Saarj Journal on Banking & Insurance Research (SJBIR)
ISSN: 2319-1422 Vol. 15, Issue 04, July 2026 SJIF 2022=7.852
A peer reviewed journal

CENTRAL BANK DIGITAL CURRENCY- CHANGING THE COMMERCIAL BANKING LANDSCAPE IN INDIA

Dr Shashi Bala*

*Principal
G.K.S.M. Government College,
Tanda Urmar, Punjab, INDIA
Email Id: Shashi_97@Yahoo.Com

DOI: 10.5958/2319-1422.2026.00007.9

ABSTRACT

Digital Currency of Reserve bank of India called Digital Rupee or Central Bank Digital currency (CBDC) represents one of the most significant developments in the evolution of the modern monetary and financial system. It aims at transforming India's financial sector, streamlining financial transactions, reducing cash management. Unlike crypto currencies and privately issued digital money, a CBDC is a digital form of sovereign currency issued and backed by a central bank. In India, the Reserve Bank of India (RBI) introduced pilot programmes for the Digital Rupee (e₹) in both wholesale and retail segments. The retail CBDC pilot was launched in December 2022, with commercial banks acting as intermediaries for distribution through digital wallets.

The introduction of CBDC has important implications for commercial banks because bank deposits constitute a major source of bank funding and are central to the process of financial intermediation. While CBDC can improve payment efficiency, reduce transaction costs, encourage financial inclusion and create new opportunities for banks, it may also increase competition for traditional bank deposits and potentially affect bank liquidity, lending and profitability. Recent empirical evidence from India's live retail CBDC rollout suggests that CBDC eligibility reduced retail deposits by approximately 2.7%, particularly liquid savings deposits, although the impact on lending was initially negative and subsequently recovered.

This paper aims at examining the conceptual relationship between CBDC and commercial banks, analyses the opportunities and risks arising from CBDC adoption, and evaluates the Indian experience.

KEYWORDS: *Central Bank Digital Currency, CBDC, Digital Rupee, Commercial Banks, E₹, Bank Deposits, Financial Intermediation, Financial Stability In India.*

INTRODUCTION

Technological developments have fundamentally transformed the financial sector. Digital banking, mobile payments, internet banking and real-time payment systems have changed the manner in which individuals, businesses and governments conduct financial transactions. The next major development in this process is the emergence of **Central Bank Digital Currency (CBDC)**.CBDC is a digital form of money issued by a central bank. Unlike commercial bank deposits, which represent liabilities of commercial banks, CBDC represents a direct liability of the central bank. Consequently, it carries no credit risk of a commercial bank. The Reserve Bank of India has been actively exploring CBDC as part of the country's digital financial transformation. India's Digital Rupee, or **e₹**, is the digital form of the Indian rupee issued by the RBI. It is legal tender and can be used for payments and as a store of value. The RBI initiated the wholesale CBDC pilot in November 2022 and the retail CBDC pilot in December 2022. The wholesale pilot initially focused on settlement of transactions in government securities, while the retail pilot enabled person-to-

person and person-to-merchant transactions through participating banks.The development of CBDC raises an important question:

What will be the impact of central bank-issued digital money on the traditional business model of commercial banks?

This question is particularly important because commercial banks play a critical role in accepting deposits, providing credit, facilitating payments and supporting economic development.

Objectives of the Study

The major objectives of this research paper are:

1. To explain the concept and development of CBDC in India.
2. To analyse the relationship between CBDC and commercial banks.
3. To examine the potential impact of CBDC on bank deposits and lending.
4. To suggest measures for ensuring harmonious coexistence between CBDC and commercial banks.

Research Methodology

- The study is **descriptive and analytical** in nature. It is based primarily on secondary data and published literature.
- Recent empirical evidence on India's retail CBDC rollout has also been considered to assess its implications for commercial bank deposits and lending.

Concept of Central Bank Digital Currency

A Central Bank Digital Currency is a digital form of country's sovereign paper money currency issued and backed by a country's central bank.

- Legal tender: It holds same official value and legal status as cash
- Direct liability: it is direct liability of Central bank and not Commercial bank
- Not Bitcoin: unlike Bitcoin, it is centralised, stable and regulated by state
- Two forms: it is used in Retail (for public use) and Wholesale (for interbank settlements)

CBDCs can broadly be divided into:

1. **Retail CBDC**

Retail CBDC is intended for use by individuals and businesses for everyday transactions.

Examples include:

- Person-to-person payments
- Person-to-merchant payments
- Government payments
- Retail purchases
- Transfers between individuals

India's **e₹-R** represents the retail CBDC initiative.

2. **Wholesale CBDC**

Wholesale CBDC is designed primarily for financial institutions and other eligible participants.

It can be used for:

- Securities settlement
- Interbank transactions
- Cross-border payments
- Financial market settlement

The RBI's wholesale CBDC pilot was initially designed for settlement of secondary-market transactions in government securities. The RBI expected such settlement in central bank money to improve efficiency and reduce transaction costs.

CBDC and Commercial Banks: The Changing Relationship

Traditionally, the monetary system operates through a **two-tier structure**.

The central bank issues currency and maintains reserves, while commercial banks create deposits and provide credit to the economy.

CBDC introduces another form of central-bank money that can be directly accessible to the public.

The relationship can therefore be represented as:

Central Bank → CBDC → Consumers/Businesses

along side the traditional:

Central Bank → Commercial Banks → Bank Deposits → Consumers/Businesses

The coexistence of these two forms of digital money creates both opportunities and challenges.

The BIS describes the existing monetary system as one in which central banks provide public money while commercial banks create money through deposits.

A. Impact of CBDC on Commercial Bank Deposits

One of the most important concerns surrounding CBDC is its potential effect on bank deposits. Commercial banks rely heavily on deposits as a relatively stable source of funding. If customers transfer substantial amounts from bank deposits into CBDC wallets, banks could experience a reduction in their deposit base.

This could lead to:

CBDC adoption → reduction in deposits → higher funding costs → possible impact on lending

The BIS has identified two possible forms of bank disintermediation:

a) Slow disintermediation

In normal circumstances, customers may gradually shift a portion of their deposits into CBDC.

b) Fast disintermediation

During financial stress, customers may rapidly transfer deposits from commercial banks into CBDC because CBDC is a direct liability of the central bank.

The BIS has highlighted both risks in its analysis of CBDC and banking.

Importantly, recent empirical evidence from India's Digital Rupee provides some support for the deposit-substitution hypothesis. A 2024 NBER study, revised in August 2026, found that CBDC eligibility reduced retail deposits by about **2.7%**, with the effect concentrated in liquid savings accounts, while term deposits were largely unaffected.

This finding is particularly significant because it represents evidence from an actual retail CBDC implementation rather than a purely theoretical model.

B. Impact of CBDC on Bank Lending

Commercial banks transform deposits into loans and investments. Therefore, a substantial decline in deposits could potentially affect credit creation.

However, the relationship is not necessarily one-to-one.

Banks have alternative sources of funding, including:

- Wholesale borrowing
- Certificates of deposit
- Bonds
- Interbank funding
- Central bank liquidity facilities
- Retained earnings

The NBER evidence from India suggests that although bank credit initially declined following CBDC adoption, it subsequently recovered.

Similarly, BIS research suggests that a decline in bank deposits resulting from CBDC adoption does not necessarily translate into an equivalent reduction in bank lending.

Thus, the ultimate effect on lending will depend on:

- CBDC adoption levels
- CBDC holding limits
- Bank liquidity
- Alternative funding sources
- Monetary policy
- Interest rates
- Customer preferences

C. Opportunities for Commercial Banks

CBDC should not be viewed solely as a threat to commercial banks. It can create several important opportunities.

I. New Payment Infrastructure

Banks can become important providers of CBDC wallets and payment services.

In India's pilot framework, e₹ is distributed through participating banks and users can transact through digital wallets.

II. Reduction in Transaction Costs

CBDC can potentially reduce the cost and complexity of payment and settlement systems.

Wholesale CBDC can particularly improve settlement efficiency in financial markets.

III. Financial Inclusion

CBDC can potentially provide digital payment facilities to individuals who have limited access to conventional banking services.

Offline functionality may also improve usability in areas with limited internet connectivity.

IV. Innovation in Banking Services

Commercial banks can develop:

- CBDC wallets
- Merchant payment solutions
- Programmable payment services
- CBDC-based lending products
- Corporate payment solutions
- Cross-border payment services

V. Improved Government Payments

CBDC can potentially facilitate faster and more targeted government payments, subsidies and benefit transfers.

The RBI has identified potential use cases involving direct benefit transfers and other targeted payments

D. **Challenges for Commercial Banks**

Despite these opportunities, CBDC presents significant challenges.

I. Deposit Disintermediation

The most important concern is the possibility that CBDC will compete directly with bank deposits.

II. Higher Cost of Funds

If customers prefer CBDC, banks may have to offer higher deposit interest rates to retain customers.

III. Liquidity Risk

Large-scale movement of deposits into CBDC could increase liquidity pressures, especially during financial crises.

IV. Profitability Pressure

Banks may face pressure on their net interest margins because they may need to increase deposit rates while maintaining competitive lending rates.

V. Cyber security Risks

CBDC introduces additional technological infrastructure that requires strong protection against:

- Cyber attacks
- Fraud
- Identity theft
- System failures
- Data breaches

i. Privacy Concerns

Digital transactions can potentially create extensive transaction records. Therefore, an appropriate balance must be maintained between:

Financial transparency + privacy protection

Role of Commercial Banks in India's CBDC Ecosystem

India's approach has been particularly significant because commercial banks have been incorporated into the CBDC distribution framework rather than being completely bypassed.

The RBI's retail CBDC model allows banks and eligible non-bank entities to provide e₹ wallets. As of January 2025, RBI documentation listed **15 banks** offering CBDC wallets in the pilot.

This intermediary-based approach offers an important advantage:

CBDC can modernise the monetary system without completely eliminating the role of commercial banks.

Commercial banks can therefore evolve from being primarily deposit-taking and lending institutions into broader **digital financial service providers**.

13. CBDC versus Commercial Bank Deposits

Basis	**CBDC**	**Commercial Bank Deposit**
Issuer	Central Bank	Commercial Bank
Liability of	Central Bank	Commercial Bank
Credit Risk	Very low/direct central-bank liability	Depends on bank; mitigated by deposit insurance where applicable
Primary Purpose	Digital sovereign money/payments	Savings, payments and financial intermediation
Interest	Generally design-dependent; India's e₹ is designed primarily as digital cash	Usually interest-bearing
Lending Creation	Does not directly create bank loans	Supports bank lending
Role in Monetary System	Central-bank money	Commercial-bank money
Financial Intermediation	Limited/direct	Core function
Payment Innovation	Programmability and digital functionality possible	Broad range of banking/payment services

Findings of the Study

The study leads to the following major findings:

1. CBDC represents a significant evolution in sovereign money.
2. CBDC is fundamentally different from cryptocurrencies because it is issued by the central bank.
3. CBDC can improve the efficiency of digital payments and settlement.
4. Commercial banks remain important intermediaries in India's CBDC model.
5. CBDC can compete with bank deposits, particularly highly liquid savings deposits.
6. India's early empirical evidence indicates a measurable but relatively moderate reduction in retail deposits following CBDC eligibility.
7. The impact on bank lending need not be proportional to the decline in deposits.

8. CBDC could increase competition in deposit markets and potentially improve monetary policy transmission.
9. Excessive CBDC adoption could create liquidity and financial stability risks.
10. Appropriate CBDC design—including holding limits and other safeguards—can help preserve the stability of the banking system.

CONCLUSION

Central Bank Digital Currency is likely to become an important component of the future monetary and financial system. Its emergence represents not simply a technological change in payments but a potential transformation in the relationship between central banks, commercial banks and consumers.

For commercial banks, CBDC presents a **dual challenge and opportunity**. On one hand, it may compete with traditional bank deposits and create pressure on bank funding, liquidity and profitability. On the other hand, it can provide banks with new opportunities in digital payments, financial services, programmable transactions and innovative banking products.

India's experience is particularly important because the RBI has adopted a model in which commercial banks continue to play a significant intermediary role. Early empirical evidence indicates that CBDC can reduce certain categories of bank deposits, but the effect on lending appears manageable so far.

Therefore, the future should not necessarily be viewed as **"CBDC versus commercial banks."** Rather, the more appropriate perspective is **"CBDC with transformed commercial banking."**

REFERENCES

1. Reserve Bank of India. *Annual Report / Report on Currency and Finance*, relevant editions.

2. Reserve Bank of India. *Operationalisation of Central Bank Digital Currency – Wholesale (e₹-W) Pilot*, 2022.

3. Reserve Bank of India. *Operationalisation of Central Bank Digital Currency – Retail (e₹-R) Pilot*, 2022.

4. Bank for International Settlements. *Central Bank Digital Currencies*, CPMI Papers.

5. Bank for International Settlements. *CBDC and Banks: Disintermediating Fast and Slow*, BIS Working Paper No. 1280, 2025.

6. Abad, J., Nuño Barrau, G., & Thomas, C. *CBDC and the Operational Framework of Monetary Policy*, BIS Working Paper No. 1126, 2023.

7. Di Maggio, M., Ghosh, P., Ghosh, S. K., Vats, N., & Wu, A. *Central Bank Digital Currency (CBDC), Bank Deposits, and Digital Payments: First Evidence from a Live Retail CBDC*, NBER Working Paper No. 32457, 2024, revised 2026.