

# Central bank digital currency evolution in 2023: From investigation to preparation

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By [Alisha Chhangani](#)

The momentum behind Central Bank Digital Currencies (CBDCs) has remained strong in the second half of 2023. New research from our [CBDC tracker](#) shows that 130 countries are now exploring a CBDC, representing 98 percent of global GDP. A new high of sixty-four countries are now in the advanced phase of exploration (launch, pilot, or development). Notably, the European Central Bank (ECB) announced a preparation phase to lay the foundations for a digital euro, and PetroChina, a Chinese oil and gas company, completed the first international crude oil trade using the digital yuan (e-CNY).

As the year comes to a close, we are taking stock of the progress on CBDCs around the world since our last check in, [in March](#).

The single biggest news since then concerns [the Eurosystem](#): The European Central Bank (ECB), one of the largest central banks in the world, took a significant step toward CBDC exploration, announcing a new “preparation phase” for a digital euro in October. The digital euro is intended to be a digital form of cash that provides offline services, high levels of privacy, and instant settlements in central bank money. The ECB spent the last two years in its “investigative phase” where the bank explored potential design and distribution models for a CBDC. The new “preparation phase” will begin in November 2023, and will last for at least two years. This critical phase will lay

the foundations for a digital euro, focusing on finalizing a rulebook, selecting providers for platform and infrastructure development, and conducting extensive testing and experimentation.

One of the key features in the investigative phase is implementing a compensation model. This model aims to create incentives for banks and payment service providers (PSPs) to distribute digital euro and to ensure that these payments will be free of charge and widely accepted across the euro area. Although this phase will not include a decision on whether to issue a digital euro, it signals a commitment to preparing and innovating for the future of digital currency in the Eurozone. The ECB's approach emphasizes the significance of comprehensive research and collaboration with industry stakeholders. As the preparation phase progresses, it is expected to generate valuable insights that may play a pivotal role in shaping the introduction of a digital euro, and potentially influencing the border financial landscape.

The ECB is not the only central bank making progress in CBDC development: Here's a tour of how CBDCs have developed over the past eight months.

## Country updates

### [Argentina](#)

Juan Agustín D'Attellis Noguera, Director of the Central Bank of Argentina, announced that the bank is working on the legal framework for the CBDC project in pesos. Argentina is considering introducing a CBDC to primarily address economic issues and inflation.

### [Australia](#)

In October, Mastercard successfully concluded a CBDC blockchain pilot with

the Reserve Bank of Australia (RBA), demonstrating the potential for CBDCs to interoperate with various blockchains. However, as of November 2023, the RBA suggests that the development of a full-scale CBDC is still a few years away.

## [Brazil](#)

The Central Bank of Brazil is addressing issues of privacy and infrastructure as it develops the digital real (DREX). The first-phase launch is planned for May 2024, aiming to expand their CBDC across all financial services.

## [China](#)

PetroChina, a Chinese oil and gas company, has completed the first international crude oil trade using China, the e-CNY. The transaction involved the purchase of 1 million barrels of crude oil settled in e-CNY at the Shanghai Petroleum and Natural Gas Exchange. The deal was part of the efforts to address the Shanghai municipal government's requirements to use the e-CNY in cross-border trade.

## [India](#)

The Reserve Bank of India intends to launch its CBDC in the interbank borrowing market, particularly the call money market, using CBDCs as tokens for call money settlement. India's CBDC is currently undergoing a pilot phase, with the central bank aiming for one million daily transactions by the end of 2023.

## [Japan](#)

The Bank of Japan launched a forum in partnership with 60 companies for the pilot program on a digital yen. The discussions will focus on various aspects of retail settlements with CBDCs.

## [Nepal](#)

Nepal Rastra Bank announced plans to develop a CBDC. However, this will be challenging with ongoing bans on cryptocurrency and stablecoin activity.

## [Philippines](#)

The Philippines is moving forward with plans for a wholesale CBDC, partnering with Hyperledger Fabric for its first digital peso pilot, Project Agila. The pilot program aims to enhance large cross-border foreign currency transfers and mitigate settlement risks by using a wholesale CBDC.

## [Russia](#)

Russia is pushing forward with its plans for a digital ruble, aiming for mass adoption among its citizens by 2027. This follows the Russian Parliament passing a digital ruble bill in August.

## [South Korea](#)

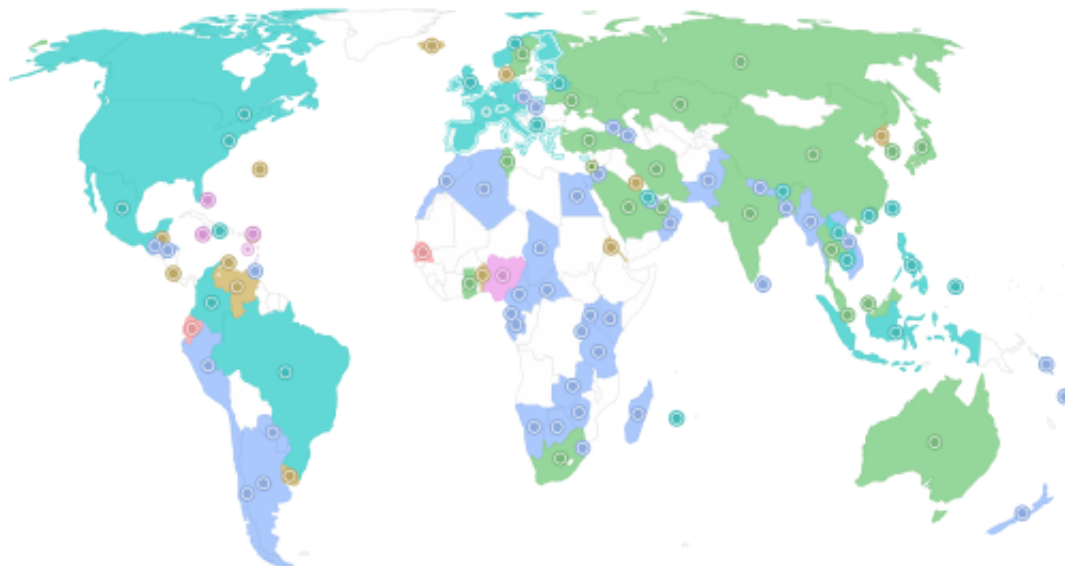
The Bank of Korea, the Financial Services Commission, and the Financial Supervisory Service are jointly planning a pilot test for a CBDC to assess its potential use in both retail and wholesale payments. Wholesale testing will begin this month and retail testing will begin at the end of 2024.

## [Switzerland](#)

The Swiss National Bank is partnering with six commercial banks and the SIX Swiss Exchange to pilot a wholesale central bank digital currency (CBDC) named the Swiss franc wCBDC. The pilot, known as Helvetia Phase III, will test the use of the Swiss franc wCBDC for settling digital securities transactions from December 2023 to June 2024.

## United States

Congressman Stephen Lynch (D-MA) reintroduced legislation to develop a US CBDC in September. This move followed the announcement of the Congressional Digital Dollar Caucus, a group that will focus on advancing the development and understanding of a digital dollar.



## Central Bank Digital Currency Tracker

[Our flagship Central Bank Digital Currency \(CBDC\) Tracker takes you inside the rapid evolution of money all over the world. The interactive database now features 130 countries— triple the number of countries we first identified as being active in CBDC development in 2020.](#)

## **Cross-border projects**

### Project Mariana

The Bank of International Settlements (BIS) concluded Project Mariana, a wholesale CBDC experiment in collaboration with central banks from France, Singapore, and Switzerland, focusing on cross-border trading and settlement using automatic market makers. The project aimed to enhance efficiency and mitigate credit and settlement risks, while highlighting the importance of international cooperation and interoperability of digital currencies.

### [Project Sela](#)

The BIS, alongside the central banks of Hong Kong and Israel, successfully completed a retail CBDC test, Project Sela. Their proof-of-concept retail CBDC combined cash-like features with digital infrastructure while emphasizing privacy and accessibility.

## Looking ahead

The GeoEconomics Center will continue to track CBDC exploration around the world, as governments and central banks continue to adopt efficient, resilient, and inclusive digital solutions. To stay updated on these developments, follow our CBDC tracker and our [Future of Money](#) work. As we enter 2024, we can expect much more from the digital currency world.

Join the GeoEconomics Center on November 28th for an upcoming conference: "Exploring central bank digital currency: Evaluating challenges & developing international standards." This first-of-its-kind convening of leaders from international financial institutions, central banks, technology providers, and governments aims to establish an understanding of the issues before a country decides to develop a CBDC.



[November 28, 2023](#)

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