Digital Currencies and Cross-Border Payments: An Overview

Junie Joseph, Office of Industry and Competitiveness Analysis

Digital currencies are one of the latest innovations to payment systems being explored by governments, institutions, firms, and households. Digital currencies promise faster, cheaper, and more transparent transactions, especially across borders, but there are concerns about effective implementation and the need for regulatory oversight. This brief contrasts two main types, Central Bank Digital Currencies (CBDCs) and cryptocurrencies (which are not backed by government central banks), and their cross-border usage.

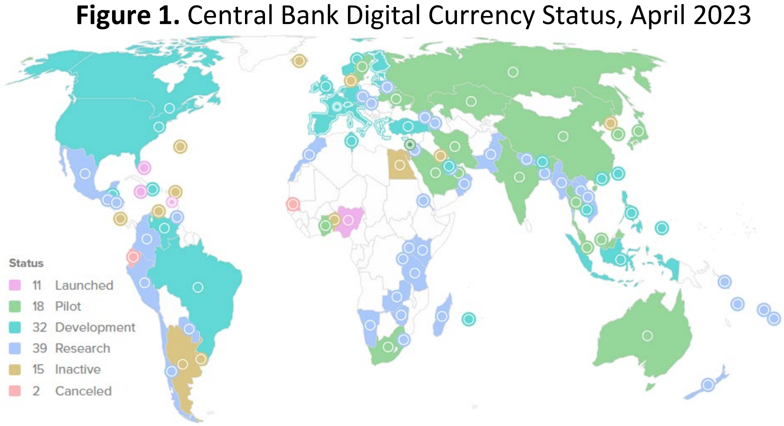
Digital currencies, or currency available only in digital form such as Central Bank Digital Currencies (CBDCs) and decentralized cryptocurrencies, have begun to transform payment services over the past decade. Used by central banks, private corporations, and increasingly individual consumers, digital currencies may enhance efficiency in payments transactions, accelerate settlement flows, and reduce costs by shortening payment chains. Digital currencies may also expand financial inclusion through reduced costs and barriers. As a result, digital currencies have the potential to reshape the global payments industry, particularly cross-border payments, especially if concerns such as cybersecurity and regulatory issues are addressed. Table 1 compares the two major types of digital currencies for cross-border payments.

Table 1. Comparison of the two major digital currency categories

Elements	Central Bank Digital Currencies (CBDCs)	Cryptocurrencies
Authority	Centralized	Decentralized
Accessibility	Determined by governments	Unrestricted
Technology	Distributed ledger or central database	Distributed ledger
Cross-border use	Wholesale or retail	Retail
Examples	Bahama's Sand Dollar, China's DCEP	Bitcoin, Ethereum, Tether

Central bank digital currencies (CBDC): Central bank digital currencies (CBDCs) are a digital form of a country's currency issued by its central bank. These digital currencies function much like fiat money—government-issued tenders backed by the nation's sovereign credit—except that because they operate by using distributed ledger technology (such as blockchain) or a central database, they are generally not anonymous by design: users and transactions are recorded.[1] As of April 2023, 100 countries have launched or are researching, developing, or piloting CBDCs (figure 1). Led by the Bahamas, ten Caribbean nations and Nigeria have fully launched a CBDC, and 14 other countries are piloting CBDCs, including China which has extended its pilot to foreign visitors and the United States, where the Federal Reserve Bank of New York launched a proof-of-concept pilot to be completed in 2023.

Figure 1. Central Bank Digital Currency Status, April 2023



Source: Atlantic Council, Atlantic Council CBDC Tracker (accessed 4/18/2023).

Facilitating improved cross-border transactions is a common component for CBDC development. Though each nation's CBDC may be implemented differently depending on domestic policy needs and goals, the majority of CBDC projects include cross-border payments, particularly for "wholesale settlement," i.e., settlement of cross-border interbank transactions. Retail CBDCs—CBDCs for the general public's use—are largely under consideration, which may improve consumer cross-border transactions and financial inclusion in their respective

[1] There are ways to develop CBDCs that are anonymous for lower value transactions. See ECB, Exploring anonymity in central bank digital currencies, December 2019.

The views expressed solely represent the opinions and professional research of the author. The content of the EBOT is not meant to represent the views of the U.S. International Trade Commission, any of its individual Commissioners, or the United States government.

economies through reduced barriers to financial services and reduced consumer costs.

On the other hand, there are concerns regarding CBDCs, including their potential to drastically change the roles of various institutions in the financial sector by removing the middlemen in financial transactions and thus cause negative impacts on the sector's stability, privacy, and security. In addition to countries and currency unions, numerous multilateral organizations, including the Bank for International Settlements, Financial Stability Board, International Monetary Fund, and World Bank, have committed to doing research on how CBDCs can address these concerns in addition to improving financial inclusion and other sustainable development goals.

Cryptocurrencies: Cryptocurrencies rely on cryptography and distributed ledger technology, such as blockchain, to provide a secure, auditable record of transactions without a centralized authority.[2] Consequently, since cryptocurrencies' first major inception with Bitcoin in 2009, they have become widely accessible to the general public globally. An estimated 13.7 percent of the U.S. population owned cryptocurrency in 2022. Globally, industry observers estimate there are over 420 million global cryptocurrency users as of April 5, 2023. According to the same source, nations with the most estimated cryptocurrency users are the United States (46 million), India (27 million), Pakistan (26 million), Nigeria (22 million) and Vietnam (20 million). By continent, Asia (260 million) has the most estimated cryptocurrency users, followed by North America (54 million) and Africa (38 million). Furthermore, major financial firms and payment providers such as Square, PayPal, and Mastercard have facilitated purchases with Bitcoin and other cryptocurrencies, with PayPal holding $604 million in cryptocurrency for its customers in 2022.

Because of their anonymous global user base and decentralized framework, cryptocurrency transactions are freely conducted across borders. Especially in economies with weakening national currencies or depressed interest rates, cryptocurrencies are an attractive alternative for consumers seeking to invest as traditional investment assets (i.e., bonds, securities) in foreign markets typically have higher barriers to investing. Cryptocurrencies may also provide relative stability in economies with rapid inflation and reduce cross-border transaction risks. Nevertheless, cryptocurrencies are susceptible to large value fluctuations, security issues, regulatory barriers, and transactional delays, particularly when finding market participants to exchange large transaction values. For example, cryptocurrencies have recently declined to an estimated global market capitalization of $1.3 trillion in April 2023, declining by 33 percent compared to the same time last year. Being largely unregulated, firms operating in the crypto exchange industry are susceptible to mismanagement and drawdowns. These limitations undermine their broad application in commercial cross-border payments which account for roughly 80 percent of total international payments.[3] Increased use as a cross-border payments system may require increased adoption, regulation, ensuring the security of assets, and transaction management.

Looking forward, many retailers and financial firms believe that digital currencies will be ubiquitous in the next five to ten years. As a result, governments are increasingly investigating efforts to regulate the industry, while not hindering innovation.

Sources: Allison, "Remember JPM Coin? Next Step Is Programmable Money," CoinDesk, 6/7/2021; Atlantic Council, "Central Bank Digital Currency Tracker," accessed 9/7/2022 ; CBDC Tracker accessed 10/31/2022 ; CPI, "Central bank digital currencies for cross-border payments," BIS, 7/2021; CPI, "Cross-border Retail Payments," BIS, 2/2018; Crypto.com, "Crypto Market Sizing Report 2021 and 2022 Forecast," 1/19/2022; Deloitte, "Deloitte's 2021 Global Blockchain Survey," 2021; Federal Reserve Board of Governors, "Money and Payments," 1/2022; Financial Stability Board, "Enhancing Cross-border Payments," 10/13/2020; Gura, "Fears of Crypto Contagion," *NPR*, 11/22/2022; McKinsey, "2022 Global Payments Report," 10/2022; Moretti and Narain, "Regulating Crypto," IMF, 9/2022; Ossinger, "The World's Cryptocurrency Is Now Worth," *Time*, 11/8/2021; Salzman, "Bitcoin Was Supposed to Be a Way Around," Barron's, 4/9/2021; Tobias and Mancini Griffoli, "The Rise of Digital Money", IMF, 7/15/2019; Triple A, "Global Crypto Adoption," accessed 4/5/2023 ; Triple A, "Crypto Ownership United States," accessed 4/13/2023 ; Tzanetos, "Cryptocurrency statistics 2022," Bankrate, 7/8/2022; Wolff, "The competing priorities facing U.S. crypto regulations," Brookings, 10/17/2022; Deloitte, "Merchants getting ready for crypto," 2022; Campbell, "Bowman says Fed's crypto oversight," *American Banker*, 1/10/2023; ECB, "Crypto-assets," 2/15/2023.

[2] Centralized and cryptocurrencies with concentrated control may occur if some investors own a large share of its market.

[3] Consumer cross-border payments include remittance services and consumer-to-business payment services while commercial cross-border payments services include all other business transactions and documentary trade finance.

The views expressed solely represent the opinions and professional research of the author. The content of the EBOT is not meant to represent the views of the U.S. International Trade Commission, any of its individual Commissioners, or the United States government.