Digital Euro: The Preparation Phase of a Pan-European Payment Solution as a Central Bank Liability

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Abstract: In a context marked by accelerated digital transformations and growing interest in central bank digital currencies (CBDCs), the Digital Euro project is capturing significant attention among policymakers, researchers, and industry stakeholders. This article analyzes the Digital Euro project, a potential CBDC for the eurozone, focusing on its current preparation phase. The main goal is to provide an in-depth understanding of the rationale, design, challenges, and status of this major undertaking. The methodology is qualitative, based on documentary analysis and synthesis of information from primary sources (reports and communications from the European Central Bank and the European Commission) and secondary sources (academic research, analyses by the Bank for International Settlements (BIS), industry reports, and stakeholder perspectives). Preliminary findings indicate that the Digital Euro is conceived as a risk-free liability of the Eurosystem, intended to complement cash and serve as a digital monetary anchor. Key objectives include creating a pan-European payment solution, strengthening strategic autonomy, and fostering innovation. The proposed design involves a complex balance between accessibility (free of charge, online/offline functionalities), privacy (with different levels for online and offline), and financial stability (through holding limits and non-remuneration). The current preparation phase focuses on finalizing the rulebook, selecting providers, and ongoing testing, in parallel with the EU legislative process. Major identified challenges include risks to financial stability, ensuring privacy and cybersecurity, defining a sustainable economic model for intermediaries, and achieving market adoption. The significance of this work lies in clarifying the complexity and implications of one of the most advanced CBDC projects in a major economy, providing a basis for informed discussions about the future of digital money in Europe.

Key words: Digital Euro, CBDC, Pan-European Payments, Financial Stability, Privacy

JEL classification: E42, E58, G21, G28

1. Introduction

The accelerated digital transformation of the global economy and profound shifts in consumer payment behavior, marked by a decline in cash usage in many jurisdictions and the ubiquity of private digital payment solutions (Boar & Wehrli, 2021), have led central banks worldwide to reassess the role of sovereign currency. The emergence of crypto-assets and stablecoins has intensified this dynamic, raising fundamental questions about financial stability, payment system efficiency, and monetary sovereignty itself (Brunnermeier et al., 2019). In this evolving landscape, central bank digital currencies (CBDCs) have appeared as a strategic response, promising to modernize public money for the digital age.

In response to these developments, the European Central Bank (ECB) and the Eurosystem initiated the Digital Euro project (ECB, 2020), aiming to introduce a potential retail CBDC (rCBDC) for the eurozone. The relevance and importance of this project are considerable: the Digital Euro has the potential to fundamentally reshape the European payments landscape, influence the business model of commercial banks, and provide a response to geopolitical challenges arising from the dominance of non-European actors in the digital payments space. The pressing timeliness of the topic is underscored by the project's entry into the preparation phase (November 2023 - October 2025) (ECB, 2023c), a crucial stage dedicated to finalizing the technical and operational design, selecting providers, and navigating the legislative process at the European Union level. This phase represents a critical juncture, the decisions of which will shape the future of money in Europe.

This paper aims to provide a detailed and critical scientific analysis of the Digital Euro project's preparation phase. By navigating the complexity of official documents, research reports, and public debates, this article seeks to answer the following fundamental research question: *To what extent is the proposed design and implementation framework of the Digital Euro project, in its current preparation phase, aligned with the Eurosystem's stated strategic objectives, and how effectively does it address the multidimensional challenges (technological, economic, social, and security-related) inherent in introducing a CBDC in a monetary area as large as the eurozone?*

To answer this question, the paper sets the following specific research objectives:

1. To precisely define the concept of the Digital Euro, its nature as a central bank liability, and to differentiate it from other forms of digital and traditional currency.
2. To critically analyze the multilevel strategic objectives of the Digital Euro project, including the creation of a pan-European payment solution, the consolidation of strategic autonomy, its role as a monetary anchor, the stimulation of innovation, and financial inclusion.
3. To examine in detail the key design features proposed for the Digital Euro, focusing on the balance between accessibility, functionalities (online/offline), privacy, and measures to protect financial stability (distribution model, holding limits, non-remuneration).
4. To evaluate the technological options and the envisioned cybersecurity framework, including resilience to emerging threats such as quantum computing.

5. To present the current status of the preparation phase, including the development of the rulebook and the EU legislative process.
6. To place the Digital Euro in the global context of CBDC projects through a comparative analysis with other major initiatives and to identify relevant lessons.
7. To identify and analyze the main challenges, risks (financial, operational, adoption-related), and criticisms associated with the project, as well as the proposed adoption strategies.

The structure of the paper is designed to systematically address these objectives. We will begin by defining the concept (Section 4.1) and providing a detailed analysis of the strategic objectives (Section 4.2). Subsequently, we will explore the design features (Section 4.3), the distribution model and economic-financial considerations (Section 4.4), and the technological and security framework (Section 4.5). We will continue by presenting the current status of the preparation phase (Section 4.6) and a comparative analysis in a global context (Section 4.7). Finally, we will evaluate the challenges, risks, and adoption strategies (Section 4.8), before drawing synthetic conclusions from the research.

2. Literature review

The concept of Central Bank Digital Currency (CBDC) has become a focal point in academic literature and economic policy debates, reflecting the rapid transformations in the global financial landscape. A widely accepted working definition, proposed by a group of central banks (Group of central banks, 2020), describes a CBDC as a digital form of fiat money, representing a direct liability of the issuing central bank. Within this general category, the literature distinguishes between CBDCs intended for interbank transactions (wholesale) and those accessible to the general public for everyday payments (retail), with the Digital Euro explicitly falling into the latter category, as also highlighted by the European Commission (2023). A defining element, consistently reiterated in the Eurosystem's official documents (ECB, 2020), is the nature of the Digital Euro as its direct liability. This particularity grants it the status of central bank money without credit risk and theoretically ensures its convertibility at par with other forms of the euro (ECB, 2020). It is precisely this fundamental characteristic that positions the Digital Euro distinctly from commercial money, which are liabilities of private banks and therefore carry a certain degree of risk, and, especially, from crypto-assets and stablecoins, the latter being either decentralized assets without a clear responsible issuer or liabilities of private entities, with inherent risks related to collateral reserves and specific governance (Finance Watch, 2025). Thus, by contrast, the Digital Euro is designed to offer a public, secure, and stable anchor in the digital ecosystem.

Analyzing the motivations behind CBDC exploration globally, a considerable diversity is noted: while emerging economies often emphasize financial inclusion, advanced economies, such as the eurozone, are predominantly concerned with payment system efficiency, maintaining financial stability, and responding to accelerated digitalization (Boar & Wehrli, 2021). In the specific case of the Digital Euro, the Eurosystem has articulated a series of clear strategic objectives. Among these are the creation of a pan-European payment solution intended to overcome current market fragmentation and, not least, the consolidation of Europe's strategic autonomy by reducing dependence on non-European payment service providers (EACCNY, 2025). Additionally, a frequently invoked objective is maintaining the role of central bank money as a "monetary anchor" in an increasingly digitalized economy where cash use is declining (ECB, 2023d). However, it is important to note that the necessity of an rCBDC for specifically achieving this latter objective is still a debated topic in academic literature, with some researchers (Mayer et al., 2023) questioning whether existing wholesale mechanisms are not sufficient. Secondary, yet significant, objectives include stimulating innovation and competition in the payments sector, as well as promoting financial inclusion for vulnerable segments of the population (European Commission, 2023).

The specific design of the Digital Euro, as it is taking shape in the current preparation phase, reflects not only these ambitious objectives but also a manifest prudence regarding potential risks, especially those to financial stability. Thus, design options such as the intermediated distribution model, the proposal of holding limits for individual users (Panetta, 2022), and the policy of non-remuneration for Digital Euro holdings (Cipollone, 2023) are measures explicitly designed to mitigate the risks of massive bank disintermediation (Angeloni, 2024). However, a part of the critical literature (Mayer et al., 2023) underscores the inherent tension and difficult trade-off between these restrictive measures, intended to protect the traditional banking system, and the actual attractiveness or functionality of the Digital Euro for the end-user. In this complex context, crucial aspects such as ensuring an adequate level of privacy, differentiated between online and offline transactions, and guaranteeing robust cybersecurity (ECB, 2024b) become central pillars in the project's architecture and in its public perception.

An increasingly discussed aspect in the specialized literature is the potential impact of CBDCs on monetary policy and its transmission. Although some studies argue that a CBDC with well-calibrated features (such as non-remuneration) would not significantly alter existing mechanisms (Bindseil, 2020), others contend that the introduction of a universally accessible digital asset issued by the central bank could affect the saving and decision-making behavior of economic agents (Kumhof & Noone, 2018). Concurrently, the literature highlights opportunities for better monetary policy transmission under conditions of negative interest rates or banking system fragmentation (Brunnermeier & Niepelt, 2019). This debate underscores the need for a careful analysis of systemic implications, beyond payment functionalities.

Furthermore, there is a diversity of positions regarding the relationship between CBDCs and private sector innovation, particularly in the fintech and payment solutions area. Some works argue that a CBDC can stimulate competition and interoperability among providers, reducing entry barriers and acting as a platform for new services (Zamora-Pérez, 2022). On the other hand, critical research points to the risk that a centralized and overly restrictive design,

or a dominant presence of the public solution, could inhibit private innovation and reduce the role of market actors in developing user-tailored solutions (Kiff et al., 2020). Therefore, from our perspective, the literature suggests the imperative of a delicate balance between promoting innovation, ensuring systemic safety, and maintaining monetary sovereignty. This triad of objectives gives the Digital Euro project a particular complexity, requiring a fine calibration of policies and technical design, possibly different from approaches observed in other jurisdictions.

3. Research methodology

This paper adopts a qualitative research methodology, focused on documentary analysis and the synthesis of information from a variety of sources relevant to the Digital Euro project. Given that the project is still in its preparation phase, the main approach consists of a critical examination of official documents, academic literature, and expert analyses to understand the rationale, proposed design, challenges, and current status.

Data collection methods included:

- Detailed examination of progress reports, consultation documents, officials' speeches, and the legislative proposal concerning the Digital Euro, published by the European Central Bank (Eurosystem) and the European Commission.
- Research of peer-reviewed journal articles and research papers addressing the theory and implications of CBDCs, with a focus on specific analyses of the Digital Euro.
- Consultation of publications issued by the Bank for International Settlements (BIS), the International Monetary Fund (IMF), banking associations (such as EBF), consumer organizations (such as BEUC), and specialized consulting firms.
- Tracking articles and analyses in relevant publications (e.g., Global Government Fintech, Ledger Insights) to capture recent developments and market perspectives.

Data processing and analysis methods consisted of a narrative synthesis of the collected information, a comparative analysis of different design options and international approaches, a critical analysis of pro and con arguments, and a contextual interpretation of decisions and challenges within the specific framework of the eurozone. No specific software was used for qualitative data analysis. The main methodological difficulty was the dynamic and ongoing nature of the project, which means some information is preliminary or subject to change, requiring a cautious approach and constant updating of the analysis.

4. Results and discussions

4.1. Definition and Nature of the Digital Euro

The Digital Euro is designed as a retail Central Bank Digital Currency (rCBDC). Its fundamental characteristic is its status as a direct liability of the Eurosystem, meaning it represents a direct claim on the central bank, similar to physical banknotes. This grants it the quality of risk-free central bank money (CeBM) and guarantees its 1:1 convertibility with other forms of the euro (ECB, 2020). This nature essentially differentiates it from:

- Cash: By its digital versus physical form. The Digital Euro is complementary, not a replacement (ECB, 2020).
- Commercial Bank Money: Bank deposits are liabilities of private banks and carry credit/solvency risk (Finance Watch, 2025).
- Crypto-assets and Stablecoins: These either lack a responsible central issuer (Bitcoin) or are liabilities of private entities with risks related to reserves and governance (stablecoins) (Finance Watch, 2025). The Digital Euro offers a public, secure, and stable anchor.

Table 1 details these key differences.

Table 1. Comparison between Digital Euro, Cash, Commercial Bank Money, and Crypto-assets

Characteristic	Digital Euro	Cash (Banknotes/Coins)	Commercial Bank Money (Deposits)	Cryptoassets (Generic, e.g., Bitcoin)	Stablecoins (Typically Asset-Backed)
Issuer	Eurosystem (ECB + NCBs)	Eurosystem	Commercial banks	Decentralized (usually)	Private entities
Form	Digital	Physical	Digital (accounting entry)	Digital (token)	Digital (token)
Issuer Risk	Risk-free (central bank guarantee)	Risk-free	Credit/solvency risk (bank)	High market/operational risk	Credit/liquidity/operational risk
Guarantee/Liability	Direct liability of central bank	Direct liability of central bank	Liability of commercial bank	No clear liability	Liability of private issuer
Value Stability	Stable (1 Digital EUR = 1 EUR)	Stable	Stable (but exposed to bank risk)	Highly volatile	Intended to be stable (depends on

					mechanism/reserves)
Anonymity/Privacy	Offline: High (cash-like); Online: Pseudonymized	High (anonymous)	Low (transactions are tracked)	Pseudonymized (but public)	Variable (depends on design/issuer)
Acceptance	Targeted: Universal (proposed legal tender)	Universal (legal tender)	Broad (but infrastructure-dependent)	Limited/Variable	Growing, but limited
Primary Purpose	Payments (complementary to cash)	Payments, Store of value	Payments, Savings, Lending	Speculation, Limited payments	Payments, Transfers, DeFi Access

Source: Own elaboration based on (Finance Watch, 2025).

4.2. Strategic Objectives

The objectives underpinning the project are multiple and interconnected:

- Pan-European Solution: Overcoming the current fragmentation of the retail payments market in the eurozone by offering a single, standardized solution for P2P, POS, and e-commerce transactions (EACCNY, 2025).
- Strategic Autonomy: Reducing dependence on non-European payment providers (e.g., international card schemes) and strengthening European monetary sovereignty in the face of expanding global stablecoins or other CBDCs (Finance Watch, 2025).
- Monetary Anchor: Maintaining the role of central bank money as a stable reference point in a digital economy where cash usage is declining (Mayer et al., 2023).
- Innovation and Competition: Stimulating the development of new payment services by the private sector based on the Digital Euro infrastructure and exerting competitive pressure on existing players (European Commission, 2023).
- Financial Inclusion: Providing access to secure and free digital payments for all citizens, including the unbanked or those with difficulties accessing digital services (European Commission, 2023).

4.3. Key Design Features

The design proposed in the preparation phase includes a series of essential elements, summarized in Table 2:

- Accessibility and Free Basic Use: Intended for all residents and businesses in the eurozone, with basic use free of charge for individuals. The proposed legal tender status aims to ensure broad acceptance (European Commission, 2023).
- Online and Offline Functionality: The ability to make payments both via an internet connection and directly between devices (offline) is a distinctive feature. The offline mode aims to replicate some properties of cash, particularly enhanced privacy (Panetta, 2022).
- Privacy: A very high level of privacy ("cash-like") is targeted for offline payments. For online payments, pseudonymization at the Eurosystem level is proposed (data cannot be directly linked to the user by the central bank), while intermediaries would have limited data access only for AML/CFT compliance and with user consent for commercial purposes (ECB, 2024b).
- Non-Programmability (by the issuer): The ECB has emphasized that it will not restrict the use of the digital euro for specific goods or services (European Commission, 2023).

Table 2. Synthesis of Key Design Features of the Digital Euro (Projected Status)

Characteristic	**Description / Projected Status**
Accessibility	All residents/companies in the euro area; potential for expansion
Basic User Cost	Free for individuals
Legal Tender Status	Proposed (mandatory acceptance by merchants, with possible exceptions)
Online/Offline Functionality	Yes, both targeted
Privacy Level	Offline: High ("cash-like"); Online: High (Pseudonymized), AML/CFT compliant
Holding Limits (Individuals)	Proposed (€3,000 – €5,000), under calibration
Holding Limits (Merchants)	Proposed (Zero – for transactional use only)
Remuneration (Interest)	No (non-remunerated)
Programmability (by issuer)	No
Distribution Model	Intermediated (two-tier)
Waterfall Mechanism	Yes (Waterfall / Reverse Waterfall)
Core Technology (likely)	Centralized (possibly TIPS-based)

Source*:* Own elaboration based on (Central Bank of Ireland, n.d.).

4.4. Distribution Model and Economic-Financial Considerations

The Eurosystem has opted for an intermediated (two-tier) distribution model, where banks and other supervised PSPs manage the end-customer relationship (onboarding, provision of wallets/accounts, transaction processing), and the Eurosystem operates the central infrastructure (Panetta, 2022). While leveraging existing infrastructure, this model raises the issue of economic sustainability for intermediaries, whose implementation and operational costs must be covered in the context of free basic services and potential caps on merchant fees (EBF, 2023).

To mitigate risks to financial stability (bank disintermediation, acceleration of bank runs), the design includes holding limits (proposed between €3,000-€5,000 for individuals, zero for merchants) and a non-remuneration policy (Panetta, 2022). The optimal calibration of these limits is essential, representing a trade-off between stability and utility/adoption (Mayer et al., 2023). The "waterfall" mechanism (waterfall/reverse waterfall) is the technical solution to allow the fluidity of online payments exceeding balance limits, by automatically linking to bank accounts, albeit adding complexity to system integration (ECB, 2024c).

4.5. Technological and Security Framework

In the context of the Digital Euro's development, although various technologies, including Distributed Ledger Technology (DLT) for its potential in specific functionalities like offline payments or wholesale settlements, have been intensively explored, the core architecture for the retail system appears to decisively lean towards a centralized solution. This direction is considered superior from the perspective of direct central bank control, demonstrated efficiency, and the scalability required to manage the massive transaction volume in the eurozone, possibly by leveraging and expanding existing infrastructures such as TARGET Instant Payment Settlement (TIPS) (ECB, 2021).

Given the project's systemic importance, cybersecurity is treated as an absolute and non-negotiable priority (ECB Banking Supervision, 2024). In this regard, a multi-layered defense strategy ("defense-in-depth") is planned, which includes robust measures such as advanced end-to-end and at-rest data encryption, the use of hardware security modules (HSMs) for key management, multi-factor authentication (MFA) and biometric mechanisms, as well as advanced fraud monitoring and prevention systems based on artificial intelligence and machine learning. Operational resilience is ensured through "Zero Trust" architectures, extensive redundancy, and rigorous business continuity plans, complemented by penetration testing and periodic security audits. Protecting against cyber threats in such a complex ecosystem, with multiple interconnected actors – the Eurosystem, supervised intermediaries (PSPs, banks), and millions of end-users – requires heightened attention to supply chain security and user education. Furthermore, anticipating and countering future risks are essential, a prominent example being the threat posed by the development of quantum computers ("Q-Day").

The Eurosystem is proactively addressing this risk by integrating quantum resistance requirements into the design and by participating in research projects dedicated to Post-Quantum Cryptography (PQC), such as Project Tourbillon, aiming to ensure the long-term viability of the Digital Euro (ECB Banking Supervision, 2024).

4.6. Status of the Preparation Phase

The project is in the preparation phase (November 2023 - October 2025), focusing on three main directions (ECB, 2024c):

- Finalizing the Rulebook: A dedicated group, composed of Eurosystem experts and market representatives, is developing a single set of rules, standards, and procedures to ensure the harmonized operation of Digital Euro payments throughout the eurozone (ECB, 2024c).
- Selecting Providers: The process of identifying and selecting technology partners who could develop the platform and associated components is underway, involving significant planned investments (Global Government Fintech, 2024a).
- Testing and Experimentation: Continuation of technical tests (including for offline functionality) and research to understand user preferences and explore innovative use cases (Global Government Fintech, 2024a).

These activities are carried out in parallel with the EU legislative process, where the proposed Regulation on the Digital Euro is being debated by the European Parliament and the Council. The adoption of this legislation is a prerequisite for any final issuance decision (ECB, 2024c).

4.7. Global Context and Comparative Analysis

The Digital Euro project is part of a global trend, with most central banks exploring or developing CBDCs (Atlantic Council, 2024). The European approach, emphasizing complementarity with cash, high privacy, and cautious implementation, differs from other major projects.

For example, China's e-CNY pilot, the most advanced and extensive rCBDC project globally, is much more advanced in scale, having been publicly tested for years in numerous provinces (Atlantic Council, 2022). It uses an intermediated two-tier model and likely centralized technology, with different objectives than the Digital Euro, such as the potential replacement of physical cash, regaining control over payment data in a market dominated by tech giants like Alipay and WeChat Pay (Atlantic Council, 2021a), and a more pronounced potential international role for the renminbi (Angeloni, 2024). Its approach to privacy, described as "controllable anonymity," has raised surveillance concerns, differing from the European emphasis on data protection standards.

In Sweden, one of the most advanced societies in the transition to a cashless economy, the exploration of the e-krona was spurred precisely by this rapid decline in the use of physical money (Riksbank, 2018). The Riksbank's main

objective is to ensure continued public access to central bank money in a modern form, exploring both account-based and token-based models, including offline functionality. However, a recent government inquiry concluded that there is not yet sufficient societal need for its issuance, so the final political decision is still pending, with the progress of the Digital Euro project being an influencing factor (Riksbank, 2018).

Experiences from countries like Nigeria, with the eNaira, and the Bahamas, with the Sand Dollar – both among the first fully launched rCBDCs globally – are instructive. Although their primary objective was to improve financial inclusion and payment efficiency, both have faced significant challenges related to slow public adoption (IMK, 2024). These cases underscore the crucial importance of a design deeply oriented towards user needs and behavior, the communication of a clear and compelling value proposition compared to existing payment alternatives, and the implementation of effective education, communication, and integration strategies within the existing financial ecosystem (BIS, 2023).

Table 3 provides a concise comparative overview of these projects.

Table 3. Selective Comparison of Global CBDC Projects (Status and Key Features)

Characteristic	Euro Area (Digital Euro)	China (e-CNY / DCEP)	Sweden (e-krona)	Nigeria (eNaira)	USA (Digital Dollar - exploratory)
Current Status	Preparation phase (targeted piloting)	Extended pilot (multi-province, public)	Exploration/Preparation (political decision delayed)	Launched (Oct 2021)	Research/Experimentation (no decision yet)
Type	Retail (rCBDC)	Retail (rCBDC)	Retail (rCBDC)	Retail (rCBDC)	Exploratory (Retail & Wholesale)
Key Motivation	Pan-European payments, Strategic autonomy, Monetary anchor	Efficient domestic payments, Data control, Tech alternative, Int'l RMB role	Response to cash decline, Access to central bank money	Financial inclusion, Payment efficiency	Maintain dollar role, Efficiency, Research
Core Technology (likely)	Centralized	Centralized	Undecided (DLT & centralized explored)	Centralized	Undecided (DLT & centralized explored – MIT)
Access Model	Intermediated (Two-tier)	Intermediated (Two-tier)	Likely intermediated	Intermediated (Two-tier)	Undecided (but likely intermediated)
Holding Limits?	Yes (proposed: €3–5k for individuals, 0 for merchants)	Yes (tiered by KYC level)	Explored (likely necessary)	Yes	Undecided (but likely necessary)
Remuneration?	No (non-remunerated)	No	Explored (likely no at start)	No	Undecided
Relation to Cash	Complementary	Potential replacement	Complementary (cash declining fast)	Complementary	Complementary (likely)
Level of Public Piloting	Low (only research/targeted tests)	Very high (millions of users, multiple years)	Low (internal/limited tests)	Publicly launched (slow adoption)	None

Source: Own elaboration based on (ECB, 2023c)

4.8. Challenges, Risks, and Adoption Strategies

The successful implementation of the Digital Euro faces a series of significant challenges and risks, widely discussed in specialized literature and consultation documents:

- Financial Stability: The risk that introducing a safe digital central bank asset could lead to substantial deposit outflows from commercial banks (disintermediation) or accelerate withdrawals during crises remains a major concern, being the main reason for the restrictive design (limits, non-remuneration) (Copenhagen Economics, 2023).
- Privacy vs. Compliance: Finding an acceptable balance between the level of privacy desired by users (especially for offline mode) and the need to comply with strict regulations on anti-money laundering and counter-terrorism financing (AML/CFT) is a major technical and political challenge (CNIL, 2022).
- Cybersecurity: As critical pan-European infrastructure, the Digital Euro system will be a prime target for cyberattacks. Ensuring end-to-end resilience and security in a complex ecosystem is essential but difficult (ECB Banking Supervision, 2024).

- Economic Model and Costs: Defining a sustainable compensation model for private intermediaries (PSPs/banks) is crucial to ensure their active participation and cover the significant implementation and operational costs (EBF, 2023).
- Adoption and Market Acceptance: Even if technically viable, success depends on voluntary adoption by consumers and merchants. This requires a clear value proposition, ease of use, trust in the system (especially regarding privacy and security), and effective integration with existing payment solutions (Monnet & Niepelt, 2023). The risk is that the restrictive design may limit initial attractiveness.
- Competitive Impact: There are concerns that the Digital Euro could cannibalize private European payment solutions, discouraging innovation instead of stimulating it (EBF, 2023).

Adoption strategies discussed by the Eurosystem and the European Commission include levers such as potential legal tender status (to guarantee merchant acceptance), free basic services for users, ensuring a simple and convenient user experience, and transparent communication to build trust (European Commission, 2023).

5. Conclusions

The Digital Euro project represents a major endeavor by the Eurosystem, with the potential to fundamentally reshape the monetary and payments infrastructure in the eurozone in the context of digitalization. The current preparation phase is crucial for defining the technical, operational, and regulatory framework, a process significantly influenced by parallel legislative deliberations at the EU level.

This paper aimed to answer the central research question regarding the congruence between the proposed design for the Digital Euro, its strategic objectives, and its capacity to manage the associated complex challenges. By fulfilling the specific research objectives – defining the concept, critically analyzing the objectives and design, evaluating the technological and security framework, presenting the current status and global context, as well as identifying risks and challenges – a detailed perspective on these aspects has been provided.

The analysis of the proposed design, detailed throughout the paper, reveals a complex balancing act, attempting to reconcile multiple objectives: providing a digital form of public money that is safe and efficient, strengthening European strategic autonomy, but also protecting financial stability and the role of existing financial intermediaries. The restrictive measures adopted (holding limits, non-remuneration) reflect the priority given to mitigating risks, but they raise legitimate questions about the final product's attractiveness and its ability to compete effectively in the market.

The remaining challenges are substantial, including technical aspects (security, privacy, scalability), economic issues (the business model for intermediaries, impact on lending), and political considerations (public acceptance, finalization of the legal framework). The success of the Digital Euro is not guaranteed and will depend on the ability to navigate these complexities, offer a compelling value proposition to users, and gain the trust of all stakeholders. The final decision to issue the Digital Euro or not, expected after the completion of the preparation phase and the adoption of legislation, will be one with profound and long-lasting implications for the future of the euro currency and the European financial system. Further research will be conducted following the launch of the Digital Euro in order to monitor its evolution and assess its long-term impact.

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