

CBDC - Central Bank Digital Currency, Meaning, Examples, Significance

July 6, 2026 • vajiramandravi.com



Central Bank Digital Currencies (CBDCs) represent a digital version of a country's fiat currency, issued and regulated by central banks. These digital currencies aim to modernize financial systems, increase financial inclusion, and improve payment efficiency, offering a government-backed option for everyday transactions.

As countries like the **Bahamas**, **China**, and **India** have begun piloting or implementing CBDCs, global adoption is steadily growing. While CBDCs bring advantages like reducing transaction costs and enhancing monetary policy, challenges related to privacy, cybersecurity, and infrastructure need to be addressed.

What are CBDCs?

Central Bank Digital Currencies (CBDCs) are digital versions of a country's **fiat currency**, issued and regulated by the **central bank**. Unlike decentralized cryptocurrencies, CBDCs are **centralized** and fully controlled by the government, offering a state-backed alternative to physical cash. CBDCs can be used for a variety of purposes, including daily transactions, cross-border payments, and enhancing financial inclusion while providing a more secure and efficient form of digital money.

CBDC Global Adoption

The **Bahamas** was the first country to launch a nationwide Central Bank Digital Currency (CBDC), named the **Sand Dollar**, in 2020. Following this, **Nigeria** also rolled out its **eNaira** in the same year. In April 2020, **China** became the first major economy to pilot its digital currency, the **e-CNY** or **Digital Yuan**. Since then, numerous central banks have initiated pilot programs and research projects to assess the viability and usability of CBDCs within their economies.

e-Rupee in India

India has introduced the **e-Rupee**, a form of digital currency, through the **Reserve Bank of India (RBI)**. The e-Rupee aims to modernize the financial infrastructure, ensure financial inclusion, and reduce transaction costs. The digital currency was initially rolled out in phases, with pilot projects for wholesale and retail use in 2022 and 2023. The e-Rupee seeks to integrate with India's existing digital payment systems, providing a reliable, government-backed alternative to cash for everyday transactions.

CBDC Types

CBDCs can be divided into two primary categories: **wholesale** and **retail**, each serving different functions in the financial system. Wholesale CBDCs are primarily used by financial institutions, while retail CBDCs are designed for use by consumers and businesses in everyday transactions.

- **Wholesale CBDCs:** These are designed for use by financial institutions and market participants for large-scale transactions, such as interbank transfers and securities settlement.
 - Financial institutions can hold accounts with central banks to deposit funds or settle interbank transactions.
 - Central banks can use tools like reserve requirements or interest rates on reserves to influence lending and manage monetary policy.
- **Retail CBDCs:** These are government-backed digital currencies designed for public use, enabling consumers and businesses to make transactions. They are of two types:
 - **Token-based retail CBDCs:** These currencies can be accessed using private and public keys, allowing for anonymous transactions.
 - **Account-based retail CBDCs:** These require digital identification for users to access and use their accounts.

CBDC Significance

CBDCs present a range of potential benefits for financial systems, and individuals. Their ability to enhance efficiency, security, and accessibility positions them as a key tool in modernizing financial infrastructure and promoting economic stability. The key significance of CBDCs includes:

- **Financial Inclusion:** By providing access to digital money, CBDCs can bring unbanked populations into the formal financial system, improving financial access for all.

- **Reduced Transaction Costs:** CBDCs can lower the costs of transactions by eliminating intermediaries, thus making payments more efficient and affordable.
- **Enhanced Monetary Policy:** With direct control over the digital currency, central banks can more effectively implement monetary policy, such as controlling inflation and managing interest rates.
- **Security:** CBDCs offer greater security compared to physical currency, as they are resistant to counterfeiting and fraud, with transactions being traceable.
- **Eliminating Third-Party Risk:** CBDCs can reduce risks associated with events like bank failures or bank runs.
- **Lower Cross-Border Transaction Costs:** By simplifying the distribution systems and fostering greater cooperation between jurisdictions, CBDCs can lower the high costs of cross-border transactions.
- **Direct Consumer-Central Bank Connection:** CBDCs can establish a direct connection between consumers and central banks, eliminating the need for costly intermediary infrastructure and improving the efficiency of payment systems.

CBDC Challenges

Despite their promising potential, the implementation and widespread adoption of CBDCs face several challenges. These hurdles range from privacy concerns to technological limitations, which must be addressed for CBDCs to achieve their full potential in enhancing financial systems globally. Key challenges of CBDCs include:

- **Privacy Concerns:** The digital nature of CBDCs makes it easier for governments to track and monitor transactions, raising concerns about user privacy and surveillance.
- **Cybersecurity:** With increased reliance on digital systems, CBDCs are susceptible to cyberattacks, requiring robust security measures to safeguard against potential breaches.
- **Infrastructure and Accessibility:** Implementing a CBDC system requires significant digital technological infrastructure, which could be a challenge for developing nations with limited digital infrastructure.
- **Impact on the Banking System:** The widespread adoption of CBDCs could disrupt traditional banking models, potentially reducing the role of commercial banks in credit distribution.

CBDC vs Cryptocurrency

While both CBDC and Cryptocurrency are digital forms of currency, they differ significantly in terms of their structure, purpose, and regulation. Key differences between CBDCs and cryptocurrencies include:

- **Centralization vs Decentralization:** CBDCs are issued and controlled by central banks, making them a centralized currency.
 - Cryptocurrencies, like **Bitcoin**, operate on decentralized networks, meaning no central authority oversees their creation or distribution.
- **Stability:** CBDCs are designed to be stable and maintain their value, as they are backed by the government.
 - Cryptocurrencies, on the other hand, are volatile and can experience significant price fluctuations.
- **Legal Tender:** CBDCs are legal tender, meaning they are recognized by governments as an official form of payment.
 - Cryptocurrencies, although accepted by some businesses, are not legally recognized as official currency in most countries.

- **Usage:** CBDCs are primarily intended for official use within a national economy, while cryptocurrencies are often used as a store of value or for speculative investment.

Source: <https://vajiramandravi.com/upsc-exam/central-bank-digital-currency/>

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