Digital Euro: Is a CBDC Really Necessary for Europeans?

Leonardas Marcinkevičius

Policy Analyst, LFMI

23 October 2024

Summary

- The European Central Bank (ECB) is progressing with the Digital Euro project, aiming to introduce a central bank digital currency (CBDC) by October 2025.
- The European Commission has proposed making the digital euro legal tender and requiring merchants to accept it in retail transactions.
- Financial service providers must offer digital euro accounts free of charge to improve payment services and financial inclusion.
- The digital euro may not significantly improve financial inclusion and questions its necessity over existing private market solutions.
- Cybersecurity risks and costs associated with the digital euro are concerns, given past ECB system hacks and the need for a clear budget and risk prevention plan.
- The ECB will implement restrictions to prevent the digital euro from becoming a speculative investment, aiming for stability in the financial system.

Table of contents

SUMMARY 1

TABLE OF CONTENTS 2

INTRODUCTION 4

MECHANISM OF THE DIGITAL EURO 4

NO JUSTIFIABLE NEED TO DEVIATE FROM THE BASELINE SCENARIO 5

CYBERSECURITY THREATS 6

MONETARY POLICY CHALLENGES 6

CONCLUSION 7

REFERENCES 8

About the Lithuanian Free Market Institute (LFMI)

The Lithuanian Free Market Institute (LFMI) is a Vilnius-based think tank committed to promoting economic freedom and individual liberties in Lithuania. Founded in 1990, their mission is to support initiatives that enhance economic freedom, foster collaboration among free market advocates, and emphasise liberal democracy, the rule of law and an open society.

About EPICENTER

EPICENTER, the European Policy Information Center, is an independent initiative of twelve leading think tanks from across Europe. It seeks to inform the European policy debate and promote the principles of a free society by bringing together the expertise of its members.

EPICENTER is formed by the Center for Political Studies (Denmark), Civil Development Forum (Poland), Fundalib (Spain), the Institut économique Molinari (France), the Institute of Economic Affairs (UK), the Institute of Economic and Social Studies (Slovakia), the Institute for Market Studies (Bulgaria), Istituto Bruno Leoni (Italy), KEFiM (Greece), the Lithuanian Free Market Institute, Prometheus (Germany), and Timbro (Sweden). Like its members, EPICENTER is politically independent and does not accept taxpayer funding.

Introduction

Central bank digital currency (CBDC) projects are gaining momentum worldwide. The European Central Bank (ECB) is no exception. In October 2023 it announced the completion of the investigatory phase of the Digital Euro project. The project is now in the preparatory phase,1 which will continue until October 2025. It aims to introduce a CBDC in Europe.

Even before the investigation was completed on 28 June 2023, the European Commission submitted two related projects to the European Parliament. The first proposal aims to expand the concept of central bank funds to include a digital euro for retail use (European Commission 2023a). Per this proposal, the ECB will assume liability for the digital form of money, similar to cash, implying that it will start participating in the retail deposits market (to better understand the European Commission's approach, it is useful to compare the chosen model with a possible alternative presented in table 1). The second proposal aims to amend current regulations to define the CBDC as legal tender, requiring merchants (with specified exceptions) to accept the digital euro in retail transactions (European Commission 2023b).

As part of the digital euro project, financial service providers (FSPs) will be required to provide digital euro account opening services free of charge. By mandating this, the ECB aims to improve payment service availability for consumers in a digitised economy and enhance monetary policy effectiveness. It also seeks to increase financial inclusion by providing electronic payment opportunities to euro area residents who do not have access to banking services.

To evaluate the potential benefits and risks of implementing a CBDC in the euro area, the Lithuanian Free Market Institute (LFMI) analysed the European Commission's proposals and found that the implementation contradicts the principles of quality legislation, which state that new regulation can only be justified by proving the insufficiency of maintaining the 'baseline scenario', that is, continuing to rely on private financial market initiatives.

Mechanism of the digital Euro

In the current European financial system, two forms of money coexist: commercial bank money and central bank money. These forms of money differ in terms of who assumes liability toward the user. Central bank money includes 'base' money – physical national currency (in this case, euros) in the form of cash (banknotes and coins) – and mandatory reserves held by commercial banks at the central bank for interbank settlements. The essential novelty of a retail central bank digital currency (CBDC) is that the central bank assumes liability for it, regarding it as legal tender currency.

To use the CBDC, consumers will need to open a digital euro payment account through an intermediary – a credit or financial services institution operating within the EU. The European Commission's regulation on the digital euro mandates that "all credit institutions providing payment account services would be required to provide basic digital euro payment services upon request of their clients" (2023a), that is, basic digital euro services should be provided to individuals free of charge.

Additionally, the European Commission has proposed changing the definition of 'legal tender' (2023b). By amending current regulations and defining the CBDC as legal tender, merchants (with specified exceptions) will be required to accept digital euros in retail transactions.

In 2021, the European Court of Justice clarified that the definition of legal tender does not include mandatory acceptance of retail payments (Dietrich and Haring v Rundfunk 2021). The Court concluded that legal tender can only not be refused if it is used to settle a debt expressed in the same currency unit. In response, the European Commission proposed changing the definition of legal tender to stipulate: *"The legal tender status of euro banknotes and coins means that they must be accepted at full face value, enabling the payment obligation to be met' (2023b)"* Under this proposed definition, recipients cannot refuse euro banknotes and/or coins presented to fulfil an obligation. This means that the euro cash or CBDC would have to be mandatorily accepted not only in debt repayments but also in all retail transactions by residents and businesses in the euro area.

Table 1. Possible classifications of CBDC

Classification per	Model chosen by the European Commission	Possible Alternative
CBDC usage	**Retail**: Intended for the general public and can be used for everyday transactions, similar to physical cash or payment cards. Individuals and businesses can hold and use retail CBDCs for making payments.	**Wholesale**: Used for interbank and large-scale transactions between financial institutions. It would be meant for settlements between banks and other financial entities only.
Operational mechanism	**Account-based**: Transactions are recorded in a ledger, and users access their CBDC-based funds through accounts. In this model, each user has a digital wallet linked to their unique identifier, such as a phone number or national identification.	**Token-based**: Tokens would represent the value and issuance of central bank currency, but the transaction accounting would occur in a decentralised manner. Users could hold digital euros and conduct transactions directly without intermediaries such as commercial banks. Essentially, this would be similar to cryptocurrencies.
Interaction with the Central Bank	**Direct**: The central bank will issue CBDCs directly to the public or financial institutions. The obligation lies with the respective central bank.	**Indirect**: CBDCs would be issued to commercial banks, similar to how cash is distributed. Thus, the entry of CBDCs into the real economy would depend on the decisions of commercial banks.
Interest possibility	**Non–interest bearing**: Holding digital euros will not earn interest, making it unattractive for long-term savings.	**Interest-bearing**: Holding digital euros could earn interest, similar to deposits held in commercial banks.

No justifiable need to deviate from the baseline scenario

The European Commission claims that the key benefit of the digital euro is financial inclusion. However, it is doubtful whether the introduction of a CBDC would result in a significant improvement in access to financial services in an economically advanced region such as the euro area. The problem of financial inclusion is already being addressed by private market participants, and the number of Europeans not using banking services is steadily decreasing. In 2017, this number was 8.2%, and by 2021, it had fallen to just 3.54%. This indicates that even without the presence of the digital euro, more and more people are gaining access to a wider variety of payment methods.

In developing countries, where there is a greater need to improve access to financial services, CBDCs have not proven to be attractive financial instruments. For example, Nigeria's CBDC, eNaira, which was launched in 2021, is used by only 0.5% of the population. Moreover, data from the International Monetary Fund (IMF) shows that 98.5% of users who downloaded the eNaira electronic wallet never used it (Ree, J., 2023). This suggests that residents lacking the motivation or skills to use electronic payment methods will not be encouraged to do so by a central bank alternative.

The requirement that end users use the digital euro for free means that the euro area residents will have to bear the costs of compensating financial service intermediaries as well as maintaining infrastructure and systems. Private market participants already provide inexpensive or even free electronic payment services. Given that the digital euro will be developed based on existing market technology standards, it is unclear how the ECB plans to offer a more attractive lower-cost service. Without specifying the budget required for the introduction and maintenance of the digital euro, it is impossible to assess whether the benefits of a CBDC are proportional to the costs borne by taxpayers.

Cybersecurity threats

The European Commission's proposal states that the digital euro will protect "privacy while ensuring traceability" (2023a). However, the proposal does not identify specific technological solutions to achieve this objective. Transactions conducted in this system will be recorded in the central bank's ledger, and the CBDC does not address fundamental privacy risks because its operation is centralised.

The centralisation of electronic payments also poses serious cybersecurity threats. Creating a unified payment instrument would make the financial system less resilient to cyber risks, as even the most secure system, when concentrated in one place, becomes a target for hacking. In the past decade, the ECB's systems have been hacked at least twice: in 2014, hackers stole data from 20,000 individuals who had made various registrations in the ECB's database, while in 2018, hackers accessed The Banks' Integrated Reporting Dictionary (BIRD) system and stole the contact information of 500 users. Notably, the ECB reported this incident only almost a year after it occurred.

Moreover, IMF researchers note that, so far, central banks have paid little attention to analysing CBDCs from a cybersecurity perspective (Fanti, Lipsky and Moehr 2022). Therefore, the digital euro project raises concerns regarding both personal data protection and national security.

Monetary policy challenges

For developed economic regions such as the euro area, the potential monetary benefits of CBDCs are limited. Specialists from the Bank of Lithuania argue (Šiaudinis, 2019) that while CBDCs may benefit developing countries with underdeveloped financial systems, they pose more risks than advantages for advanced economies because poor accessibility of financial services is not a widespread issue in such territories. Further, implementing broad measures such as CBDCs could have a "disruptive" effect on the market. Thus, the benefit of a digital euro for the financially advanced euro area economy remains disputable.

CBDCs can only serve as a monetary policy tool when the target inflation rate is below 2%, not vice versa. Their usefulness in ensuring price stability is one-sided and limited. Thus, the digital euro could contribute to increased inflation, posing significant challenges for policymakers aiming to control it.

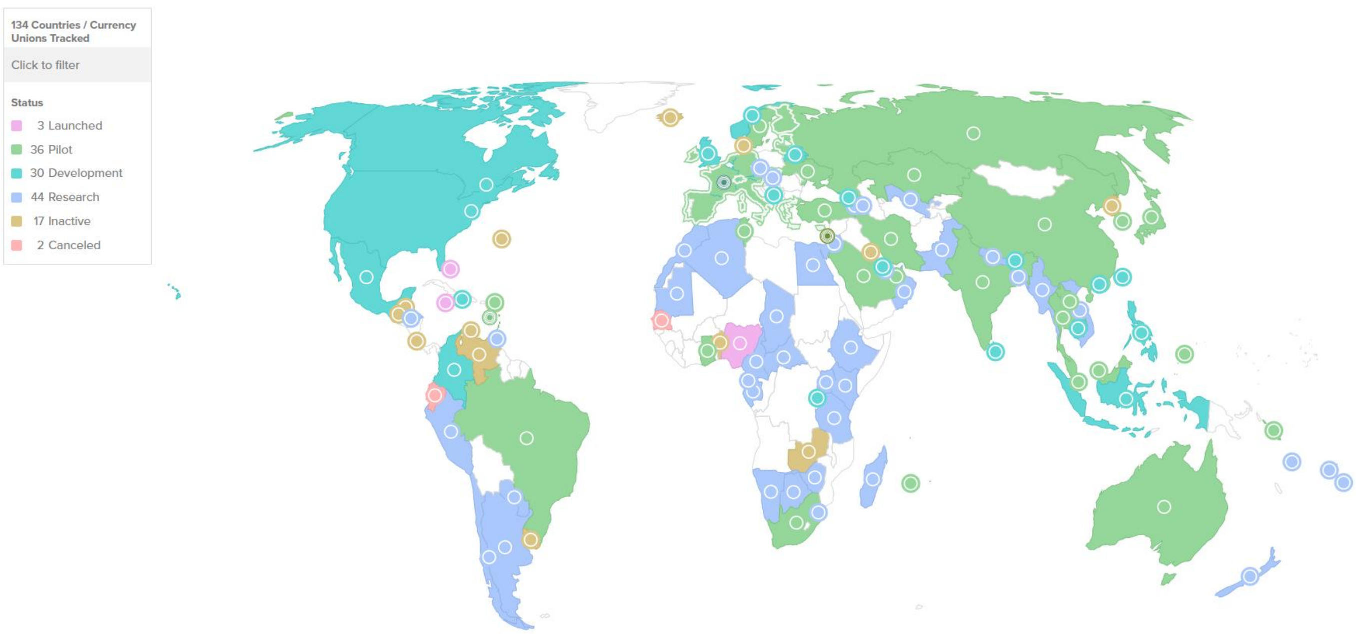
Nonetheless, to address the risks associated with structural changes in the deposit market, and to prevent the digital euro from becoming a speculative investment tool, the proposal includes provisions for withdrawal restrictions and savings limits (2023, a). The ECB is expected to develop instruments to limit the use of the digital euro as a store of value, including holding limits. Decisions on the implementation and extent of these measures would be at the discretion of the ECB, potentially including quantitative limits on digital euro savings.

Conclusion

A shift in the relationship between commercial service providers and clients will result in the banking business fulfilling government mandates rather than meeting consumer needs. For evaluating the needs of the Digital Euro project responsibly and effectively, the following are essential:

- A thorough cost–benefit analysis,
- transparency regarding the costs of launching and maintaining the project,
- a justification for significant changes to the current financial system, and
- a comprehensive risk prevention plan.

Figure 1. The evolution of CBDC worldwide.



Source: Atlantic Council

References

Atlantic Council. (no date) Central Bank digital currency tracker (https://www.atlanticcouncil.org/cbdctracker/).

European Commission. (2010) 'On the scope and effects of legal tender of euro banknotes and coins'. Brussels: European Commission. (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32010H0191).

European Commission. (2023a) 'Proposal for a regulation of the European Parliament and of the Council on the establishment of the digital euro'. Brussels: European Commission. (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52023PC0369).

European Commission. (2023b) 'Proposal for a regulation of the European Parliament and of the Council on the legal tender of euro banknotes and coins'. Brussels: European Commission. (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52023PC0364).

European Parliament. (2015) 'Directive (EU) 2015/2366 on payment services in the internal market'. Brussels: Council of the European Union. (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32015L2366).

Fanti, G., Lipsky, J., and Moehr, O. (2022) Central bankers' new cybersecurity challenge. *Finance and Development* (September) (https://www.imf.org/en/Publications/fandd/issues/2022/09/Central-bankers-new-cybersecurity-challenge-Fanti-Lipsky-Moehr).

Hemingway, B. (2022) The impact of CBDC on bank deposits and the interbank market. Bank of Lithuania Working Paper Series 110. Vilnius: Bank of Lithuania.

Judgment of the Court (Grand Chamber) in the Joined Cases C-422/19 and C-423/19, *Johannes Dietrich (C-422/19) and Norbert Häring (C-423/19) v. Hessischer Rundfunk*, 26 January 2021 (https://curia.europa.eu/juris/document/document.jsf?text=&docid=236962&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=11893485).

'Number of unbanked adult EU citizens more than halved in the last four years', *The European Savings and Retail Banking Group*, 14 July 2022 (https://www.wsbi-esbg.org/number-of-unbanked-adult-eu-citizens-more-than-halved-in-the-last-four-years/).

Ree, J. (2023) Nigeria's eNaira, one year after. Working Paper No. 2023/104. Paris: International Monetary Fund.

Šiaudinis, S. (2019) Digital currencies and central banking: A sense of déjà vu. Bank of Lithuania Occasional Paper Series No. 26. Vilnius: Bank of Lithuania.