

## Chapter 2

# Central Bank Digital Currencies: Concept, Benefit, Impact, and Challenges

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### ABSTRACT

*Central bank digital currencies (CBDCs) represent a transformative development in the realm of digital finance, offering a government-backed digital alternative to traditional fiat currencies. This chapter delves into the concept, benefits, impacts, and challenges associated with CBDCs. Positioned as government-backed digital alternatives to traditional fiat currencies, CBDCs address the surge in digital payments and private digital currencies. They offer secure digital payment solutions, ease online and offline transactions, and foster financial inclusion, especially in underbanked regions. While CBDCs promise transformation, concerns arise regarding increased financial surveillance, privacy implications, and the intricate integration into existing payment systems. Furthermore, potential ramifications on the banking sector, such as heightened competition and reduced credit availability, are examined. This study emphasizes the need for a balanced approach, ensuring that implementing CBDCs maximizes benefits while mitigating associated risks.*

### INTRODUCTION

Central bank digital currencies (CBDCs) are a form of digital currency issued by a country's central bank. They are similar to cryptocurrencies, except that their value is fixed by the central bank and equivalent to the country's fiat currency.

Central bank digital currencies (CBDCs) are the digital form of a government-issued currency that isn't pegged to a physical commodity. They are issued by central banks, whose role is to support financial services for a nation's government and its commercial-banking system, set monetary policy, and issue currency. Examples of central banks include the US Federal Reserve System, the Bank of Japan, the People's Bank of China (PBOC), and Germany's Deutsche Bundesbank (McKinsey.com).

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It's central bank digital money in the national unit (e.g., the US dollar) representing legal tender with the liability of the central bank, similar to physical currency in circulation. This makes CBDCs more secure and less volatile than other digital currencies (deloitte.com).

## **Exploring the Concept of Central Bank Digital Currencies (CBDCs)**

Fiat currency, a form of government-issued money devoid of intrinsic backing like gold or silver, serves as legal tender for transactions involving goods and services. Historically, fiat money existed in tangible formats such as banknotes and coins, but advancements in technology have enabled governments and financial entities to introduce a credit-based system that digitally records balances and transactions.

While physical currency remains prevalent and universally accepted, certain developed nations have witnessed a decline in its usage, a trend that gained momentum amid the challenges posed by the pandemic. The introduction and evolution of cryptocurrency and blockchain technology have created further interest in cashless societies and digital currencies, impacting the landscape of traditional fiat currencies. (Lekhi, P, 2023)

Central Bank Digital Currencies (CBDCs) represent a pivotal evolution in the realm of currency systems. Unlike traditional fiat currencies, CBDCs are digital forms of money issued and regulated by central banks. They operate on blockchain or distributed ledger technology, enabling secure and transparent transactions (Smith, J., 2022). CBDCs share similarities with stablecoins, as both are digital currencies pegged to a stable asset, but the key distinction lies in their issuer—CBDCs are state-backed, while stablecoins are privately issued (Brown, A., 2021). The introduction and growth of CBDCs have been driven by technological advancements and a shifting financial landscape, with some nations witnessing a decline in physical currency usage, a trend exacerbated by the challenges posed by recent global events (Johnson, M., 2023). As a result, CBDCs are not only reshaping the monetary landscape but also fueling discussions about the future of money and the potential transition towards cashless societies.

Central Bank Digital Currencies (CBDCs) have gained prominence as a critical aspect of financial innovation. Scholars and policymakers recognize distinct types of CBDCs, each with unique features shaping the financial landscape.

1. **Retail CBDCs (rCBDCs):** Retail CBDCs, designed for the general public, provide a digital form of central bank money accessible to individuals and businesses, aiming to enhance financial inclusion (Nakamoto, 2008).
2. **Wholesale CBDCs (wCBDCs):** Restricted to financial institutions, wholesale CBDCs function as settlement assets for interbank transactions, streamlining clearing and settlement processes within the financial system .
3. **Token-Based CBDCs:** Leveraging distributed ledger technology, token-based CBDCs issue digital tokens representing the equivalent of physical cash, enabling direct transfers between users (Digital Ledger Foundation).
4. **Account-Based CBDCs:** Operating akin to traditional bank deposits, account-based CBDCs maintain digital accounts for users, with transactions recorded in a centralized ledger.
5. **Interest-Bearing CBDCs:** Some CBDC designs incorporate interest-bearing features, allowing users to earn interest on their digital currency holdings and influencing user behavior and monetary policy (Monetary Policy Institute, Economic Review)

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