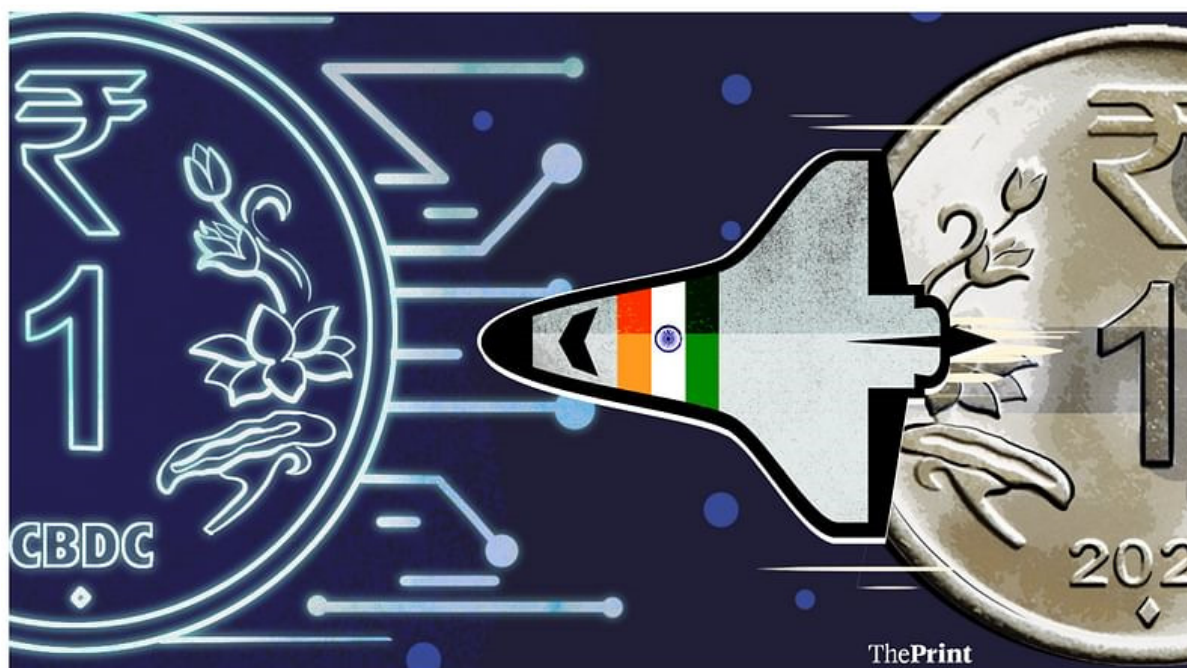


# RBI's digital rupee concept has many pros, but also some risk to India's financial stability

CBDCs have the potential to lead to greater financial inclusion, but a concept note issued by the Reserve Bank of India also rightly places emphasis on consumer protection.

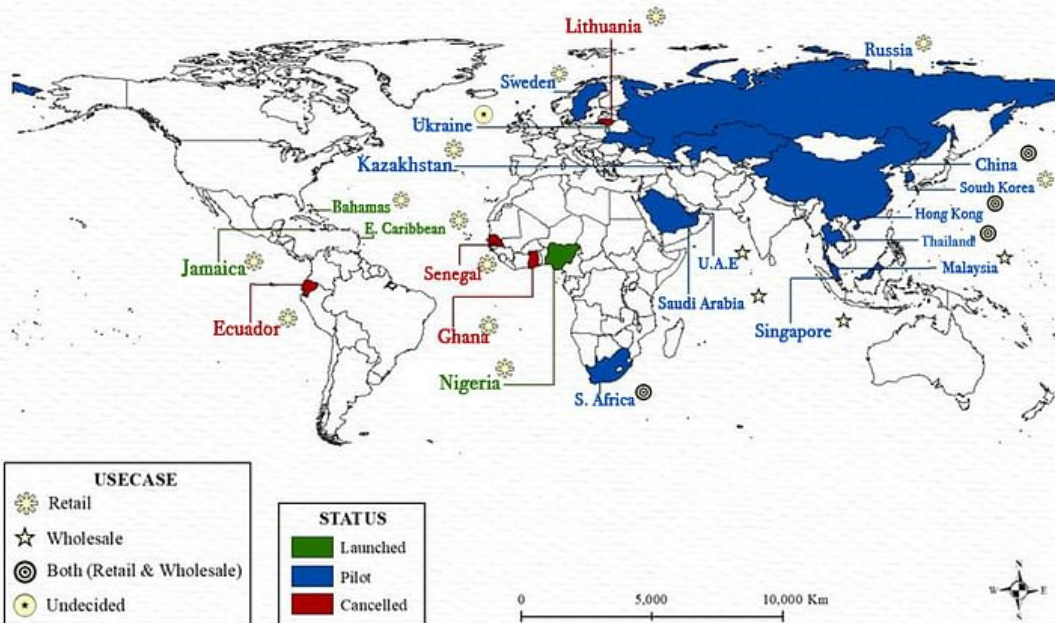
RADHIKA PANDEY and KRITI WATTAL 14 October, 2022 08:31 am IST



Recently, the Reserve Bank of India (RBI) issued a [concept note](#) on the Central Bank Digital Currency (CBDC). The note discusses the objectives, choices, benefits and risks of issuing a CBDC. The note also discusses the implications of issuing CBDCs on the banking system, monetary policy and financial stability, besides discussing the design choices, the underlying technology and possible uses.

Among the key motivations, the concept note positions CBDCs as a safe alternative to private virtual currencies. However, a one-on-one comparison between the two may not be appropriate. Private virtual currencies, such as Bitcoin, are seen more as [assets than as a medium of exchange](#). They are largely seen as instruments to diversify risks.

# CBDC adoption in the world



Source: Atlantic Council

A CBDC is a central-bank-issued digital money denominated in a sovereign currency. It is the same as cash but in digital form. It will be used as a medium of exchange rather than as an asset.

CBDCs could lead to greater financial inclusion and bring about innovations and efficiency in the payments system. It will, however, be important to address the offline functionality of CBDCs to enable mass adoption. Consultation with stakeholders and analysing international experience would help design CBDCs for universal access.

The note has rightly placed emphasis on consumer protection as an important pillar of financial stability. The adoption of a new digital form of money may give rise to different forms of consumer grievances such as technical disruption, frauds etc. Prompt and efficient framework for resolution of consumer grievances would build trust and facilitate adoption of CBDCs.

## Objectives of issuing CBDCs

Currently, 105 countries are exploring CBDC, accounting for 95 per cent of the global GDP. These include 19 of the G20 countries, as per [Atlantic Council's data](#). Out of these, 50 countries are in an advanced phase of exploration: launch, pilot or development.

## STATUS OF CBDC ADOPTION BY COUNTRY

COUNTRY	PROJECT NAME	STATUS	USE CASE
The Bahamas	Sand Dollar	Launched	Retail
Jamaica	JAM-DEX	Launched	Retail
Eastern Carribean (8 countries)	DCash	Launched	Retail
Nigeria	e-Naira	Launched	Retail
Sweden	E-krona	Pilot	Retail
Ukraine	E-hryvnia	Pilot	Undecided
Russia	Digital Ruble	Pilot	Retail
Kazakhstan	Digital Tenge	Pilot	Retail
Saudi Arabia	Project Aber	Pilot	Wholesale
United Arab Emirates	Project Aber	Pilot	Wholesale
South Africa	Electronic legal tender (Retail), Project Khokha (Wholesale), Project Dunbar (Wholesale)	Pilot	Both
China	e-CNY	Pilot	Both
South Korea	NA	Pilot	Retail
Hong Kong	e-CNY	Pilot	Both
Thailand	mCBDC Bridge	Pilot	Both
Singapore	Project Ubin, Project Dunbar	Pilot	Wholesale
Malaysia	Project Dunbar	Pilot	Wholesale
Ghana	E-cedi	Pilot	Retail
Lithuania	LBCOIN	Pilot	Retail
Ecuador	Dinero Electrónico	Cancelled	Retail
Senegal	eCFA	Cancelled	Retail
Germany	Digital Euro	Development	Both
Estonia	Digital Euro	Development	Retail
Iran	Crypto Rial	Development	Retail
Turkey	Digital Turkish Lira	Development	Retail
Netherlands	Digital Euro	Development	Retail
France	Digital Euro	Development	Both
Switzerland	Project Helvetia, Project Jura	Development	Wholesale
Italy	Digital Euro	Development	Undecided
Spain	Digital Euro	Development	Retail
Euro Area	Digital Euro	Development	Both
Japan	Project Stella	Development	Both
Bhutan	Digital Ngultrum	Development	Both
Cambodia	Bakong	Development	Retail
Palau		Development	Both
Australia	Project Dunbar	Development	Both
Indonesia	Project Rupiah	Development	Both
India	Digital Rupee	Development	Both
Mauritius		Development	Both
Bahrain		Development	Wholesale
Israel		Development	Retail
Lebanon	e-Shekel	Development	Retail
Haiti	Digital Gourde	Development	Both
Brazil	Digital Real	Development	Retail
Venezuela	Digital Bolivar	Development	Both
Belize	NBB Pay	Development	Undecided
Canada	Jasper	Development	Both

Source: Atlantic Council

A review of international experience suggests that one of the key motivations for issuing CBDCs has been to foster financial inclusion. For instance, in the

Bahamas, the [Sand Dollar](#) was introduced in order to facilitate financial inclusion because its population was spread across 30 islands, many of them remote.

In countries facing dwindling usage of cash, such as [Sweden](#), central banks issue CBDCs as a digital complement to cash. Some countries, such as [Japan](#) are exploring CBDCs as a payment instrument alongside cash and also to ensure stability and efficiency of the payments system.

A key motivation behind issuing CBDCs in India is to reduce the cost of physical cash management. A CBDC would reduce costs related to printing, storage, transportation and replacement of banknotes. Despite significant push to digitisation, the usage of cash remains high, particularly for small value transactions. Cash is favoured for its anonymity. If reasonable anonymity is assured, the public may shift from cash to the CBDC for regular transactions and small value payments, thus furthering digitisation.

Introduction of CBDCs could support competition and innovation in payments and settlements by providing another avenue to the public. CBDCs could potentially promote financial inclusion by making financial services more accessible to the unbanked and underbanked population. This would require suitable design choices including offline functionality of CBDCs.

## Types and design features of CBDCs

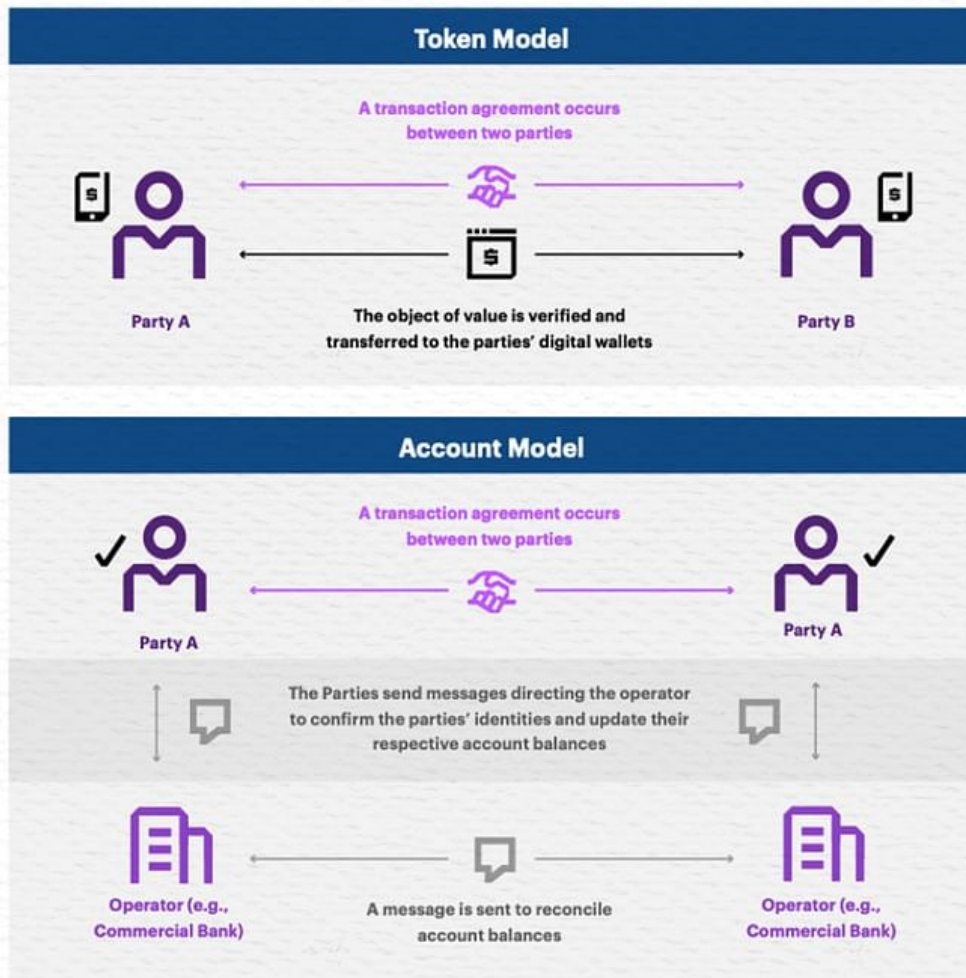
Based on the accessibility, the concept note distinguishes between wholesale and retail CBDCs. Retail CBDC would be available for use by all: private sector, non-financial consumers and businesses. Wholesale CBDCs are designed for restricted access by financial institutions.

The concept note also explores the possibility of using wholesale CBDCs for buying assets such as government securities, commercial papers and primary auctions for government securities bypassing the bank route.

Retail CBDC is an electronic version of cash. While India already has a sound payment infrastructure ranging from Real Time Gross Settlement (RTGS), National Electronic Fund Transfer (NEFT) to Unified Payments Interface (UPI) etc, the concept paper argues that CBDC can provide an alternative medium of making digital payments in case of operational or technical problems leading to disruption in other payment system infrastructures.

CBDC can be token-based or account-based. A token-based CBDC is a digital token representing a claim on the central bank. The transfer of tokens would entail transfer of ownership similar to handing over banknotes from one person to another. Tokens would be stored through “wallets” similar to the technology employed by cryptocurrency users.

## HOW THE TOKEN- AND ACCOUNT-BASED MODELS OF CBDCs WORK



Source: Digital Dollar Foundation

In an account-based CBDC, the central bank would hold accounts for users of the CBDC. Money would be held as credit balances in accounts. Both designs will have separate [legal considerations](#) and will require suitable amendments to the legal framework.

# Monetary and financial stability implications

While the roll out of CBDCs has many potential benefits, it may also pose risks to financial stability. The risks would vary depending upon whether the CBDC is interest-bearing (remunerated) or non-interest bearing (non-remunerated).

If accounts with central banks offer interest, then there will be an incentive for people to move their deposits in banks to CBDC accounts. This could have adverse implications for credit creation by commercial banks. Banks would have to offer higher interest rates on deposits, thus increasing their cost of funding.

Banks may be compelled to pass on the additional costs to borrowers. They may also turn to riskier sources for generating higher returns. The reliance on central bank's liquidity could also increase.

If a CBDC is non-remunerated, the incentive to shift from bank deposits would be lesser. However, if there are concerns about the banking sector's health or during economic instability, depositors may switch from bank deposits to CBDCs.

More discussion on the implications of CBDCs on bank runs, monetary policy transmission and central bank's balance-sheets is needed to ensure that CBDC is issued with adequate safeguards to counter potential risks.

*Radhika Pandey and Kriti Wattal are consultants at National Institute of Public Finance and Policy.*

*Views are personal.*