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Emergence of Digital Rupee: Challenges and Opportunities

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***Abstract:** The RBI hope to solve issues with current physical currency and cross border transactions by launching the digital rupee. The process of transferring money across borders and exchanging for foreign currency is time consuming and costly. The digital rupee's introduction is expected to improve bank cash management and operations through instantaneous cross border money transfers.*

It can be difficult to place track cash in India. By addressing anonymity, CBDC can resolve it in a non-threatening manner and lessen the need for payment. The government goal of a cashless economy will be strengthened by the savings it will realize in operational, printing, distribution and storage expenses.

***Keywords:** Digital rupee, CBDC, Cross border transactions,*

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I. INTRODUCTION

The Reserve Bank of India (RBI) has declared the launch of India's Central Bank Digital Currency (CBDC) for individual users on Thursday, December 1st. The digital rupee (e-R) will be available for use by customers and merchants in Mumbai, New Delhi, Bengaluru, and Bhubaneswar. State Bank of India, ICICI Bank, Yes Bank, and IDFC First Bank will provide digital currency services in four cities. The service will be available in Ahmedabad, Gangtok, Guwahati, Hyderabad, Indore, Kochi, Lucknow, Patna, and Shimla. Bank of Baroda, Union Bank of India, HDFC Bank, and Kotak Mahindra Bank are



confirmed participants. e-R is a digital token that is recognised as a form of legal money. The currency will be supplied through banks in the form of both paper and coin denominations. The Reserve Bank of India (RBI) has stated that individuals can engage in transactions utilising electronic rupees (e-R) by utilising a digital wallet provided by partner banks and stored on mobile devices. The Reserve Bank of India (RBI) has put forth two variations of the digital rupee: retail (CBDC R) and wholesale (CBDC W). The CBDC

R will serve as a digital representation of physical currency specifically designed for retail transactions. On the other hand, the CBDC W will exclusively facilitate interbank transfers and other wholesale transactions.

What Position Do Other Nations Hold Regarding Digital Currency?

1. CBDCs have already been legalised in several nations in one form or another. The Bahamas' central bank launched a digital currency in 2020.
2. Globally, more and more central banks are starting to explore the viability, utility, and value of digital currencies.
3. China is the only large nation testing a CBDC on a wide scale; it was obliged to do so due to the absence of competition for two big participants in the digital payments market. Another explanation for the rush could be a desire to beat China, which is also intending to introduce its e-CNY (Chinese Yuan Renminbi). China wants to support a currency that competes with the dollar in international trade and finance.
4. In Sweden, banknotes make up 1% of the total currency. However, the Riksbank (the Swedish Central Bank) is taking its time sanctioning a CBDC. The Swedish Monetary Authority has been investigating proposals for five years but has not yet made up its mind whether to create an electronic krona.
5. The US Fed is searching for opinions from the public on whether to offer an official tender to take on privately issued stable coins that rely on the dollar as the most extensively used unit of account worldwide.

6. A 24-month research is going on employing a digital euro. If everything goes according to plan, the ECB might start selling it by 2025.

7. Japan might postpone the debut of its digital currency until 2026.

8. Although it's impossible to fathom how an e-rupee can discourage the public from the temptation of cryptocurrencies' "get-rich-quick" schemes, India's hastened deadline looks to be at least partially a response to them.

Under Digital Rupee transactions can be both person to person (P2P) and person to merchant (P2M) (P2M). QR codes allow merchant payments. The e-R would offer confidence, safety, and final settlement. Like cash, it yields no interest and can be converted to bank savings.

The RBI hopes to advance India in the virtual currency race by introducing a digital rupee. And because of cryptocurrency. Blockchain will increase efficiency and transparency in the digital rupee. It offers real-time ledger tracking and maintenance.

- Wholesale and retail customers can utilise the payment system 24/7.
- Indian consumers pay directly.
- Cost reduction.
- Real-time settlements.
- Digital rupees don't require a bank account.
- Transnational trades swiftly.
- No volatility risk since RBI backs it.
- Digital rupees are mobile, unlike currency notes.

I.A. FINANCIAL CONSULTING COMPANY OUTLINES FOUR CBDC USE CASES IN INDIA

Programmed payments: CBDC can create 'fit-for-purpose' money for social welfare and other payments in a country. In such instances, the central bank can pay pre-programmed CBDC to designated recipients. Pre-programmed CBDC may be distributed as LPG subsidies (DBT). PwC India proposes CBDCs for speedier cross-border payments. Collaboration among the world's major economies, particularly India, could boost CBDC transmission and conversion. CBDC-based retail payments may use payment instruments. CBDC universal access may include offline payments. PwC India argues CBDC's technology and digital nature make it preferable to conventional digital payments. When coupled with ownership record transfers, its impregnable character can prove ownership. Cross-border money transfers and currency exchanges are time-consuming and costly. The deployment of the digital rupee will streamline bank cash management and operations.

In India, tracking cash placement is tough. CBDC can resolve anonymity non-intimidatingly and minimise cash demand. The government will save on operational, printing, distributing, and storing costs, enabling a cashless economy. CBDC, a digital fiat currency, may seem like Bitcoin. Technically, they're distinct. CBDCs and Bitcoin employ DLT, however the former has permission identification. Bitcoin's permissionless blockchain lets any user to run the programme and make transactions. CBDC's permissioned blockchain works as follows:

In a CBDC, the DLT includes numerous copies of financial records rather than a central database; Each replica of this ledger is owned by a different financial firm regulated by the Central Bank. These firms work on DLT. The central monetary authority controls who can view or edit financial data on the blockchain.

WHY DO WE NEED THE DIGITAL RUPEE?



• To reduce operational costs in managing physical cash and bring efficiency in payments systems



• To boost innovation in cross-border payments



• To quell concerns over money laundering, terror financing, tax evasion with private cryptocurrencies like Bitcoin, Ether, etc.

CBDC provides rapid credit to MSMEs in India. More MSMEs employing CBDC will improve banks' borrower risk profiles. This helps speed up MSME financing. Cyber-attacks and threats, monetary sovereignty danger, bank disintermediation, financial inclusion risk, and privacy harm are all possible hazards warns Pwc India.

I-B. DIGITAL RUPEE VS CRYPTO CURRENCY

- A decentralised sort of money without any middlemen in the transaction process is what bitcoin is, to put it simply. On the other hand, a digital rupee is a centralised currency that the RBI issues and manages.
- While cryptocurrencies run on a public blockchain in a decentralised infrastructure, the digital rupee employs a private blockchain.
- Cryptocurrency users who make payments stay anonymous. With the digital rupee, it's not the same, though.
- The digital rupee is exclusively employed for payments and other financial operations in terms of use cases. However, cryptocurrencies are intrinsically both assets and money.
- When inflationary pressure is present, the digital rupee reacts. Cryptocurrency, on the other hand, serves as a hedge against inflation.
- The digital rupee is effective in terms of scalability because it uses permissioned networks, which are analogous to databases.

I.C. OPPORTUNITIES

CBDC blends the simplicity and security of digital currencies with the regulated, reserve-backed money circulation of traditional banks. Digital currency will lower Indian depositors' risk of bank losses.

E-rupees may be a safer alternative to bank savings, which underpin 76 trillion in real-time payments like PhonePe, Google Pay, and Paytm. As more purchases are done online, the trust in demand deposits as cash-equivalents may become theoretical-.E- money could keep convertibility real. It might decrease the need for a costly network of correspondent banks. For Indians working overseas, sending money home will become simpler and cheaper, saving India, the world's top remittance receiver, millions.

I.D. CHALLENGES

If e-cash develops mainstream and RBI doesn't limit mobile wallet storage, weaker banks may struggle to preserve low-cost deposits. Small banks may be reluctant to sell loan assets and sacrifice income as they lose their cushion. Their less-liquid balance sheets could provoke bank runs. Advanced nations worry about the dwindling use of banknotes, notably after Covid. Unlike cash, most CBDCs will be traceable by central banks. Fintech firms may lose access to data collected for inexpensive loans to consumers without collateral if payment apps can't observe their transactions.

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