

## India's Own Central Bank Digital Currency (CBDC) Launched: How the e-rupee will work

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(Indian Economy)

- ❖ The retail CBDC launched by RBI on Thursday is a digital token that will function as the digital equivalent of a banknote that can be transferred electronically from one holder to another.

The Reserve Bank of India (RBI) on Thursday launched the Central Bank Digital Currency (CBDC) — digital rupee or e-rupee (₹) — for the common man.

### What is CBDC or the digital rupee?

CBDC is a legal tender issued by the RBI in digital form. It is the same as the fiat currency, and is exchangeable one-to-one with the fiat currency. Only its form is different — it is not paper (or polymer) like physical cash. It is a fungible legal tender, for which holders need not have a bank account. CBDC will appear as ‘liability’ (currency in circulation) on the RBI’s balance sheet.

The e-rupee will be in the form of a digital token representing a claim on the central bank, and will effectively function as the digital equivalent of a banknote that can be transferred electronically from one holder to another. A token CBDC is a “bearer-instrument” like a banknote, meaning whoever ‘holds’ the tokens at a given point in time will be presumed to own them.

### How is RBI introducing the CBDC?

The pilot launched on Thursday will initially cover four cities — Mumbai, New Delhi, Bengaluru and Bhubaneswar — and will be later extended to Ahmedabad, Gangtok, Guwahati, Hyderabad, Indore, Kochi, Lucknow, Patna, and Shimla. The pilot will work in a closed user group (CUG) comprising participating customers and merchants, the RBI has said. Select customers from the selected cities will get CBDC wallets with notes printed digitally with the RBI Governor’s signature. Eight banks will participate in the pilot — the State Bank of India, ICICI Bank, Yes Bank and IDFC First Bank in the first phase in the first four cities, and subsequently, Bank of Baroda, Union Bank of India, HDFC Bank, and Kotak Mahindra Bank. The scope of the pilot may be expanded gradually to cover more banks, users, and locations.

## How can an individual use the e-rupee?

E-rupees will be issued in the same denominations as paper currency and coins, and will be distributed through the intermediaries, that is banks. Transactions will be through a digital wallet offered by the participating banks, and stored on mobile phones and devices. Transactions can be both person to person (P2P) and person to merchant (P2M). For P2M transactions (such as shopping), there will be QR codes at the merchant location. A user will be able to withdraw digital tokens from banks in the same way she can currently withdraw physical cash. She will be able to keep her digital tokens in the wallet, and spend them online or in person, or transfer them via an app.

## How is this different from other wallets?

Not very different in terms of how it will be used. However, UPI-based apps like Google Pay and Paytm have a daily and per-transaction spending limit. The RBI has not fixed any limit on holding digital rupees in wallets. Digital rupee transactions above Rs 2 lakh are likely to be reported for tax matters.

## What are the types of e-rupee?

Based on usage and the functions performed by the digital rupee, and considering different levels of accessibility, the RBI has demarcated the digital rupee into retail and wholesale categories.

- ➔ Retail e-rupee (launched on Thursday) is an electronic version of cash primarily meant for retail transactions, which can potentially be used by almost everyone, and can provide access to safe money for payment and settlements.
- ➔ Wholesale CBDC is designed for restricted access to select financial institutions. It has the potential to transform the settlement systems for financial transactions undertaken by banks in the government securities (G-Sec) segment and inter-bank market, and make the capital market more efficient and secure in terms of operational costs, use of collateral, and liquidity management.

## CBDC Use in the World

A study by the Atlantic Council Geoeconomics Center found that around 105 countries are considering the possibility of introducing a CBDC that would be used primarily for inter-bank transactions. From the recently projected 35 countries by 2020, this is a significant jump. About 19 Group of Twenty (G20) countries are exploring issuing a CBDC and most of them have progressed beyond the preliminary research stage.

As far as the large-scale use of CBDCs is concerned, China has made the most progress among the developed countries. There are several successful pilot projects running in several cities in China. WeChat, the country's foremost payments platform and messaging app, recently launched a feature that allows users to select e-CNY, China's CBDC, as a method of payment on the platform.

## Unified Payments Interface (UPI)

It is an advanced version of the Immediate Payment Service (IMPS) - a round-the-clock (i.e. available 24 hours) service to make cashless payments faster, easier and smoother. UPI is a system that integrates multiple bank accounts into a single mobile application (any participating bank), multiple banking facilities, consolidated fund routing and merchant payments into a single fund and is governed by the National Payments Corporation of India (NPCI). ) launched UPI in the year 2016 with 21 member banks.

## **What was the need to introduce the e-rupee?**

Leveraging blockchain technology for the e-rupee is a stepping stone for India becoming a \$1 trillion digital economy. India is witnessing massive growth in digital transactions — the volume and value of UPI transactions increased by 118 per cent and more than 98 per cent respectively in Q2 2022 compared to Q2 2021. The digital rupee based on transparent and efficient technology will provide customers with continuous access to the payment system, whether wholesale or retail.

## **How is CBDC different from cryptocurrency?**

Being backed by the RBI, e-rupee is not comparable to private virtual currencies like Bitcoin that have mushroomed over the last decade. Private virtual currencies sit at substantial odds with the historical concept of money. They are not commodities or claims on commodities as they have no intrinsic value; claims that they are akin to gold seem opportunistic. Usually, certainly for the most popular ones now, they do not represent any person's debt or liabilities. There is no issuer. They are not money — certainly not currency — as the word has come to be understood historically.

Cryptos are not backed by the central bank; in fact, the RBI wants the government to ban cryptocurrencies in India. The inherent design of cryptocurrencies is more geared to bypass the established and regulated intermediation and control arrangements that play the crucial role of ensuring integrity and stability of the monetary and financial ecosystem, says the RBI's concept note on digital rupee.

## **What are the benefits of e-rupee?**

CBDC has the potential to provide significant benefits such as reduced dependency on cash, higher seigniorage due to lower transaction costs, and reduced settlement risk. To the extent large cash usage can be replaced by CBDCs, the cost of printing, transporting, storing and distributing currency can be reduced, the RBI says.

Digital rupee has some clear advantages over other digital payments systems: payments are final, and thus reduce settlement risk in the financial system. When CBDC is transacted instead of bank balances, the need for interbank settlement disappears. CBDC can also enable a more real-time and cost-effective globalization of payment systems.

Along with reducing operational costs associated with physical cash management, it will also enhance settlement efficiency and spur innovation in cross-border payments and offer the public the same uses as any private virtual currency without the risks associated with it.

## **Will CBDC work in offline mode?**

There is no indication yet from the RBI that the e-rupee will function in the offline mode. While offline functionality will allow CBDC transactions in regions with poor or no Internet connectivity and create digital footprints of the unbanked population in the financial system, the RBI feels that a risk of 'double-spending' exists in offline mode — because it will be technically possible to use a CBDC unit more than once without updating the common ledger of CBDC. However, the RBI has said this can be mitigated to a large extent by technical solutions and appropriate business rules including a monetary limit on offline transactions.

## Is it vulnerable to cyber-attacks?

The RBI concept paper says CBDC ecosystems may be at similar risk for cyber-attacks as existing payment systems. Cybersecurity considerations will need to be taken care of, both for the item and the environment. A large number of concerns, relating to data security and financial stability, have come up in the investigations surrounding CBDCs around the world. US Fed Chair Jerome Powell said that cyber risk was his primary concern around financial stability. A UK House of Lords report has highlighted that privacy risks and cybersecurity were the primary reasons to avoid developing CBDC.

### Expected Question

**Que. Consider the following statements-**

1. National Payments Corporation of India (NPCI) launched UPI in the year 2016.
2. Central Bank Digital Currency (CBDC) – 'Digital Rupee' or 'E-Rupee' (e₹) has been launched by the Reserve Bank of India (RBI).

Which of the above statements is/are true?

- (a) Only 1                                      (b) Only 2  
(c) Neither 1 nor 2                              (d) Both 1 and 2

**Answer : D**

### Mains Expected Question & Format

**Que.: What is CBDC or Digital Rupee? Explain in detail the Digital Rupee or E-Rupee recently launched by RBI and also explain its benefits and risks.**

**Answer Format :**

❖ **Introduction (40-50 words)**

What is digital rupee.

❖ **Main Body (140-150 words)**

Explain in detail the various aspects of Digital Rupee launched by RBI.

❖ **Conclusion (40-50 words)**

Explain the benefits and risks associated with digital rupee.

**Note:** - The question of the main examination given for practice is designed keeping in mind the upcoming UPSC mains examination. Therefore, to get an answer to this question, you can take the help of this source as well as other sources related to this topic.