



Digital Banking and RBI's Digital Rupee (CBDC): A Pathway to Financial Inclusion

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Abstract:

Digital banking has transformed financial transactions by enabling paperless, instant and 24/7 secure banking services. In India, the RBI has played a crucial role in promoting digital transactions through initiatives such as UPI, IMPS, NEFT and RTGS facilities. A significant development in this sector is the introduction of the digital rupee, known as Central Bank Digital Currency (CBDC), launched by the RBI in 2022. The digital rupee aims to enhance financial inclusion by providing banking access to unbanked and under-banked populations, ensuring security, transparency, convenient and reducing cash dependency. This facilitates low-cost transactions, encourages digital payment adoption and reduces financial fraud. However, challenges such as digital literacy, cyber security risks, and digital infrastructure limitations must be addressed for successful implementation. This research paper explores the impact of digital banking and the digital rupee on financial inclusion in India. Findings suggest that CBDC lowers transaction costs, reduces reliance on cash, enhances cross-border payments and improves financial security. Despite challenges, integrating CBDC with digital banking can bridge the financial gap, empower rural populations and support India's transition to a cashless economy.

Keywords: *Digital Banking, Digital Rupee, CBDC, Financial Inclusion, Unified Payment Interface*

Introduction:

Digital banking has revolutionized the financial sector by enabling paperless, instant 24/7 convenient and secures financial transactions. It provides individuals with access banking services through mobile applications, internet banking and digital payment systems. In India, the RBI has played a crucial role in promoting digital transactions through initiatives such as the Unified Payments Interface (UPI), Immediate Payment Service (IMPS), National Electronic Funds Transfer (NEFT) and Real Time Gross Settlement (RTGS). One of the most significant recent developments in digital banking is the introduction of the RBI's digital rupee; this is known as Central Bank Digital Currency (CBDC) launched by the RBI in 2022. It aims to complement the existing financial ecosystem by offering a government-backed, digital alternative to physical cash.

Digital rupee enhances financial inclusion by providing banking access to unbanked and under banked populations, ensuring financial security, transparency and reducing dependency on cash. It facilitates instant, low-cost transactions, encourages digital payment adoption and helps to reduce financial fraud. Meanwhile, challenges such as digital literacy, cyber security risks and infrastructure limitations need to be addressed for successful implementation. With the right policies and technological advancements, the digital rupee can bridge the financial gap, empower rural and remote peoples and support India's goal of a cashless economy. By integrating digital

banking with CBDC, India can ensure inclusive growth, economic stability and equitable financial access for all peoples.

About RBI's Digital Rupee (CBDC):

The Digital Rupee, also known as the e-Rupee is a digital form of Indian currency issued by the RBI. It is often mistaken for being a form of Cryptocurrency. However, unlike Cryptocurrency, which is decentralized and operates without a central governing body, the Digital Rupee is a sovereign currency backed by the RBI. The key aim of introducing this digital currency is to complement the existing physical currency and offer an alternative to people that is secure, efficient and convenient to conduct transactions. The Digital Rupee pilot programme was launched in December 2022. It is part of the broad initiative by the Indian government and the RBI to modernize the financial system and enhance financial inclusion while promoting the use of digital currency over physical cash. While the e-Rupee is a legal tender issued by the RBI, it is different from the way an individual holds deposits in bank accounts. It does not attract interest that is usually gained from traditional deposits. However, one's deposits held in the bank can be converted into digital rupees and vice versa.

Review of Literature:

Several studies have examined the role of digital banking and financial technology in promoting financial inclusion.

According to IMF New Era of Digital Money Report (2021), digital money has the potential to transform the financial sector. Emerging markets and lower-income countries stand to gain the most from this dramatic shift. Broad and inexpensive access to digital money and phone-based transactions could open the door to financial services for 1.7 billion people without traditional bank accounts. And countries may grow increasingly connected, facilitating trade and market integration. The real-world impact is significant. But with any opportunity comes risk. The passage to this new world could exclude those on the other side of the digital divide. It also opens the door to fragmentation, currency substitution, and loss of policy effectiveness. The transition must be well managed, coordinated, and soundly regulated.

World Bank Report on Central Bank Digital Currencies Cross-Border Payments, Review of Current Experiments and Ideas (2021), highlighted that over the years, the demand for seamless and inexpensive cross-border payments has grown in parallel with growth in international E-commerce, remittances and tourism. The cross-border payments have not yet kept pace with the intensive modernization that has characterized domestic payment services worldwide. Cross-border payments continue to be largely based on the old correspondent banking model, which has not quite benefited from the same flow of innovations as domestic payments have over the recent decades. This is mainly because managing change in the cross-border payment and settlement space is considerably more challenging than doing so in the area of domestic payments and settlements, due to the inevitable presence and complex interactions of multiple jurisdictions that feature different policy and regulatory requirements, use dissimilar standards and operating procedures, and difficulties in the organization of the necessary collective action

IMF Working Paper on Stay Competitive in the Digital Age: The Future of Banks (2021) showed that digital technology has evolved alongside the development of the computer and the internet. The shift to digital technology from mechanical and analogue electronic technology started as early as the 1940s and led to the adoption of digital computers and digital record keeping. In the 1970s, the home computer was introduced, but it was not used widely until the 1990s. While only 8 percent of U.S. households owned a personal computer in 1984, by 2000, 51

percent of U.S. households owned a computer. In the same period, the internet, developed in the 1960s and 1970s, became one of the most prominent applications of digital technology. Wider internet usage, however, did not happen until the 2000s, once computers had become a common household appliance. In late 2005, the internet was used by a population reached one billion. Another key development in diffusing digital technology has been the rapid rise of mobile technology. The wide-spread use of mobile devices and intrinsic advantages of a global network has led to an explosion of mobile-based innovations influencing all aspects of human lives. One prominent example is mobile-based payments.

IBEF (2025) asserted that there has been a great increase in the volume of transactions conducted via digital channels, compared with traditional forms of transacting via physical bank notes, since the introduction of the Unified Payments Interface (UPI). The RBI governor in March 2024 announced that retail digital payments rose from 162 crore transactions in FY13 to over 14,726 crore transactions in FY24 (as of February 2024).

A study by Demirgüç-Kunt et al. (2018) found that access to digital financial services reduces transaction costs and enhances financial accessibility for marginalized populations. Similarly, Claessens and Rojas-Suarez (2021) highlighted that mobile banking services, especially in developing economies, help bridge the gap between formal banking institutions and unbanked individuals.

Hayashi and Toh (2022) indicated that although central banks in several emerging markets and developing economies have implemented or plan to implement a general-purpose or retail CBDC to promote financial inclusion and improve their payment systems, central banks in many advanced economies have not yet found a compelling case to issue a retail CBDC.

Ozili (2023) reviewed the CBDC literature, and found that many central banks are researching the potential to issue a CBDC due to its many benefits but some studies have called for caution against over optimism about the potential benefits of CBDC due to the limiting nature of CBDC design and its inability to meet multiple competing goals.

Research on CBDCs suggests that digital currencies issued by central banks can enhance monetary policy effectiveness and promote financial stability. According to a report by the Bank for International Settlements (BIS-2021), CBDCs provide a secure and efficient medium of exchange, reducing dependency on physical cash and commercial banking systems. RBI's Digital Rupee is expected to play a transformative role in India's financial ecosystem. A study by the National Payments Corporation of India (NPCI-2022) emphasizes that CBDCs can improve financial literacy and accessibility by reducing the reliance on intermediaries.

IBEF (2025) showed that India is a developing nation with majority of the population residing in rural areas. It has been battling with the challenge of financial inclusion. This leads too much of the population having no bank accounts as they lack financial literacy as well as infrastructure. The lack of infrastructure, poor connectivity and socioeconomic barriers are the major contributors to the low financial inclusion of rural people. As per RBI reports, India's financial inclusion index is 56.4% as of March 2022. The Digital Rupee can be introduced in rural areas to bridge this gap as digital currency does not require fully functional bank accounts and it works offline, thereby boosting inclusion. The widespread usage of smartphones and growing internet penetration are major enablers of the adoption of digital currency.

According to RBI Report (2023), digital rupee can enhance cross-border transactions reduce fraud and increase transparency in financial dealings.

Digital banking has emerged as a powerful tool for enhancing financial inclusion, allowing individuals in underserved communities to access essential financial services through mobile devices and online platforms. By providing affordable and convenient banking solutions, digital banking helps bridge the gap between traditional financial institutions and those who have

been excluded from the formal economy. Furthermore, sustainable business models in the digital banking sector can foster long-term growth by prioritizing social responsibility and environmental stewardship, ultimately contributing to a more equitable and sustainable financial ecosystem (Rathod et al., 2024).

Digital banking has revolutionized the way individuals interact with financial services, making banking accessible to a broader demographic and promoting financial inclusion. This technological shift empowers underserved populations by providing them with tools and resources to manage their finances effectively, while also enhancing investment awareness through educational platforms and user-friendly investment apps. As more people engage with digital banking solutions, the potential for informed financial decision-making and increased participation in the investment landscape grows significantly (Bhave & Pawar, 2022).

Significance of the Study:

The introduction of the digital rupee or CBDC aligns with India's vision of a cashless economy and financial inclusion. This study is significant as it highlights several key benefits such as the digital rupee enhances financial inclusion by providing banking services to individuals who lack access to traditional banking systems. It also helps reduce cash dependency by promoting digital payments, thereby improving efficiency and security. Additionally, digital transactions increase transparency and security, making 24/7 financial services more traceable and reducing fraud and corruption. Moreover, the digital rupee supports economic growth by fostering a secure and efficient digital economy with faster financial transactions.

Objectives of the Study:

1. To study the impact of digital banking on financial inclusion in India.
2. To assess the role of RBI's CBDC in enhancing financial accessibility.
3. To examine the benefits and challenges associated with CBDC.

Research Methods:

The present research paper is based on secondary data such as various literatures reviews, case studies, articles in journals, magazines and reports of various national and international organizations/institutions.

Summary and Conclusion:

The adoption of digital banking has significantly increased in India, driven by platforms like UPI, IMPS, NEFT and RTGS. In 2017-18, the total digital payment transactions worth was Rs. 2,071 crore further it was increased by Rs. 18,737 crore in 2023-24. Meanwhile, UPI has seen more growth over the past five years. The introduction of the RBI's Digital Rupee further strengthens this trend by providing a government-backed, stable and efficient digital currency, ensuring seamless transactions across all sectors. One of the key benefits of the digital rupee is its role in improving financial inclusion. By providing banking access to individuals in remote and underserved areas, it bridges the financial gap. Unlike traditional banking, CBDCs do not require physical bank branches, enabling people without bank accounts to participate in the digital economy using minimal infrastructure. Additionally, digital banking and the digital rupee contribute to reducing reliance on physical cash, making transactions more efficient, 24/7 convenient and secure. By promoting cashless payments, the RBI's digital rupee helps minimize issues like counterfeit currency, theft and cash handling costs.

Another significant advantage of the digital rupee is its ability to lower transaction costs. Traditional banking transactions often involve intermediaries, leading to additional charges. The

digital rupee allows for direct peer-to-peer transactions, eliminating intermediaries and making digital payments more affordable for individuals and businesses for 24/7. Moreover, digital transactions leave a traceable record, reducing financial fraud, tax evasion and corruption. Since the digital rupee is issued and regulated by the RBI, it ensures high levels of security and transparency in financial activities. It also enables instant transactions without delays, making it a viable alternative to cash and traditional digital payments. Notwithstanding, it enhances cross-border payments by eliminating intermediaries, thereby reducing processing time and costs.

However, despite these benefits, certain challenges need to be addressed for the successful adoption of the digital rupee. The problems such as digital literacy, cyber security risks, internet accessibility in rural areas, difficulties of electricity and resistance to digital adoption pose significant barriers. Adequate policy measures, infrastructure development and user awareness programs are essential to overcome these challenges. The digital rupee plays a crucial role in supporting India's vision of a cashless and digitally empowered economy. By integrating CBDC with digital banking services, the country can achieve greater financial inclusion, economic stability and equitable financial access for all citizens. These findings highlight the transformative potential of digital banking and the RBI's digital rupee in shaping India's financial future while emphasizing the need for strategic implementation and policy support.

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