



PRESS INFORMATION BUREAU
(Research Unit)
Ministry of Information and Broadcasting
Government of India



CENTRAL BANK DIGITAL CURRENCY (DIGITAL RUPEE – e₹)

India – One of the pioneers in introducing CBDC

(Ministry of Finance)

December 01, 2022

Digital India means fast profit, full profit; Digital India means minimum government, maximum governance

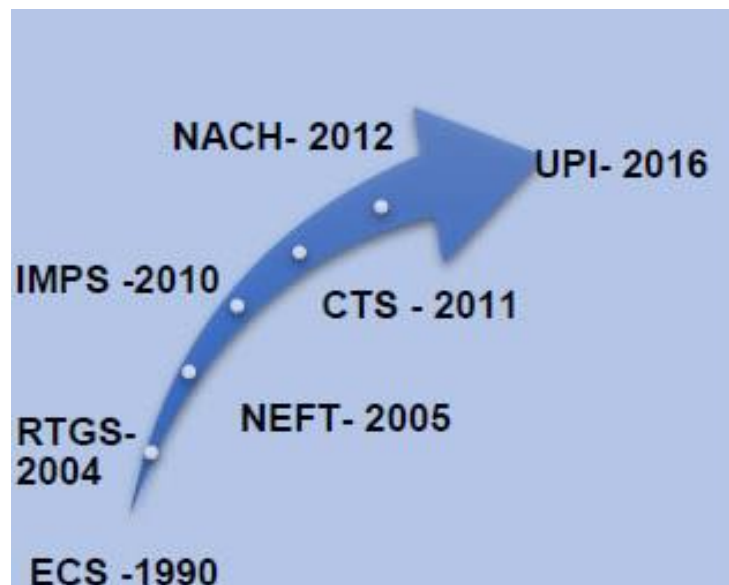
Prime Minister Narendra Modi

INTRODUCTION

India has made impressive progress towards innovation in digital payments. A **separate law for Payment and Settlement Systems** has been enacted, which has enabled an orderly development of the payment eco-system in the country. The present state-of-the-art payment systems that are affordable, accessible, convenient, efficient, safe, secure and available 24x7x365 days a year are a matter of pride for the whole nation as, in many cases, India is far ahead of the most developed countries also in this area.

Having already introduced the first pilot in the Digital Rupee - Wholesale segment (e₹-W) on November 1, 2022, the Reserve Bank has announced the launch of the first pilot for retail digital Rupee (e₹-R) on December 01, 2022. This places India as one of the front runners as most of the major economies of the world have not introduced the Central Bank Digital Currency (CBDC) as yet.

This striking shift in payment preference has been due to the creation of robust round-the-clock electronic payment systems such as **Real Time Gross Settlement (RTGS)** and **National Electronic Funds Transfer (NEFT)** that has facilitated seamless real-time or near real-time fund transfers. In addition, the launch of **Immediate Payment Service (IMPS)** and **Unified Payments Interface (UPI)** for instant payment settlement, the introduction of mobile-based payment systems such as **Bharat Bill Payment System (BBPS)**, and **National Electronic Toll Collection (NETC)** to facilitate electronic toll payments have been



the defining moments that has transformed the payments ecosystem of the country and attracted international recognition.

The convenience of these payment systems ensured rapid acceptance as they provided consumers with an alternative to the use of cash and paper for making payments. The facilitation of non-bank FinTech firms in the payment ecosystem as **PPI issuers, Bharat Bill Payment Operating Units (BBPOUs)** and **third-party application providers** in the UPI platform have further strengthened the adoption of digital payments in the country.

The concept of money has experienced evolution from Commodity to Metallic Currency to Paper Currency to Digital Currency. The changing features of money are defining the new financial landscape of the economy. Further, with the advent of cutting-edge technologies, the digitalization of money is the next milestone in monetary history. Advancement in technology has made it possible for the development of a new form of money, viz. **Central Bank Digital Currencies (CBDCs)**.

UNION BUDGET 2022-23 ANNOUNCEMENT

The Government of India announced the launch of the Digital Rupee — a Central Bank Digital Currency (CBDC) from FY 2022-23 onwards in the [Union Budget](#) placed in the Parliament on February 01, 2022.

DEFINITION OF CBDC

Reserve Bank of India broadly defines **CBDC (Digital Rupee (e₹))** 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.

CBDC is a **digital or virtual currency but it is not comparable to the private virtual currencies** that have mushroomed over the last decade. Private virtual currencies sit at substantial odds to the historical concept of money. They are not commodities or claims on commodities as they have no intrinsic value.¹



KEY MOTIVATIONS FOR LAUNCH

CBDC, being a sovereign currency, holds unique advantages of central bank money, viz. trust, safety, liquidity, settlement finality and integrity. The key motivations for exploring the issuance of CBDC in India, among others, include reduction in operational costs involved in physical cash management, fostering financial inclusion, bringing resilience, efficiency, and innovation in the payments system, adding efficiency to the settlement system, boosting innovation in cross-border payments space and providing public with uses that any private virtual currencies can provide, without the associated risks.

¹<https://newsonair.gov.in/News?title=All-You-need-to-Know-about-Digital-Currency&id=450218>

The use of the offline feature in CBDC would also be beneficial in remote locations and offer availability and resilience benefits when electrical power or mobile network is not available.

CBDCs will provide the public with the benefits of virtual currencies while ensuring consumer protection by avoiding the damaging social and economic consequences of private virtual currencies/ Crypto Currencies.

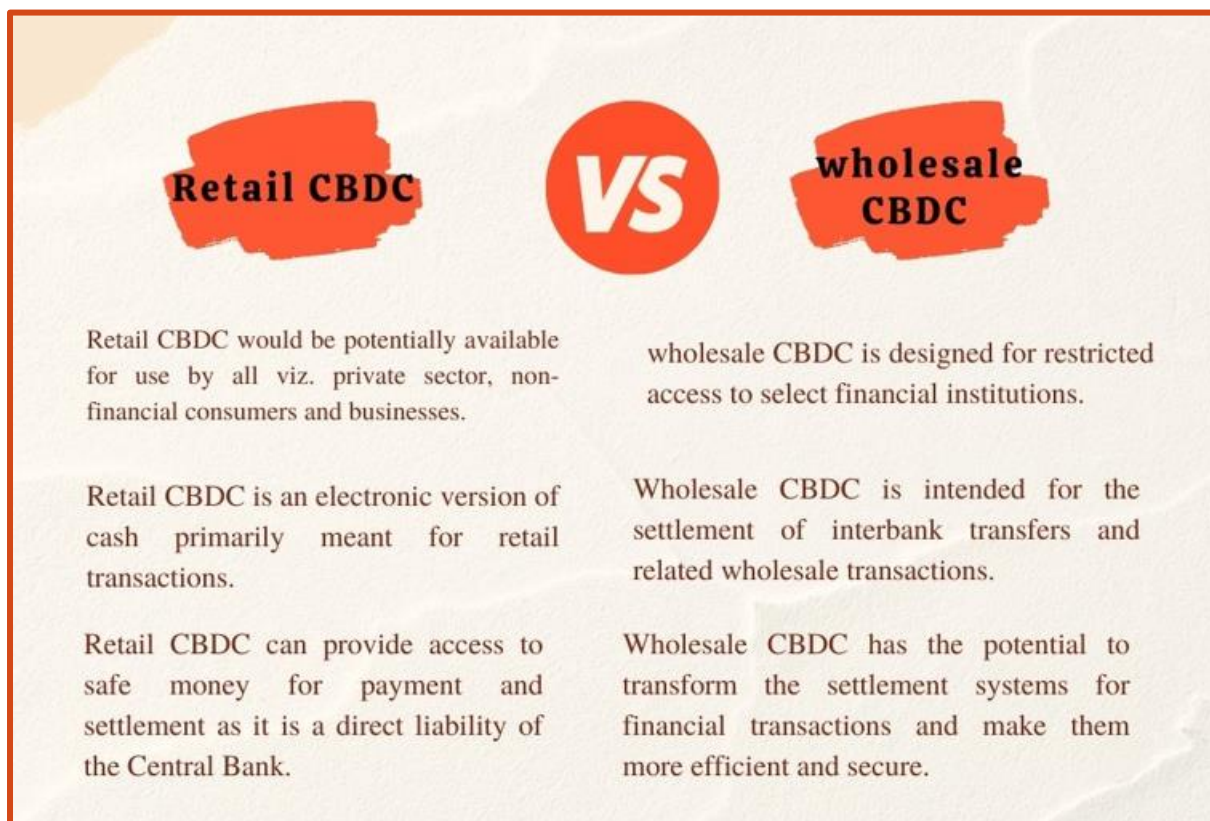
According to the Managing Director of the International Monetary Fund (IMF), Ms Kristalina Georgieva, "If CBDCs are designed prudently; they can potentially offer more resilience, more safety, greater availability, and lower costs than private forms of digital money. That is clearly the case when compared to unbacked crypto assets that are inherently volatile."²

TYPE OF CBDC

CBDC can be classified into two broad types, viz. general purpose or **Retail (CBDC-R)** and **Wholesale (CBDC-W)**.

Retail CBDC (e₹-R) would be potentially available for use by all, viz., private sector, non-financial consumers and businesses, while **Wholesale CBDC (e₹-W)** is designed for restricted access to select financial institutions.

While Wholesale CBDC is intended for the settlement of interbank transfers and related wholesale transactions, Retail CBDC is an electronic version of cash primarily meant for retail transactions.



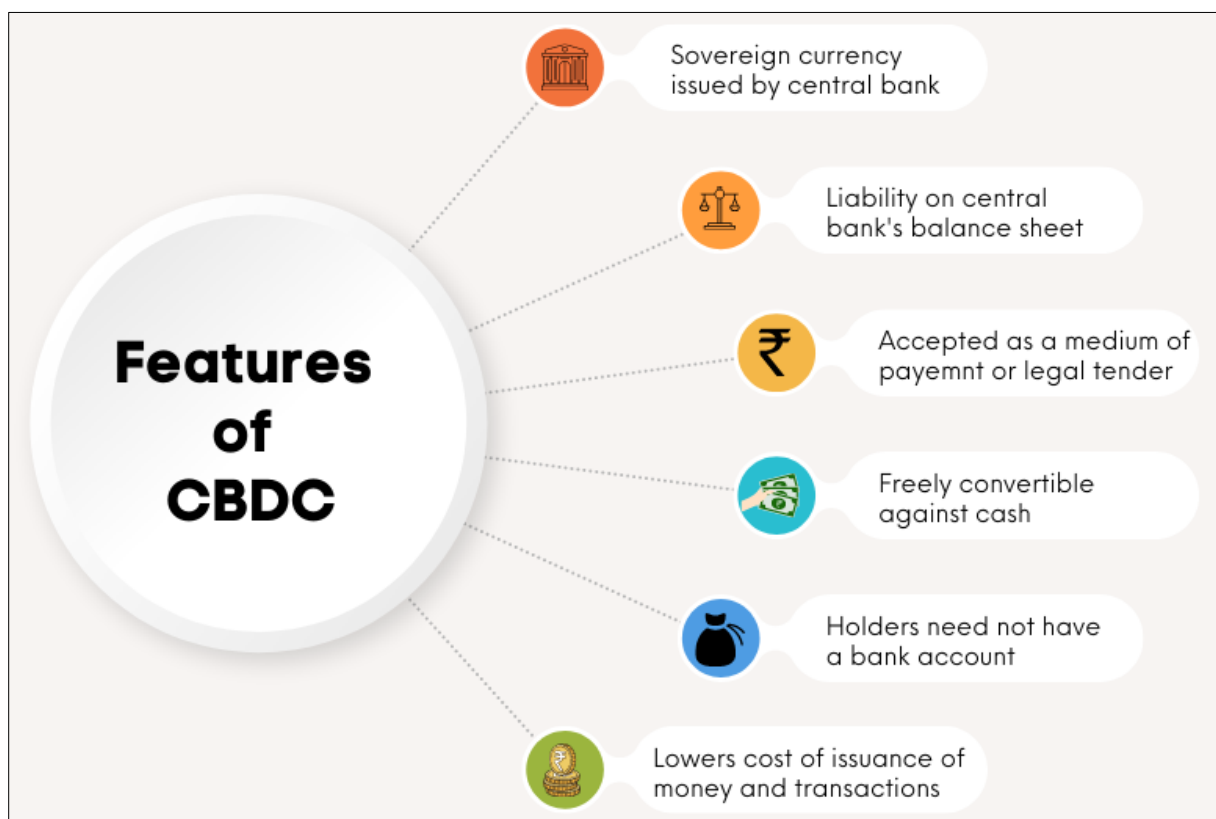
² <http://employmentnews.gov.in/NewEmp/MoreContentNew.aspx?n=SpecialContent&k=70494>

FORMS OF CBDC

CBDC can be structured as ‘**token-based**’ or ‘**account-based**’. A token-based CBDC is a bearer-instrument like banknotes, meaning whosoever holds the tokens at a given point in time would be presumed to own them. In contrast, an account-based system would require maintenance of record of balances and transactions of all holders of the CBDC and indicate the ownership of the monetary balances.

Considering the features offered by both the forms of CBDCs, a **token-based CBDC is viewed as a preferred mode for CBDC-R** as it would be closer to physical cash, while an **account-based CBDC may be considered for CBDC-W**.

FEATURES OF CBDC:



RECENT DEVELOPMENTS

1. The **first pilot in the Digital Rupee - Wholesale segment (e₹-W)** commenced on **November 1, 2022**. The use case for this pilot is the settlement of secondary market transactions in government securities. The use of e₹-W is expected to make the interbank market more efficient. Settlement in central bank money would reduce transaction costs by pre-empting the need for settlement guarantee infrastructure or for collateral to mitigate settlement risk. Going forward, other wholesale transactions and cross-border payments will be the focus of future pilots, based on the learnings from this pilot. RBI has identified **nine banks** for participation in the Digital Rupee's wholesale pilot project, which are:

- ✓ State Bank of India
- ✓ Bank of Baroda
- ✓ Union Bank of India
- ✓ HDFC Bank

- ✓ ICICI Bank
- ✓ Kotak Mahindra Bank
- ✓ Yes Bank

- ✓ IDFC First Bank
- ✓ HSB

2. The Reserve Bank has announced the launch of the first pilot for retail digital Rupee (e₹-R) on December 01, 2022.

The pilot would cover select locations in Closed User Group (CUG) comprising participating customers and merchants. The e₹-R would be in the form of a digital token that represents legal tender. It would be issued in the same denominations that paper currency and coins are currently issued. It would be distributed through intermediaries, i.e., banks. Users will be able to transact with e₹-R through a digital wallet offered

by the participating banks and stored on mobile phones/devices. Transactions can be both Person to Person (P2P) and Person to Merchant (P2M). Payments to merchants can be made using QR codes displayed at merchant locations. The e₹-R would offer features of physical cash like trust, safety and settlement finality. As in the case of cash, it will not earn any interest and can be converted to other forms of money, like deposits with banks.

Eight banks have been identified for phase-wise participation in this pilot. The first phase will begin with four banks, viz., State Bank of India, ICICI Bank, Yes Bank and IDFC First Bank in four cities across the country. Four more banks, viz., Bank of Baroda, Union Bank of India, HDFC Bank and Kotak Mahindra Bank will join this pilot subsequently. The pilot would initially cover four cities, viz., Mumbai, New Delhi, Bengaluru and Bhubaneswar and later extend to Ahmedabad, Gangtok, Guwahati, Hyderabad, Indore, Kochi, Lucknow, Patna and Shimla.



CBDC: GLOBAL SCENARIO

Across the globe, more than 60 central banks have expressed interest in CBDC, with a few implementations already under pilot across both Retail and Wholesale categories and many others are researching, testing, and/or launching their own CBDC framework.

As of July 2022, there are 105 countries in the process of exploring CBDC, a number that covers 95% of the global Gross Domestic Product (GDP). 10 countries have launched a CBDC, the first of which was the Bahamian Sand Dollar in 2020, and the latest was Jamaica's JAM-DEX.

Currently, 17 other countries, including major economies like China and South Korea, are in the pilot stage and preparing for possible launches. China was the first large economy to pilot a CBDC in April 2020 and it aims for widespread domestic use of the e-CNY by 2023. Increasingly, CBDCs are being seen as a promising invention and as the next step in the evolutionary progression of sovereign currency.

Different jurisdictions have justified the adoption of CBDC for very diverse reasons. Some of them are enumerated below:

- Central Banks, faced with dwindling usage of paper currency, seek to popularise a more acceptable electronic form of currency (like Sweden);
- Jurisdictions with significant physical cash usage seeking to make issuance more efficient (like Denmark, Germany, Japan or even the US);
- Countries with geographical barriers restricting the physical movement of cash had the motivation to go for CBDC (e.g. The Bahamas and the Caribbean with small and large numbers of islands spread out);
- Central Banks seek to meet the public's need for digital currencies, manifested in the increasing use of private virtual currencies, and thereby avoid the more damaging consequences of such private currencies.

LIMITATIONS AND WAY FORWARD

- In India, out of the nearly 140 crore population, 82.5 crore people have internet access. This means many Indians will not be able to use CBDCs due to connectivity unavailability. To ensure the widespread use of CBDC, offline capabilities need to be incorporated.
- CBDC ecosystems may be at similar risk for cyber-attacks as the current payment systems are exposed to. The cybersecurity considerations need to be taken care of both for the item and the environment. For example, while the token creation process should ensure the highest levels of cryptography to ensure security at the item level, the transaction of tokens also needs to be secured to ensure a trusted environment.

CONCLUSION

CBDC is aimed to complement, rather than replace, current forms of money and is envisaged to provide an additional payment avenue to users, not to replace the existing payment systems. Supported by state-of-the-art payment systems of India that are affordable, accessible, convenient, efficient, safe and secure, the Digital Rupee (₹) system will further **bolster India's digital economy**, make the **monetary and payment systems more efficient** and contribute to furthering **financial inclusion**.

FURTHER READING:

- [Concept Note on Central Bank Digital Currency \(RBI\)](#)

REFERENCE LINKS

- <https://newsonair.com/2022/11/01/rbi-launches-pilot-project-of-digital-rupee-in-wholesale-segment-2/>
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VIDEO LINKS

- <https://twitter.com/pibchennai/status/1587494012243836929?s=20&t=M-YYyvrBm3R4LDNE0XT9rQ>

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