

Chapter 22

A Systematic Study of Central Bank Digital Currency: Challenges, Limitations, and Its Effects on the Indian Economy

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ABSTRACT

This chapter examines central bank digital currencies (CBDCs) and their possible impact on the Indian economy in an age of digitization. Commercial value, user experience, legal frameworks, and financial stability are crucial to understanding digital currencies. CBDCs are a new payment infrastructure frontier. The chapter emphasizes the significant investments needed to build a large user and merchant network, highlighting the far-reaching effects of digital currencies. This exploration aims to demystify CBDCs as electronic variants of fiat currency. CBDCs, issued by central banks as legal money, are versatile and available to the public, financial institutions, and businesses for savings and transactions. The study describes the rise of digital cash by tracing currency from early barter systems to physical notes and coins. It admits initial skepticism about digital currencies due to their volatility, diversity, and lack of official backing.

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1. INTRODUCTION

It is crucial to analyze various dimensions to understand digital currencies fully. These dimensions include the commercial relevance of digital currencies, the user interface of digital currencies, the legal structure of digital currencies, and the ramifications for financial stability. Central bank digital currencies (also known as CBDCs) are a revolutionary form of payment infrastructure that requires recognition of the large investments required to build a comprehensive network that includes both consumers and merchants. This is because CBDCs are backed by central banks. Because there hasn't been widespread acceptance of Central Bank Digital Currencies (CBDCs), giving infrastructure the priority, it deserves. Raghava Suresh is currently employed with Tata Consultancy Services (TCS) as an industry advisor for banking, financial services, and insurance (BFSI). Central banks in several countries actively explore and implement their national digital currencies, typically referred to as Central Bank Digital Currency, or CBDC for short. Central Bank Digital Currencies (CBDCs) have the potential to be used in a manner that is equivalent to that of conventional tangible currency, and they can serve a variety of stakeholders, including the general public, financial institutions, and businesses.

The potential of Central Bank Digital Currencies (CBDCs), based on blockchain technology, a decentralized and permission less ledger platform, may be the primary reason for their foundation on blockchain technology. Individuals can use Central Bank Digital Currency (CBDC) for various activities, including saving money and conducting business transactions. These activities are collectively referred to as "transactional activities." The Central Bank Digital Currency (CBDC) can be defined briefly as the electronic embodiment of a country's authorized monetary unit, which exists solely in digital format. This is the most straightforward way to express the meaning of the term. It is of the utmost importance to emphasize that Central Bank Digital Currency (CBDC) is a valid form of payment supported by governmental jurisdiction. Digital currency systems use blockchain technology and operate within centralized networks, incorporating sophisticated procedures for verifying user identities.

Throughout human history, the development of monetary systems has displayed a dynamic and ever-changing nature. This development spans the transition from barter systems, in which physical things functioned as a method of exchange, through the introduction of metallic coins and paper currency as financial instruments and, most recently, the growth of digital currency as a mode of transaction. Barter systems were prevalent in ancient times and included actual objects. At first, the introduction of digital money was met with widespread cynicism. This was mostly due to concerns regarding the existence of many digital currencies, their quick proliferation, significant volatility, and the absence of support from the government. Cryptocurrencies' decentralized and safe nature has raised concerns about their long-term stability, reflected in significant price shifts.

In a budget statement, Nirmala Sitharaman, the Finance Minister of India, stated that the country's central bank wants to launch a Central Bank Digital Currency (CBDC) in the fiscal year 2022-2023. The Indian government has made an important decision in this regard. At the same time, some countries, including China, the United States, South Korea, South Africa, Canada, and Cambodia, are all actively working towards building their centralized digital currencies. The Reserve Bank of India (RBI) has initiated a comprehensive study to evaluate the potential benefits and drawbacks associated with the introduction of a central bank digital currency (CBDC) within the Indian framework. This study intends to determine whether India should implement a CBDC. The major purpose of this study is to determine the fundamental design components that would support the seamless integration of Central Bank Digital Currency (CBDC) with minimal upheaval while also comparing the current system to an

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