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CBDC in the Euro Area

Analysis of the Digital Euro Project

Central bank digital currency (CBDC) projects are gaining momentum worldwide. This discussion paper examines the European Commission's proposed digital euro project to assess its impact on consumers, the commercial sector, financial institutions, and monetary policymakers.

The first part of the paper analyses the context that led to the development of the CBDC.

The second part then examines whether the advantages of the digital euro actually justify and outweigh its risks.

The third part assesses the financial stability and monetary risks that this change may pose for the modern banking system and commercial relations with consumers.

The paper concludes by analysing how the digital euro may affect price stability, which is a primary task of the European Central Bank.

Introduction

In the financial market, private innovation and competition, combined with minimal state intervention in retail payments, ensure accessibility of payment services and consumer inclusion. However, while this model has worked well so far, the European Central Bank (ECB) is now considering a significant overhaul of the system.

In October 2023, the ECB announced that it was concluding the research phase of the digital euro project and preparing for the introduction of a central bank digital currency (CBDC) (ECB 2023).[1] Before the study was finalised, on 28 June 2023, the European Commission submitted two related proposals to the European Parliament (hereafter 'the Regulations').

The Regulations would consolidate the ECB's involvement in the retail deposit market and change the concept of legal tender (European Commission 2023a; 2023b).[2] This is expected to ensure the accessibility of payment services in the context of a digitalised economy and enhance the effectiveness of monetary policy.

It has been argued that the CBDC will not replace cash payments but only complement them, while providing a convenient tool to transmit monetary policy in an economy where cash payments are becoming rarer.

This paper analyses the European Commission's proposed digital euro Regulations, setting aside other CBDC models that have been discussed in theoretical debates. The aim is to assess the potential benefits of a CBDC for consumers, the trading sector, financial institutions, and monetary policymakers.

The first part of the paper assesses the context that shaped the incentives for the development of the CBDC. The second part examines whether the perceived advantages of the digital euro actually represent a need and outweigh its risks. This includes assessing the problems posed by the project's significant start-up and maintenance costs, which have not yet been disclosed. The third part assesses, from a financial stability and monetary point of view, the risks that

[1] 'Eurosystem proceeds to next phase of digital euro project,' European Central Bank, 18 October 2023 (https://www.ecb.europa.eu/press/pr/date/2023/html/ecb.pr231018~111a014ae7.en.html).

[2] The 'Regulation of the European Parliament and of the Council on the creation of the digital euro' would extend the concept of central bank funds to include the retail digital euro. The central bank would assume liability for the digital form of money, as it does for cash. This implies that the ECB would become involved in the retail deposit market. At the same time, the draft 'On euro banknotes and coins as legal tender' changes the very concept of legal tender by introducing mandatory obligations for retailers to accept cash and CBDC.

may be posed by the change in the modern banking system and in the commercial relationship with the consumer. It also analyses how the digital euro may affect price stability – which is one of ECB's main tasks.

What are the issues the CBDC aims to address?

This section provides an overview of the digital euro project, including the arguments put forward by its promoters. It also assesses the environment and context within which the main incentives for the CBDC project were created. Finally, the design of the specific CBDC model chosen is analysed.

The need for a digital euro is based on digitisation trends

The Regulations identify digitisation as the driving force behind the digital euro project. According to the European Commission, digitisation could pose challenges to the euro and reduce confidence in the money issued by commercial banks. According to the drafters, the objective of the CBDC is to ensure that central bank money, which has legal tender status, remains accessible to the general public.

Two issues have been identified that the rules of procedure are supposed to solve.

First, it has been argued that money issued by the Central Bank is not used in e-commerce. Rather, digital private money (from commercial banks) is used in online transactions.[3] These online purchases are technically not eligible for legal tender status.

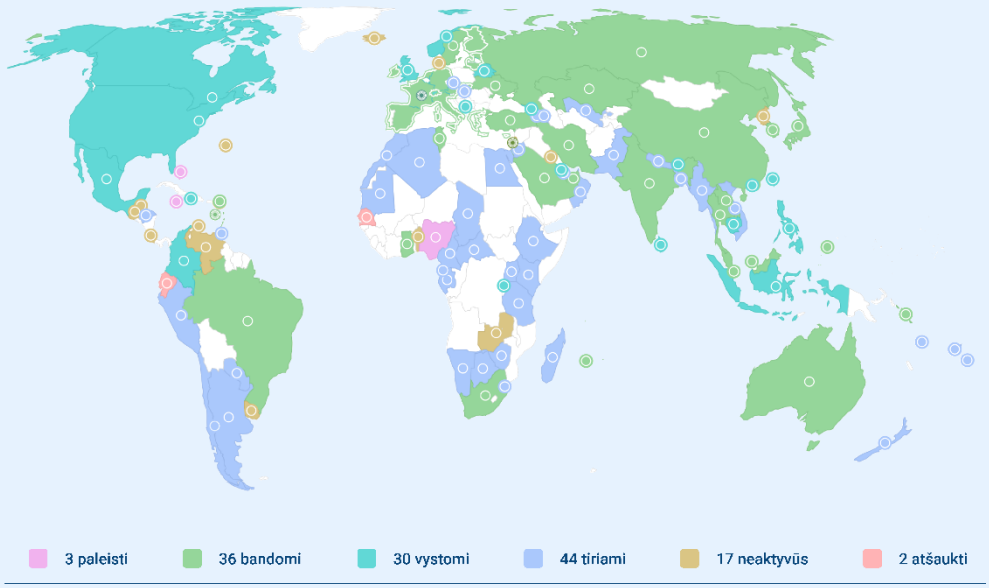
Secondly, central banks in developing countries are also testing the feasibility of creating their own digital currencies (Figure 1). European institutions are therefore concerned that these countries' CBDCs, or alternative means of payment (cryptocurrencies and stablecoins), could gain a significant market share and diminish the euro's role in an increasingly digitalised economy.

A key benefit of the digital euro, which its promoters believe justifies the creation of a single centralised digital currency, is that it would increase financial inclusion by making electronic payments available to the unbanked in the euro area.

[3] For the differences between commercial bank currencies and central bank currencies, see the next section.

FIGURE 1

The evolution of CBDC worldwide



Source: Atlantic Council. Central bank digital currency tracker.

The digital euro is different from current electronic payment instruments

In today's financial system, two different types of money interact: commercial bank money and central bank money. These two forms of money differ in terms of who bears the liability towards the consumer.

The term 'central bank money' covers the 'base' money— the physical national currency (in this case, the euro) — in the form of cash (banknotes and coins), as well as the required reserves held by commercial banks at the central bank for use in interbank settlements.

Meanwhile, the term 'commercial bank money' (also known as 'private money') refers to the money held by commercial banks in the form of deposits, which are generated by extending loans to customers. This is made possible by the fractional reserve system, by which commercial banks can create new money by extending more loans (taking on more liabilities) than they have reserves. Thus, all electronic money used for everyday payments (e.g., online transfers, credit card payments) is currently private money, for which commercial market players are liable to consumers.

The essential innovation of retail CBDC is that the 'liability' would fall directly on the ECB, and would be accounted for in the currency that is the legal tender, in this case, the euro. In the current system, commercial banks act as intermediaries between the Central Bank and the public by issuing new loans to increase the money supply in the market. With CBDC, the digital currency would be a direct liability of the Central Bank, replacing the traditional hierarchy of the financial system and leading to the direct and active involvement of the ECB in retail operations.

European Commission opts for retail CBDC model

The digital euro model is still subject to significant debate among monetary policymakers (see Table 1, where the ECB's chosen model is compared with a possible alternative). However, The European Commission aims to make the broadest possible use of the CBDC. The Regulations state that 'The digital euro is a direct commitment by the European Central Bank or the national central banks to users of the digital euro'.[4] This implies that a digital euro payment account will have to be opened through a payment service provider, with commercial banks acting as intermediaries between the central bank and the user.

To start using the CBDC, users will have to open a digital euro payment account through an intermediary financial services provider. A financial services provider is understood to be a credit or financial services institution established in the territory of the European Union (European Parliament and Council 2015). The Regulations provide that 'all credit institutions providing payment account services should provide basic digital euro payment services to their customers on request' (European Commission 2023a: 3). They also emphasise that essential digital euro services should be provided free of charge to natural persons.

Secondly, the European Commission proposes that the digital euro be adapted to retail: 'digital euros can be used by natural and legal persons to make retail payments' (European Commission 2023a: 11). The aim is to create a CBDC for everyday use.

[4] Ibid, p. 40.

TABLE 1

Possible classifications of CBDC

Classification by:	*ECB chosen model*	*Possible alternative*
Use of CDBC	**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 CBDC to make payments.	**Wholesale**: Used for interbank and wholesale transactions between financial institutions. It can be used for settlements between banks and other financial entities.
Operational mechanism	**Account-based**: Transactions are recorded in an accounting ledger, and users access their CBDC funds through their accounts. In this model, each user has a digital wallet linked to his or her unique identifier, such as a telephone number or national identity document.	**Token-based**: Tokens reflect the value of the central bank's currency, the issue. However, settlement accounting is decentralised. Users may hold digital euros and transact directly, without going through an intermediary such as a commercial bank. In essence, this is similar to cryptocurrencies.
Interaction with the central bank	**Direct**: The central bank issues the CBDC directly to the public or to financial institutions. The liability rests directly with the central bank.	**Indirect:** The CBDC is issued to commercial banks, similar to cash. The distribution of the CBDC into the real economy depends on the commercial banks' decisions.
Interest opportunity	**Non-interest-bearing**: It is not possible to earn interest from holding digital euros, making it an unattractive form of long-term savings.	**Interest-bearing**: Digital euros may earn interest on holdings, similar to deposits in commercial banks.

Third, to limit the digital euro's function as a store of value, the possibility of receiving a return on savings is restricted under the following terms: 'No interest is payable on digital euro under this Regulation' (European Commission 2023a: 13).

In summary, the digital euro model proposed by the European Commission can be described as a direct, account-based (centralised transaction accounting), retail-oriented, and non-interest-bearing CBDC.

BOX 1

The ECB's proposed change to the definition of 'legal tender'

Until now, the concept of legal tender in the euro area was governed only by the European Commission's (2010) 'Recommendation on the Scope and Impact of Legal Tender of Euro Banknotes and Coins'. This document proposed that euro banknotes and coins should be accepted as means of payment in retail transactions and that this form of payment can be refused only if there are valid reasons related to the 'goodwill principle' (e.g., the seller would forego the returns that would accrue from receiving payment in a higher value denomination.). However, this recommendation has so far been a non-binding legal act – failure to comply with it does not lead to any legal consequences.

The fact that the definition of the euro as legal tender does not imply its compulsory acceptance in retail payments was clarified in 2021 by the Court of Justice of the European Union (*Dietrich and Haring v Rundfunk* 2021). The ruling states that legal tender cannot be refused where it is used 'to settle a debt denominated in the same unit of currency'.

In the light of the Court's judgement, the European Commission (2023b: 17) has proposed a change to the concept of legal tender: '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'. At the same time, it is noted that 'Under the principle of compulsory cash acceptance, the payee may not refuse to accept euro banknotes and/or coins presented for the purpose of fulfilling that obligation' (ibid.). This means that the acceptance of euro cash would be mandatory not only in debt repayment but also in all retail payments by euro-area residents and businesses.

However, the European Commission's draft digital euro proposal (2023b: 20) notes that requiring all businesses to accept payments in full would be 'disproportionate'. Therefore, several exceptions are foreseen where this requirement would not apply: (1) for natural persons, where the activity is purely for personal or household purposes; (2) for micro-enterprises (by definition, a micro-enterprise is defined as a business with up to ten employees, or with an annual turnover of less than €2 million); and (3) non-profit-making legal persons who operate for 'purposes of public interest and for the public good'.

However, all these exemptions would not apply where the seller accepts payments through digital payment instruments similar to the CBDC, such as credit cards.

To ensure the broadest possible use of the CBDC, the Commission also aims to mandate distribution obligations for the public sector: 'It is important that public entities, including local or regional authorities, or post offices, distribute digital euros. To this end, Member States should designate entities to carry out this task on their territory' (European Commission 2023b: 23). Therefore, public undertakings in the member states may be required to provide financial services even if they do not operate directly in this area.

To maximise the use of the digital euro, the European Commission and the ECB aim to define it as legal tender (see BOX 1). However, the mere designation of CBDC as legal tender would not guarantee its compulsory acceptance for retail payments. Therefore, the European Commission has presented a parallel proposal amending the definition of 'legal tender' itself.

A change to the current regulation, which would define the CBDC as legal tender, would oblige merchants (with certain exceptions) to mandatorily accept digital euros for retail payments. Meanwhile, financial services intermediaries will be obliged to provide digital euro account opening services free of charge.

Would a digital euro really benefit Europeans?

To assess the need for digital euro, this section considers the problems that the Regulations are expected to address. Secondly, it analyses whether the proposed measures entail proportionate costs and benefits for Europeans. Finally, it assesses whether the digital euro would be an attractive alternative to existing payment instruments in terms of security and privacy.

Financial inclusion and digitalisation are already being tackled by private-market players

A key benefit of the digital euro that its promoters identify is that the unbanked in the euro area would be able to use electronic payments in an increasingly digitalised economy. However, in a developed economy like the euro area, it is doubtful whether introducing the CBDC would significantly improve access to financial services. The problem of financial inclusion is already being addressed by private-market players, and the number of unbanked Europeans is steadily declining, dropping from 8.2 per cent in 2017 to just 3.54 per cent in 2021 (ESBG 2022).[5] This means that even without the digital euro, a growing number of citizens can make payments in a way that is accessible to them.

Moreover, financial inclusion in advanced economies is not just about access to financial services. The level of trust in the banking system is a major factor (Antony and Michel 2022). If consumers do not trust commercial financial market players, they will not use the CBDC, as they would have to go to a financial services provider rather than directly to the central bank

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

to open a digital euro account. Even in developing countries, where the need to improve access to financial services may indeed be significant, the CBDC does not automatically become an attractive financial instrument.

For example, in Nigeria, one of the few countries that has already adopted a CBDC, the eNaira was launched in 2021. However, it is used by only 0.5 per cent of the population. Moreover, according to the International Monetary Fund (IMF), 98.5 per cent of users who downloaded the eNaira e-wallet have never used it (Jookyung Ree 2023). It can be concluded that the alternative offered by the central banks will not attract a population that lacks the motivation or skills to use electronic payment instruments.

The European Commission would require financial services intermediaries to provide essential services, such as account opening, free of charge. It sees this as a significant advantage of the digital euro. As commercial market participants would not be able to charge for the provision of these services, the Regulations provide that they should be compensated '[f]or the costs of distribution, both for distributing and acquiring payment service providers, including a reasonable profit margin' (European Commission 2023b). Such a change in the commercial service provider's relationship with the customer would represent a shift in the banking business away from the consumer and towards satisfying the needs and orders of the government.

Meanwhile, the amended definition of 'legal tender' implies an obligation for merchants to accept digital euro payments without charging the customer an additional fee. No compensation is foreseen for implementing this obligation, although merchants would be obliged to accept CBDC payments even if customers only use the instrument sporadically.

Finally, the main identified benefits of CBDC implementation, such as increasing financial inclusion, are already being addressed by commercial market participants, whereas the principles of quality lawmaking require that public authorities intervene only when the problem cannot be solved by private initiative.

Project costs are not identified

The Regulations do not indicate how much the development of CBDC technology could cost, how much compensation would be required for financial services intermediaries, or how much it could cost to operate and maintain related infrastructure.

First, the cost of the project includes the preparation and commissioning of the project, such as setting up the infrastructure and preparing the legal framework. It is also important to understand that this is not just a one-off investment. Both the compensation of financial intermediaries and the maintenance of IT infrastructure will require ongoing resources, which must be identified. Therefore, until a cost–benefit analysis of the launch and maintenance of the digital euro is carried out, it would not be possible to assess whether this project is beneficial for Europeans.

Private players are already providing low-cost or even free e-payment services. Meanwhile, the digital euro would have to be developed per current technological standards, so it is not clear how the ECB could offer a more attractive service at a lower cost. The digitisation trend identified by the European Commission also illustrates that the growing popularity of electronic payments is driven by private market players, who compete to offer the most attractive product at the lowest possible price.

The requirement that end users be allowed to use the digital euro free of charge means that all euro area residents will pay for the compensation of financial intermediaries and the maintenance of infrastructure and systems – even those who do not use the digital euro service. Without an assessment of the budget required to introduce and maintain the digital euro, it is not possible to evaluate whether the benefits of the CBDC are proportionate to the costs that each taxpayer will bear. Hiding the true cost from consumers by passing it on to taxpayers distorts the healthy relationship between the provider and recipient of the service.

Cyber and personal data protection risks

The European Commission's proposal (2023b: 8) states that the digital euro will 'protect privacy while ensuring traceability'. However, no specific technological solutions have been identified to make this a reality. Users wishing to use the digital euro would have to log in to a digital wallet and transact using the central bank's infrastructure. Transactions carried out using this system would be recorded in the ECB ledger.

The main challenge for developers of private digital currencies has been ensuring privacy. The fact that cash payments do not require an intermediary was considered one of the key advantages of physical money before the advent of cryptocurrencies. Blockchain technology was a key innovation that at least partially solved the privacy problem and led to the popularity of cryptocurrencies. In the case of the digital euro, there is no intention to use blockchain technology, so the need for an intermediary remains.

Consumer confidence in extant decentralised digital currencies does not come from their virtuality, but from their decentralisation. It is therefore questionable whether the digital euro can be considered equivalent to cryptocurrencies or even decentralised stablecoins. The CBDC does not address fundamental privacy risks as its operation is centralised.

The centralisation of electronic payments also poses serious cyber threats. Creating a single payment instrument would make the financial system less resilient to cyber risks, as even the most secure system becomes a vulnerable target for hackers when concentrated in one place. The ECB's systems have been hacked twice in the last decade. In 2014, the ECB's database was hacked, and the data of 20,000 individuals who had submitted various registrations was stolen.[6] In 2018, the Banks' Integrated Reporting Dictionary (BIRD) system was hacked, and the contact details of 500 users were stolen.[7] The ECB reported the event almost a year after the incident (ECB 2019).

TABLE 2

Fundamental differences between cryptocurrencies, stablecoins, and CBDC

Features of digital currencies	*Type of digital currency*		
	Cryptocurrencies	*Stablecoins*	*CBDC*
Is the digital currency issued by public authorities?	No	No	Yes
Is the digital currency covered by a private company?	No	Yes	No
Is the value of a digital currency linked to a country's monetary policy or other assets?	No	Yes	Yes
Is the digital currency centralised?	No	Yes/No	Yes

[6] 'ECB hacked: Data stolen from central bank', CNBC, 24 July 2014 (https://www.cnbc.com/2014/07/24/ecb-announces-data-theft.html).
[7] 'ECB shuts down compromised BIRD website,' European Central Bank, 15 August 2019, (https://www.ecb.europa.eu/press/pr/date/2019/html/ecb.pr190815~b1662300c5.en.html).

No IT system is perfectly immune to cyber attacks, so centralising the financial system poses serious risks. The fact that central banks have so far paid little attention to cybersecurity analyses of CBDCs is also noted by IMF researchers (Fanti, Lipsky and Moehr 2022).[8] The digital euro project therefore raises questions regarding personal data protection and national security.

What challenges does the CBDC pose for monetary policy?

This section first assesses whether the trend towards digitalisation, as identified by the initiators of the Regulations, creates a significant need for reform of the monetary mechanism. It also analyses whether the CBDC would contribute to the ECB's core objective of price stability.

Digitisation does not reduce the efficiency of the monetary system

Another argument in favour of the introduction of CBDC is the decline in the use of cash due to digitalisation, which raises doubts about the central bank's ability to control the economy through monetary policy. However, the ECB's existing tools allow it to conduct monetary policy in a non-cash society. The establishment of bank reserves and legal tender status guarantee that central bank money will continue to be used in the future, and a decision to introduce the digital euro would also have implications for credit activity and the liquidity of commercial market participants. Therefore, the benefits of the CBDC in terms of improving the effectiveness of monetary policy seem unconvincing.

Bank of Lithuania specialists argue that the long-term decline in the use of cash is related to the increasing efficiency of monetary policy: 'although digitalisation may accelerate the decline in cash, the need for another type of money – bank reserves – would still remain. This would be the transmission channel for monetary policy. The heyday of modern monetary policy was seen from the mid-1980s to the late 2000s, when the ratio of central bank money to the broad money supply was at a historically low level' (Šiaudinis 2019: 15). It seems doubtful that reforming the existing central banking model through the introduction of the digital euro would improve the effectiveness of monetary policy.

[8] 'Central bankers' new cybersecurity challenge', International Monetary Fund, September 2022 (https://www.imf.org/en/Publications/fandd/issues/2022/09/Central-bankers-new-cybersecurity-challenge-Fanti-Lipsky-Moehr).

For advanced economies such as the euro area, the potential monetary benefits of the CBDC are even smaller. Bank of Lithuania experts note that for developing countries with an underdeveloped financial system, a CBDC could be useful for a limited time. However, for advanced economies, the CBDC would pose more risks than benefits: 'in advanced economies where the banking sector is developed, poor access to financial services is not a universal problem', and attempting to respond to the problems with large-scale measures such as a CBDC would have a 'disruptive' effect (Šiaudinis 2019: 27). Thus, the purported benefits of the digital euro for the financially well-developed euro area economy seem exaggerated.

Inflationary risks also remain

The CBDC can only serve as a monetary policy tool when the inflation target is below 2 per cent and not otherwise. Its usefulness as a tool for maintaining price stability is one-sided and limited.

The CBDC's ability to ensure that new money enters the real economy quickly should make it easier for the ECB to meet a 2 per cent inflation target. However, the digital euro would not be an effective tool for reducing inflation. The greater impact of the digital euro on inflation compared to cash can be illustrated using the Quantity Theory of Money (Lukonga 2023).[9] As per this theory, changes in the quantity of money, in terms of output or velocity, are components of changes in the general price level.

Per the Regulations, while the Central Bank would have exclusive control over the creation of the CBDC, the ECB would not have full control over the balance of liabilities: 'Although the central bank is the sole issuer of CBDCs, it has no control over how the public will react to the issuance of CBDCs and therefore cannot fully control the composition of its balance sheet liabilities' (Lukonga 2023: 15). Thus, even with the introduction of the digital euro, the central bank would not be able to control the quantity of money fully.

As IMF researchers (Lukonga 2023) point out, 'the substitution of cash for CBDC can lead to structural changes in the velocity of money or instability'. This means that even if the central bank does not increase the money supply, inflation could still rise: 'A structural change in the velocity of money means that the relationship between the quantity of money and inflation

[9] Given that there is still no consensus on whether the CBDC could be considered as a component of the money supply indicator M1, predicting the precise impact of money growth on inflation would become even more difficult. This would make it even more difficult for the ECB to forecast inflation once the digital euro project is implemented.

could still be predictable, but an increase in velocity could mean higher inflation' (Lukonga 2023). Thus, the digital euro could contribute to raising inflation, but monetary policymakers would face significant challenges in reducing it.

The digital euro poses serious challenges to the stability of the financial system

The introduction of the digital euro would make the ECB a direct competitor to commercial banks providing deposit services. Consumers would be able to withdraw their deposits held with commercial banks and transfer them to a CBDC account. ECB is a public body, which essentially means that launching the digital euro would introduce a monopolist into the deposit services market, distorting the conditions of fair competition.

According to Bank of Lithuania specialists, to ensure money supply in ther form of the CBDC, it would be necessary to 'sacrifice' the reserves of commercial banks: 'In the discussions about the role of central banks in the creation of the money supply, the idea of a general-purpose CBDC creates a déjà vu situation. A general purpose CBDC implies a structural change in the money supply, presumably by increasing the share of publicly available central bank digital money at the expense of bank deposits' (Šiaudinis 2019). This implies that the digital euro would become a risk for existing banks providing deposit services.

To counter the risks associated with structural changes in the deposit market, and to ensure that the digital euro does not become a speculative investment tool, the Regulations propose limits on withdrawals and savings limits: 'The ECB should develop measures to limit the use of the digital euro as a store of value, including limits on holdings' (European Commission 2023b). The decision of when and to what extent these measures would be used is left entirely to the ECB. These possible restrictions include, *but may not be limited to*, quantitative limits on digital euro savings.

Whether money is judged to be of 'good quality' depends on how well it can perform its functions as a medium of exchange, a unit of account, and a store of value. Limiting the use of the digital euro as a store of value will result in it failing to fulfil at least one of the three main functions of money. The CBDC would therefore be seen as a lower-quality form of money than the cash euro. As this lower-quality cash alternative would also require additional costs for the user (e.g., downloading the app, opening an account, learning how to use it, etc.), the digital euro would be relatively unattractive to users. The introduction of the digital euro would

therefore leave the ECB in a constant dilemma between ensuring financial stability and making its own instrument attractive to users.

However, assuming these restrictions do not solve problems associated with financial stability, but only partially mitigate them or postpone them, reallocating deposits from commercial to central banks would still substantially increase the instability of bank reserves. This means that credit institutions would be less able to meet liquidity needs in the market. In turn, 'the need for higher liquidity buffers reduces funding for long-term lending and weakens the credit channel' (Hemingway 2022: 25). Consequently, there will be a reduction in the credit available for both businesses and individuals. The credit channel, through which monetary policy is conducted, would become less efficient.

Moreover, a study by specialists of the Central Bank of Lithuania shows that such a state intervention could, in the long run, further increase the costs of banks operating in the deposit market, which would reduce competition in this sector: 'In the long run, the model suggests that the introduction of the CBDC will lead to a reduction in the number of banks operating in the deposit market and an increase in the concentration of the banking sector' (Hemingway 2022). This is particularly relevant for countries like Lithuania, where households and businesses already pay some of the highest interest rates in the euro area. Clearly, the digital euro would be more risky for relatively smaller markets.

Conclusions

Based on the Regulations drafted by the European Commission, the digital euro project proposes a fundamental change in the hierarchy of the European financial system, with the public authority becoming directly involved in the retail deposit and settlement market. It also proposes to reinforce the concept of legal tender and make it compulsory for merchants to accept digital euro payments.

The European Commission claims that the digital euro will help Increase financial inclusion and improve access to banking services. However, these aspects are already being addressed by private-market players. Moreover, European institutions have not indicated how much the digital euro project has already cost and how much more it could cost in future. This means that it is not yet possible to assess the real benefits of the project for consumers and the economy in general.

Meanwhile, the challenges – which have not yet been publicly addressed – remain significant. First, the proposed centralisation of the financial system poses both personal data protection and national security risks. Concentrating the settlement infrastructure in the hands of a single institution means a cyber-attack could cause significantly more damage to the euro area economy. Secondly, changing the architecture of the banking system also poses risks to the financial system's stability and heightens the risk of inflation.

The ECB could use the digital euro to achieve price stability – but only by boosting rather than suppressing inflation. The declining use of cash is not a factor that has a significant bearing on the influence of monetary policy, as the main levers for controlling inflation are the regulation of bank reserves, the management of credit activity, and the application of quantitative easing programmes. This means that the usefulness of the CBDC in improving the effectiveness of monetary policy is also questionable.

Meanwhile, the introduction of the digital euro would make the ECB a direct competitor to commercial banks providing deposit services, which also poses risks to financial stability. As the central bank is protected by the state, this project would mean the entry of a monopolist into the financial market, which would distort fair competition. In addition, if a significant proportion of consumers withdraw their commercial bank deposits and transfer them to CBDC accounts, it would increase the risk of bankruptcy for private financial market players, and the lower liquidity would also reduce credit availability.

This means that the digital euro would not contribute to the ECB's objective of price stability, but could disrupt the functioning and credibility of the current financial system. The introduction of the digital euro would therefore leave the ECB with a permanent dilemma between ensuring financial stability and making its own instrument attractive to consumers.

The desire to change the fundamental motives of business banking (by reorienting it towards state mandates rather than consumer needs), the introduction of a state monopoly in the retail deposit market, and the risks to financial stability and inflation are all factors that will prevent the CBDC project initiated by the European Commission and the ECB from achieving its objectives. The implementation of the initiative is contrary to the principles of quality lawmaking, which stipulate that public intervention and the need for new regulation can only be justified if it is demonstrated that the initiative of private financial market participants is not sufficient to maintain the 'baseline scenario'.

A detailed cost–benefit analysis, a disclosure of the cost of launching and maintaining the project, a justification of the need for significant changes to the current financial system, and a detailed plan to circumvent the risks posed by the CBDC are all prerequisites for a responsible and qualitative assessment of the digital euro project.

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