

Central Bank Digital Coins (CBDCs) and Monetary Sovereignty: Opportunities and Risks in the European Context

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Summary

Adopting a common European digital currency seems likely to be a powerful monetary tool that will facilitate the implementation of policies such as quantitative easing and interest rate regulation. On the other hand, the risk of destabilisation of the banking system , requires careful planning and public awareness. CBDCs will strengthen the EU geopolitically and seem to have an environmental dimension. The debate within the EU and the ECB is intense both on issues of legitimacy under the European Treaties and on issues of democracy and privacy rights. In practice, this is a technological innovation with serious parallel economic, social and political consequences.

Key words: CBDCs, Eurozone policy, Monetary Sovereignty, ECB, Personal Data, Privacy

Introduction

Over the past decade, changes in the international financial system have been tumultuous. The gradual decline in the use of cash, the rapid expansion of electronic payments and the parallel development of private digital currencies such as stablecoins and cryptocurrencies have redefined the way we perceive and use money. In this changing environment, central banks around the world are looking for new responses: How can they maintain their monetary sovereignty and control over monetary policy when technologies are constantly bypassing traditional structures? The answer that is gaining momentum is the creation and possible issuance of Digital Central Bank Digital Coins (CBDCs).

CBDCs, in simple terms, are the digital form of a country's official currency, issued and guaranteed by the Central Bank itself. They can either be addressed to the general public (retail CBDCs) or limited to transactions between institutional participants (wholesale CBDCs). Unlike private digital currencies, they carry government legitimacy and combine technological innovation with public credibility. Within the Eurozone, the European Central Bank is already in the process of intensively exploring the feasibility and design of a digital euro, in order to strengthen the stability of the currency and maintain the competitiveness of the European payment system against private and non-European threats.

However, the issue of CBDCs is not limited to its technical aspects. It involves fundamental questions about the future of economic sovereignty, the role of the banking sector, the position of the citizen vis-à-vis the state, and even the concept of personal freedom in financial transactions. The widespread adoption of a state-owned digital currency may drastically change the banking ecosystem, limiting the role of commercial banks as credit creators, while potentially concentrating too much power in the hands of the monetary authority. Equally important are issues relating to transaction privacy, the potential for government surveillance and the use of digital money as a tool of control or discipline.

Europe, like other major economies, needs to carefully weigh the benefits and risks of CBDCs. This paper focuses on the European perspective to explore whether the adoption of a digital euro could enhance or undermine monetary sovereignty, banking stability and the fundamental rights of citizens. Through the analysis of literature, a comprehensive approach to what a CBDC actually means is attempted - not only as a technological innovation, but as a political and economic event with potentially long-term consequences.

The aim is to strengthen the debate on the issue and to highlight those aspects that are often silenced in public discourse: the nature of freedom, the balance between innovation and control, and the need for institutional guarantees at a time when the concept of money is being redefined.

Review of the Literature-Discussion

Digital currencies are unquestionably an innovative development in the field of monetary and financial policy. In particular, the introduction of the digital euro has

triggered an intense debate in relation to monetary sovereignty, the stability of the banking system and the privacy of citizens.

The technology of CBDCs is found in the blockchain which offers reliability and speed of transactions. The implementation of DLTs can give the central bank additional capabilities to control currency flows, enhancing transparency and reducing the cost of cross-border payments (Sethaupt and Innet, 2021).

Monetary sovereignty is the basis of interest in CBDCs, since it is inextricably linked to the ability of countries to manage their monetary policy. Kumhof and Noone(2021) argue that CBDCs enhance monetary sovereignty as they give the central bank direct contact with users and facilitate policies such as quantitative easing and negative interest rates. In addition, the efficiency of monetary transmission is increased. (Abad et al.,2024)

On the other hand, CBDCs pose a serious challenge to the banking system. A widely accepted CBDC would potentially cause a shift of deposits from commercial banks to the central bank, limiting the role of banks and the provision of credit. (Luu et al.,2023). This phenomenon is called bank disintermediation and is causing a heated debate on CBDCs in order to avoid potential instability of the financial system.

The adoption of the digital euro also has a geopolitical dimension, as the creation of a common European payment instrument can strategically strengthen the euro area. In an international environment where stablecoins and third country digital currencies threaten to destabilise traditional monetary systems, the EU has an urgent need to have its own monetary pillar. (Wagner et al.,2021). The existence of a digital currency would strengthen European sovereignty over payment systems, enhance internal cohesion and promote political integration.

The implementation of CBDCs is not only about monetary policy, but also about broader strategies for climate policy and the green transition. (Savelli et al.,2024). A CBDC could strengthen green policies and integrate sustainability into monetary practices. This could be done through scheduled payments modified according to the consumer's carbon footprint. The importance of digital infrastructure for building resilient and decentralised energy systems is particularly emphasised here. Harnessing the potential of CBDCs to enhance energy efficiency, reduce consumption and finance projects through green monetary instruments will significantly enhance the EU's climate crisis objectives.

The introduction of a common European digital currency has raised intense debates around purely legal issues. As Nabilu (2019) notes, the ECB has no explicit mandate from the EU Treaties to manage retail payments or to hold accounts for private individuals, which makes the possible introduction of a CBDC legally problematic. In contrast, Grunewald, Zellweger and Geva(2021) argue that the digital euro can be interpreted as a means of supporting the ECB's core objectives, such as price stability and monetary sovereignty. Mooij(2021), points out that the design of a CBDC, has important implications for the legitimacy of the project. If the ECB provides direct services to individuals, this could be perceived as exceeding its powers, while a bankbased system would be legally compatible with the EU common framework.

The social dimension of the project is also very important. The success of a CBDC depends on the trust of citizens and transparency in the processes. Introducing a digital euro without proper communication and citizen participation would lead to limited use and distrust (Catugno et al.,2023). The acceptance of CBDCs is linked to the extent to which citizens understand the features and consequences of the new currency(Hoang et al.,2023)

The debate around CBDCs cannot ignore the challenges posed by government oversight of transactions and personal data. The ability to fully analyse transactions offers advantages to tax authorities , but also carries the risk of an economy of constant surveillance and infringement of citizens' rights. (Gadžo et al.,2022). In the same vein, Rennie and Steele(2021) emphasize the need to incorporate regulations that ensure anonymity, especially in times of crisis. Zaccaroni(2023), analysing the excessive expectations that accompany the digital euro, stresses that political pressure to introduce a CBDC will lead to institutional and legal excesses and low social acceptance and trust. Of course, a common thread in all the above considerations is that the success of a CBDC depends not only on the technical implementation , but also on how it embodies fundamental values such as transparency, proportionality and privacy.

Conclusions

The debate has shown that a CBDC is not just an innovation, but a multidimensional undertaking with economic, political, legal and financial consequences. The ECB must ensure that the legal basis of the digital euro is compatible with EU law, otherwise EU treaties would have to be amended. The design must be careful not to destabilise the banking system and to ensure that the rights and privacy of citizens are institutionally guaranteed. Finally, emphasis must be placed on public awareness, digital literacy and accessibility to ensure social acceptance of the project. The political challenge for the European Union is not only the technological implementation, but also the creation of a currency that enjoys legitimacy, acceptance and credibility.

Bibliography

Sethaput, V., & Innet, S. (2021). blockchain application for central bank digital currencies (CBDC). *cluster computing*, 1 - 15. https://doi.org/10.1007/s10586-022-03962-z.

Kumhof, M., & Noone, C. (2021). central bank digital currencies - Design principles for financial stability. *economic Analysis and Policy*, 71, 553-572. https://doi.org/10.1016/J.EAP.2021.06.012.

Abad, J., Nuño, G., & Thomas, C. (2024). cbdc and the Operational Framework of Monetary Policy. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.4703300.

Luu, H., Nguyen, C., & Nasir, M. (2023). Implications of central bank digital currency for financial stability: evidence from the global banking sector. *Journal of International Financial Markets, Institutions and Money*. https://doi.org/10.1016/j.intfin.2023.101864.

Mooij, A. (2021). European Central Bank Digital Currency: the Digital Euro. What Design of the Digital Euro Is Possible Within the European Central Bank's Legal

Framework.SocialScienceResearchNetwork.https://doi.org/10.2139/SSRN.3838729.

Savelli, I., Hepburn, C., & Morstyn, T. (2024). A blueprint for energy systems in the era of central bank digital currencies. *Technological Forecasting and Social Change*. https://doi.org/10.1016/j.techfore.2024.123637.

Cotugno, M., Manta, F., Perdichizzi, S., & Stefanelli, V. (2023). Ready for a digital Euro? Insights from a research agenda. *Research in International Business and Finance*. https://doi.org/10.1016/j.ribaf.2023.102117.

Gadžo, S., Jozipović, Š., & Perkušić, M. (2022). Tax Compliance in the Era of Cryptocurrencies and CBDCs: The End of the Right to Privacy or No Reason for Concern. *EC Tax Review*. https://doi.org/10.54648/ecta2022003. Abstract

Nabilou, H. (2019). Testing the waters of the Rubicon: the European Central Bank and central bank digital currencies. *Journal of Banking Regulation*, 21, 299 - 314. https://doi.org/10.1057/s41261-019-00112-1.

Tian, S., Zhao, B., & Olivares, R. (2022). Cybersecurity Risks and Central Banks' Sentiment on Central Bank Digital Currency: Evidence from Global Cyberattacks*. *Finance Research Letters*. https://doi.org/10.1016/j.frl.2022.103609.

Wagner, E., Bruggink, D., & Benevelli, A. (2021). Preparing euro payments for the future: a blueprint for a digital euro. *Journal of Payments Strategy & Systems*. https://doi.org/10.69554/bwia3143. Abstract

Zaccaroni, G. (2023). 'All that glisters is not gold?' The digital euro between myth and reality. *Maastricht Journal of European and Comparative Law*, 30, 455 - 472. https://doi.org/10.1177/1023263X231224718. Abstract

Grunewald, S., Zellweger-Gutknecht, C., & Geva, B. (2021). digital euro and ECB Powers. *european economics: Macroeconomics & Monetary Economics eJournal*. https://doi.org/10.2139/ssrn.3807855.

Hoang, Y., Ngo, V., & Vu, N. (2023). central bank digital currency: a systematic literature review using text mining approach. *research in international business and finance*. https://doi.org/10.1016/j.ribaf.2023.101889.

Rennie, E., & Steele, S. (2021). Privacy and Emergency Payments in a Pandemic: How to Think about Privacy and a Central Bank Digital Currency. *Law, Technology and Humans*, 3, 6-17. https://doi.org/10.5204/LTHJ.1745.