Chapter 1
Central Bank Digital Currency in India:
The Case for a Digital Rupee

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ABSTRACT

This chapter explores the benefits and issues surrounding the digital Rupee, also known as the eRupee or the central bank digital currency in India. The study found that Indian people who were interested in 'cryptocurrency' information were also interested in 'central bank digital currency' information. The study also showed that the introduction of CBDC has potential benefits such as reduced dependency on cash, higher seigniorage due to lower transaction costs, and reduced settlement risk. However, the India CBDC has associated risks that need to be carefully evaluated against the potential benefits. The introduction of a digital Rupee or CBDC in India will require legal and regulatory changes to make the phased CBDC implementation possible.

INTRODUCTION

The objective of this study is to explore the benefits and issues surrounding the digital Rupee, also known as the eRupee or the central bank digital currency in India.

A central bank digital currency (CBDC) is money in digital form and a legal tender issued by a central bank. A CBDC is the same as fiat currency and can be exchanged at a rate of one-to-one with the fiat paper currency or cash (Bordo, 2021; Chaum, Grothoff and Moser, 2021). The only difference is that a CBDC is money in digital form (Inozemtsev and Nektov, 2022; Kahn, Singh and Alwazir, 2022). Most CBDCs can be held in an account-based wallet or token-based wallet (Xu, 2022).

In August 2022, the Reserve Bank of India (RBI) announced that a digital rupee — a central bank digital currency — will be introduced in phases beginning with wholesale businesses in the 2022 to 2023 financial year. The India CBDC is being developed for both retail and wholesale use simultaneously. However, the Reserve Bank of India may roll out the digital currency for wholesale businesses

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first. There are four main motivations for issuing a CBDC in India, namely, (i) the Reserve Bank of India (RBI)'s desire to join other central banks that have issued a CBDC, (ii) the significant growth in digital transactions in India, (iii) the threat posed by private digital currencies, and (iii) the presence of a well-functioning and developed payment system in India.

Prior to the announcement of a phased CBDC implementation in India, the Reserve Bank of India had repeatedly opposed private digital currencies. It is widely believed that the emergence of private digital currencies, especially bitcoin, inspired the Reserve Bank of India to begin plans to launch a CBDC digital Rupee. The Reserve Bank of India also proposed amendments to the Reserve Bank of India Act of 1934 which would enable it to launch a digital rupee CBDC. The government also plans to prohibit all private digital currencies in India with certain exceptions. The RBI's argument for prohibiting private digital currencies is that private digital currencies encourage money laundering, terror financing and tax evasion. The Reserve Bank of India also noted that the number of Unified Payments Interface (UPI) transactions in India grew by 427 percent from March 2020 to August 2022 while the number of UPI QR code enabled payment acceptance points increased by 86 percent year-on-year at end of July 2022. The Reserve Bank of India suggests that these developments in the digital payment space reflect the growing acceptance and preference for digital contactless payments in India and indicates that India is ready to embrace a central bank digital currency. This development also inspired the Reserve Bank of India to initiate a phased CBDC implementation strategy. The Reserve Bank of India will also examine the appropriate use case of the India CBDC and issue a CBDC that is non-disruptive.

Meanwhile, in the literature, many studies focus on the best use case of CBDC such as Fegatelli (2022), Michel (2022), Agur et al (2022), Zhang and Huang (2022), Davoodalhosseini (2022), Minesso et al (2022), Auer et al (2022) and Chen and Siklos (2022). Only few studies focus on country specific CBDC such as Xu (2022) and Ozili (2022b). But no study has examined the case of India.

The discussion about the India CBDC contributes to the growing academic and policy literature on central bank digital currency. Existing studies have examined CBDC design issues such as account-based CBDC versus token-based CBDC, one-tiered CBDC or two-tiered CBDC, distributed ledger CBDC or centralized CBDC (e.g., Agur, Ari and Dell'Ariccia, 2022; Ozili, 2023; Kolozsi, Lehmann and Szalai, 2022; Frankó, Oláh, Sass, Hegedüs and Varga, 2022; Dinh and Dinh, 2022). Some studies have also examined the implications of CBDC for the financial stability and monetary policy objectives of the central bank (e.g., Bhowmik, 2022; Cova, Notarpietro, Pagano and Pisani, 2022; Davoodalhosseini, 2022; Kim and Kwon, 2019; Vallet, Kappes and Rochon, 2022; Wang and Hausken, 2022; Hamza and Jedidia, 2020). Other studies have examined how CBDC can improve financial inclusion for unbanked segments of the population (e.g., Ozili, 2022a). Existing studies have also examined country specific CBDC use cases in the US, Canada, China and Nigeria (e.g., García, Lands, Liu and Slive, 2020; Ricks, Crawford and Menand, 2020; Ozili, 2022b; Vodrážka, Bízek and Vojta, 2022; Coulter, 2022; Liu, Wang, Wu and Zhang, 2022; Slawotsky, 2022; Huang, 2022). But such studies do not exist for India. There is a need to explore the India CBDC, its benefits and issues. This study also contributes to the Indian CBDC literature. This paper focus on the Indian context. It provides early insight into the possible design, benefits and issues of the India CBDC.

The rest of the paper is structured as follows. Section 2 presents the literature review. Section 3 presents the data analysis. Section 4 presents the benefits of the India CBDC. Section 5 presents the possible operational CBDC design. Section 6 highlights some considerations for India. Section 7 highlights the risks to watch out for. Section 8 presents the conclusion.