet, just like physical currency. This means that it will serve both as a medium of exchange as well as a store of value allowing payments made using CBDC to take place in real time without additional settlement between banks, as required in Unified Payments Interface (**“UPI”**) payments. At the moment, the RBI is looking at the CBDC as an instrument of payment rather than as an asset that bears an interest, like bank deposits.

The CBDC can be categorised on the following basis:

Target audience: The RBI classifies CBDC into two broad categories i.e., retail (**“CBDC-R”**) and wholesale (**“CBDC-W”**). CBDC-R is an electronic version of physical cash, primarily meant for retail transactions and targets private sector, individual and other non-financial

consumers. CBDC-R is expected to provide access to safe money for payment and settlement as it is a direct liability of the central bank, i.e., the RBI. On the other hand, CBDC-W is designed for restricted access to select financial institutions for the settlement of interbank transfers and related wholesale transactions.

Issuing and managing entity: CBDC can be issued in direct (single tier) and indirect (two-tier) systems. In the direct model, the RBI would manage all aspects of the CBDC system, including account keeping, transaction verification, issuance, etc. In the indirect model, the RBI will issue CBDC to consumers indirectly through banks and other service providers (intermediaries), like the current physical currency model.

Structure: In a token-based structure the holder of the currency (token) would be its owner and would be able to transfer the token, just like physical currency. In an account-based structure, an intermediary will verify the identity of the account holder, maintain record of balances and transactions of CBDC holders and carry out the transfer of the token from payer’s account to payee’s account. The central bank said it prefers a token-based version for CBDC-R, while an account-based version is preferred for CBDC-W.



HOW IS CBDC DIFFERENT FROM DIGITAL MONEY OR DIGITAL ASSET?

The CBDC is a digital version of the physical rupee and enjoys a sovereign guarantee and government backing. CBDCs should not be confused with other forms of digital money including money stored in our bank accounts as the latter is a liability of a commercial bank.

Virtual digital asset (“VDA”) as defined by the Finance Bill, 2022 is any information, code, token (*not being Indian or any foreign currency*) generated through cryptographic means or otherwise which meets certain conditions that the government may specify, such as providing a digital representation of value that can be transferred, stored or traded electronically, and includes a Non-Fungible Token (NFT).⁴ The bill excludes Indian and foreign currencies from the definition of VDAs establishing that VDAs are not a form of currency and do not serve as a medium of exchange or as legal tender. The CBDC, as envisioned by the RBI, will not qualify as a VDA as it is akin to Indian currency and is exchangeable one-to-one with fiat currency.

Cryptocurrency, which falls within the ambit of the definition of VDAs is fundamentally different from CBDC.⁵ While, CBDC is a government-backed and government-controlled currency that has been introduced to reduce the time and costs associated with transaction settlement, cryptocurrency is issued without any central governing authority. In case of cryptocurrency, the cryptocurrency is stored on a decentralised blockchain network, where transactions can happen; and authenticated, and recorded in the public ledger without any third-party interference or central authority monitoring the deal. Whereas CBDCs, though uses the blockchain technology, is entirely centralised and overseen by a central bank such as the RBI, with the help of other third-party organisations. Further, the value of cryptocurrency is determined by market forces, i.e., supply and demand unlike CBDCs which have intrinsic store of value as determined by the central bank.

4. https://www.indiabudget.gov.in/doc/Finance_Bill.pdf.

5. <https://www.indiatoday.in/business/story/understanding-the-law-why-crypto-is-a-virtual-digital-asset-1937955-2022-04-15>.

WHY CBDC AND HOW DOES IT HELP?

The CBDC has been introduced keeping in mind the recent innovations in technology-based payments solutions which have led *“central banks around the globe to explore the potential benefits and risks of issuing a CBDC so as to maintain the continuum with the current trend in innovations.”*⁶ The other key motivations are as follows:

Efficiency: CBDC has the potential to reduce inter-bank settlements and bring efficiency in payment systems, as the settlement would be instantaneous. It is safe given it is the liability of the central bank and not of a commercial bank and would lower the operational costs involved in generation of physical cash.

Risk monitoring: With record of owners and all transactions, CBDC has great potential to remove corruption, black money, terrorism financing, and other money laundering issues plaguing the Indian economy.

Financial inclusion: Since a bank account or active internet connection is not required for owning and transacting using CBDCs, it lends itself to greater financial inclusion for the un-banked as well as the remote sector of the country.

Cross-border payments: CBDC may be the answer to making the dream of instantaneous cross-border payments, a reality. Although, it is a work in progress, Society for Worldwide Interbank Financial Telecommunications (SWIFT), i.e., the global financial messaging system has tested transactions between CBDCs based on different blockchains.

6. <https://rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=1218>

CONCERNS AROUND CBDC

Privacy and money laundering: Cash based transactions are anonymous and leave no record of transactions (*unless the transacting parties choose to document the same through a bill, invoice or contract etc.*). The CBDC would not be anonymous and would be recorded automatically. It can be argued that since the Digital Rupee is intended to be a digital equivalent of cash, it should offer the same level of anonymity. But the CBDC, by the nature of it, would entail record keeping. We believe that the acceptance of CBDC would very much depend on how the RBI addresses these privacy concerns. For example: China's CBDC project, the first serious effort backed by a central bank and with a planned launch in early 2022, has come under fire from privacy advocates for its proposed concept of "controllable anonymity." User identity can be made anonymous to the retailers and service providers that payments are exchanged with, but not to the government. On the other hand, the anonymity will undermine anti-money laundering and counter terrorism efforts, meaning the identity of CBDC would need to be monitored by at least some authority

to validate the transactions. The government touted its plans to monitor the currency in real time to police criminal activity.⁷ Therefore, the RBI must strive to strike a balance keeping in mind both privacy and money-laundering and other illegal activity risks associated with lack of transparency and anonymity.

Interoperability: While transacting digitally, it is easy to convert money from a bank account to a wallet or make purchases. In contrast, the RBI does not envisage CBDC to be converted to cash or accessed over payment systems like UPI or cards at this stage. This seems to restrict the various use cases available to CBDC. The success of CBDC might be dependent on how successful the RBI is in integrating and modifying the existing payment infrastructure so as to allow it to make and receive CBDC payments. This will ensure lower costs of operation and result in quicker adoption of CBDCs across the country.

7. <https://www.cpomagazine.com/data-privacy/proposed-digital-rupee-cbdc-from-indias-central-bank-raises-privacy-concerns/>.

PILOT PHASE

In furtherance of its commitment to implement the digital currency in India, the RBI launched the first of its kind pilot phase of the Digital Rupee rollout from November 01, 2022 for the wholesale segment (e₹-W). This initiative is focused on the settlement of secondary market transactions in government securities and eventually making the inter-bank market more efficient. The RBI has identified eight banks for participation in the pilot,

which includes State Bank of India, ICICI Bank, among others. In its press release, the RBI also announced that the first pilot in Digital Rupee - Retail segment (e₹-R) will be launched within a month in select locations in closed user groups comprising customers and merchants.

8. https://rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=54616.

CONCLUSION

There are obvious advantages to CBDCs such as cost reductions, risk monitoring, financial inclusion, and greater digitisation of the economy. Quick adoption of UPI, Fastag and Rupay cards in the recent past has set some positive examples of the country's readiness. However, there are a few clear concerns that need addressal. Considering the novelty of the concept underlying CBDC, it is hard to estimate how much traction it will get. Also, taking into account the existence and popularity of several financial products and payment methods such as prepaid payment instruments and UPI

is a major factor which will determine the fate of CBDC. This gives rise to the question, if India is even ready to adopt a new form of payment?

Further, the issue of finding a balance between traceability, anonymity and privacy primarily needs consideration while the RBI has the mammoth task of establishing an interoperable system to integrate CBDC into the Indian economy. Hence, the decisions that the RBI takes subsequently as they roll out the plans for implementation, will determine if CBDC will be a 'hit' or a 'miss'. For now, all we can do is wait and watch.



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