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The Architecture of Money

A European Strategy for Tokenized Finance

Geoeconomics
and Geofinance
Initiative

Bastien BUCHWALTER

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Abstract

This report examines how tokenization may reshape European financial sovereignty. Tokenization does more than digitize existing assets: it makes it possible to separate and recombine dimensions of monetary systems once considered inseparable. This creates new opportunities for financial integration but may also yield new forms of infrastructural and monetary dependence.

Tokenized financial assets require both digital settlement infrastructures and compatible forms of money. If tokenized markets develop primarily around non-European infrastructures and dollar-denominated stablecoins, technological modernization could reinforce rather than reduce Europe's financial dependence. Preserving European financial sovereignty therefore requires shaping the emerging ecosystem of tokenized finance through resilient European settlement infrastructures, competitive euro-denominated digital money, and supervisory frameworks capable of monitoring the financial architecture as a whole.

The *Paper* argues that tokenization may reduce fragmentation within individual financial ecosystems while increasing fragmentation between them. It redraws the existing borders of the global financial systems according to a new geopolitical map and yields an archipelago of tokenized ecosystems.

Résumé

Cette *Note* examine comment la tokenisation pourrait redéfinir la souveraineté financière européenne. La tokenisation ne se limite pas à la numérisation des actifs existants : elle permet de séparer et de recombinaer des dimensions des systèmes monétaires auparavant considérées comme indissociables. Cela crée de nouvelles opportunités d'intégration financière, mais peut également engendrer de nouvelles formes de dépendance infrastructurelle et monétaire.

Les actifs financiers tokenisés nécessitent à la fois des infrastructures de règlement numériques et des formes de monnaie compatibles. Si les marchés tokenisés se développent principalement autour d'infrastructures non européennes et de *stablecoins* libellés en dollars, la modernisation technologique pourrait renforcer, plutôt que réduire, la dépendance financière de l'Europe. Préserver la souveraineté financière européenne nécessite donc de façonner l'écosystème émergent de la finance tokenisée grâce à des infrastructures de règlement européennes résilientes, à une monnaie numérique compétitive libellée en euros et à des cadres de surveillance capables de contrôler l'architecture financière dans son ensemble.

Cette *Note* soutient que la tokenisation pourrait réduire la fragmentation au sein des écosystèmes financiers individuels tout en augmentant la fragmentation entre eux. Elle redessine les frontières existantes des systèmes financiers mondiaux selon une nouvelle carte géopolitique et donne naissance à un archipel d'écosystèmes tokenisés.

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Introduction

“Few developments in recent years have moved from the periphery to the center of the policy debate as quickly as stablecoins.”

**Christine Lagarde, President of the European
Central Bank, May 2026**

The rapid rise of stablecoins is the most visible manifestation of a broader transformation in the architecture of money and finance. As financial assets migrate toward tokenized infrastructures, the strategic question is no longer only who issues money, but also which currencies, institutions and settlement systems will underpin the next generation of financial markets.¹

For Europe, this transformation creates both an opportunity and a vulnerability. By integrating asset registration, transaction execution and settlement within more unified digital environments, tokenization could reduce reconciliation costs, improve the circulation of liquidity and collateral, and support deeper capital-market integration. But tokenized assets do not exist in isolation. Their circulation requires both an infrastructure through which transactions and ownership can be recorded, and a monetary instrument through which the corresponding transactions can be settled.²

If tokenized markets develop primarily around dollar-denominated money and non-European infrastructures, technological modernization could weaken Europe’s monetary and financial sovereignty. The choice of these infrastructures and monetary instruments is therefore not merely technical. Tokenization will redefine the borders of the international financial system along the geopolitical fault lines.

The European Union (EU) does not enter this transformation without institutional foundations. Over the past two decades, the euro area has developed common infrastructures for payments and securities settlement centered on TARGET Services and central bank money. Tokenization may

1. Tokenization consists of creating a digital representation of a financial or real-world asset on a digital infrastructure. In financial markets, securities such as bonds, commercial paper or fund shares can potentially be issued, transferred and managed as digital tokens.

2. B. Daurelle, “The Future of Financial Market Infrastructures”, in: M.-A. Faure and S. Jean (eds), “Can Interdependence Persist in Tense Times? Insights from the 2nd Paris Geoeconomic Dialogue”, *Ifri Studies*, Ifri, March 2026, pp. 45-49, available at: www.ifri.org.

extend this process of integration by allowing financial assets to circulate within shared digital environments.

In the United States (US), tokenized finance is developing largely around privately issued dollar stablecoins and market-driven infrastructures, potentially extending the international reach of the dollar across next-generation financial networks. This approach places greater emphasis on private-sector innovation and market driven development, potentially making the US ecosystem more attractive for the rapid development and adoption of tokenized finance, but also exposing it to greater monetary and financial-stability risks.

In perspective, the European approach places greater emphasis on prudential safeguards, public-sector coordination, and the continued role of central bank money, potentially reducing these risks but resulting in a less market-driven environment for innovation. The two approaches are not mutually exclusive but reflect different strategic choices about balancing between the attractiveness of tokenized financial ecosystems and the risks associated with their development.

The effect of tokenization will depend on the architecture within which tokenized finance develops. Europe's challenge is not simply to modernize financial markets, but to shape this architecture by preserving competitive infrastructures and euro denominated settlement instruments, ensuring that private digital money reinforces rather than weakens European financial integration, and adapting financial supervision to increasingly interconnected financial systems.

The foundation of tokenized finance

Tokenized financial assets depend on two complementary layers. The first is the infrastructure through which assets can be recorded, transferred and settled. The second is the monetary instrument used to settle the corresponding transactions. The following sections examine these two layers in turn before bringing them together in the architecture of money.

The infrastructure layer

A securities transaction does not simply involve the transfer of an asset: the corresponding cash payment, ownership record and, where relevant, collateral movements must be coordinated across infrastructures. In the existing European financial system, these functions are distributed across different infrastructures. Payments in central bank money are settled through TARGET Services, while securities are recorded and settled through central securities depositories (CSDs) and international CSDs. Collateral management relies on additional infrastructures and arrangements. These systems have become increasingly integrated at the European level. In particular, T2S provides a common platform for securities settlement, and the Eurosystem Collateral Management System (ECMS) extends integration to collateral used in Eurosystem credit operations.

Yet infrastructure integration should not be conflated with the integration of European capital markets. As Olena Havrylchyk shows³, substantial fragmentation persists among European CSDs despite the common infrastructure: as of April 2025, T2S connected 24 European CSDs, but intra-CSD settlement still accounted for 95.5% of total T2S settlement volume in 2024, compared with 99% in 2018. Cross-CSD settlement therefore remains limited, with cross-border activity relying substantially on international CSDs and global custodians. Differences in custody, clearing, asset servicing, legal frameworks and market practices continue to generate coordination and reconciliation requirements across the transaction chain.⁴

3. O. Havrylchyk, “Central Securities Depositories and Geopolitical Risks: Challenges For European Policy, *Ifri Studies*, Ifri, November 2025.

4. See Giovannini Group, “Cross-border Clearing and Settlement Arrangements in the European Union: Technical Report”, European Commission, 2001; Giovannini Group, “Second Report on EU Clearing and Settlement Arrangements: Technical Report”, European Commission, Brussels, 2003.

Tokenization offers a different possibility: rather than maintaining separate records across multiple infrastructures, financial assets and their associated transactions could be recorded and transferred within a shared digital environment. Distributed ledger technology (DLT) provides one potential framework for such an environment, as it allows participants to share a synchronized record of transactions and ownership.⁵ In financial markets, this could allow the issuance, transfer and settlement of tokenized assets to take place closer together within the same infrastructure, potentially reducing some of the reconciliation and operational frictions of the existing post-trade chain.⁶

While there are obvious benefits to the reduction of (reconciliation) costs, it is not the primary consideration arising with the introduction of DLTs. As we show throughout this report, the main strategic dimension concentrates around which institutions operate and govern the infrastructures through which these financial transactions take place.

The monetary layer

This infrastructure layer is complemented by a monetary layer, since transactions involving tokenized assets also require a form of money in which settlement takes place. Three main forms of tokenized money are currently emerging: stablecoins, tokenized deposits and central bank digital currencies (CBDCs). We discuss them in turn.

Stablecoins first emerged within the crypto-asset ecosystem. They constitute privately issued monetary instruments representing a claim on the private issuers.

The most prominent examples are Tether (USDT) and USD Coin (USDC), issued by Tether and Circle, respectively. These instruments circulate across permissionless blockchain infrastructures while their value is supported by reserve assets composed primarily of dollar-denominated securities.

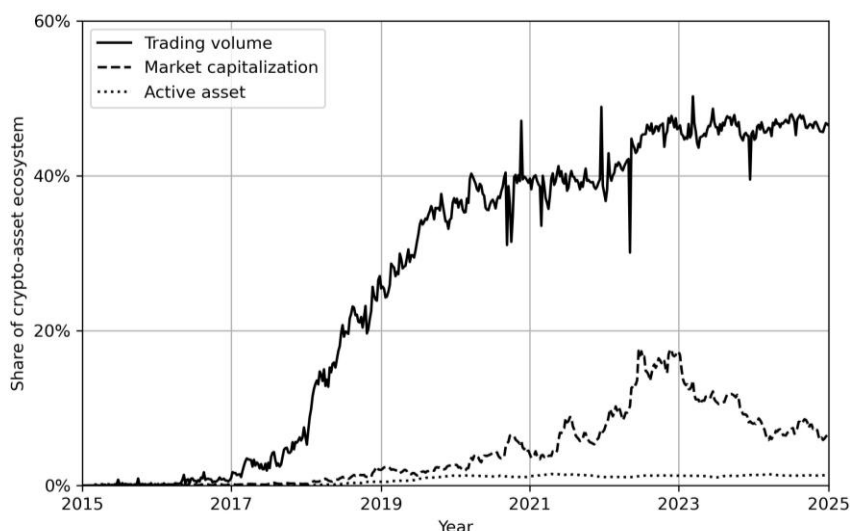
Stablecoins are also disproportionately important for activity within the broader crypto-asset ecosystem. As Figure 1 illustrates, their share of trading volume is substantially larger than their share of market capitalization or of the number of active assets. This suggests that their importance cannot be assessed solely from their outstanding market value.

5. A. Pinna and W. Ruttenberg, “Distributed Ledger Technologies in Securities Post-trading”, *ECB Occasional Paper*, No. 172, European Central Bank, 2016.

6. DLT infrastructures differ in how participation and transaction validation are organized. Permissioned DLTs restrict access to identified institutions and operate within defined governance and regulatory frameworks. Permissionless blockchains, by contrast, allow participation without prior authorization. These models therefore imply different forms of governance, access and control.

Indeed, stablecoins increasingly function as a transactional and settlement layer within crypto-asset markets.

Figure 1: Stablecoins in the crypto-asset ecosystem



Notes: The figure shows the share of stablecoins in the broader crypto-asset ecosystem measured by trading volume, market capitalization and number of active assets.

Source: © CoinMarketCap.

Further, tokenized deposits also constitute private money, but under a different institutional arrangement. They represent claims on regulated commercial banks and derive their value from the balance sheet of the issuing bank. As the European Banking Authority emphasizes,⁷ their classification depends on their design and on their continued treatment as liabilities of the issuing bank. Tokenized deposits are particularly relevant in the European context because they may extend commercial-bank money into digital financial environments while preserving the existing two-tier monetary architecture centered on central banks and commercial banks.

Finally, CBDCs represent the public-money model. In the context of tokenized financial markets, their relevance lies primarily in the wholesale dimension. Wholesale CBDCs provide a digital form of central bank money that can be used for interbank payments and securities settlement within tokenized financial infrastructures.⁸ In the euro area, wholesale transactions already settle in digital central bank money through TARGET Services. The challenge is therefore not to digitize central bank money as

7. “Report on Tokenized Deposits: Technical Report”, European Banking Authority, December 2024.

8. CBDCs can be designed for different users and purposes. Retail CBDCs would provide digital central bank money for households and businesses, while wholesale CBDCs are intended for financial institutions and interbank or securities-settlement transactions. This report focuses on wholesale CBDCs because of their role in the settlement of tokenized financial assets.

such, but to make it compatible with the new infrastructures through which tokenized financial assets may be issued, transferred and settled.

European institutions have already begun exploring such interoperability. Eurosystem experiments using the Bundesbank's Trigger Solution, Banca d'Italia's TIPS Hash-Link and the Banque de France's DL3S tested different ways to connect DLT-based transactions to central bank settlement infrastructures.⁹ Project Pontes similarly explores how DLT-based financial markets can be connected to TARGET Services, allowing tokenized transactions to settle in central bank money.¹⁰ These initiatives illustrate that DLT can develop alongside existing European settlement systems, either by connecting to them through interoperability arrangements or by supporting separate digital environments. These initiatives reflect the same underlying objective: preserving central bank money as a settlement asset as financial markets migrate toward new infrastructures of tokenization.

The architecture of money

Stablecoins, tokenized deposits and wholesale CBDCs differ in their institutional design, but they can be compared along a common set of dimensions. Any monetary system must specify who issues the settlement asset, which type of asset is issued, through which infrastructure that claim circulates, and what ultimately supports its value. These four dimensions provide a common framework for comparing the different types of settlement assets and define the architecture of money illustrated in Table 1.

Table 1: The architecture of money

Issuer	Central bank	Commercial bank	Non-bank institution
Settlement asset	CBDCs	Tokenized deposits	Stablecoins
Infrastructure	RTGS	DLT	Blockchain
Backing assets	·	Bank balance sheet	Reserve portfolio
Type	Public	Private	Private

Notes: The table compares the principal architectures of tokenized money along four dimensions: the identity of the issuer, the settlement asset, the infrastructure through which it circulates, and the assets supporting its value. For central bank money, the relevant backing is the central bank's balance sheet; unlike privately issued money, however, central bank money is the ultimate settlement asset and is not backed by a separate claim.

9. "Integrating DLTs with Market Infrastructures: Analysis and Proof-of-concept for Secure DVP Between TIPS and DLT Platforms", *Technical Report*, No. 26, Banca d'Italia, 2022; "DL3s Interoperability Experiments and Wholesale CBDC Program", "Trigger Solution: Conducted Trials and Experiments", Deutsche Bundesbank, 2024.

10. "ECB Launches Innovation Platform to Explore Interoperability of DLT and Target Services", European Central Bank, 2025, available at: www.ecb.europa.eu.

It is important to note that the three columns in Table 1 are not mutually exclusive or institutionally sealed: all three forms of money can be used for interbank transactions and can therefore interact within the same financial system. At first glance, these three forms appear as relatively self-contained arrangements in which the issuer, settlement asset, infrastructure and backing mechanism are bundled together. However, the apparent separation of the columns reflects only how their core dimensions are bundled, not strict boundaries between monetary systems.

This intuition becomes apparent with tokenization. Rather than simply creating new monetary instruments, tokenization makes it possible to separate dimensions previously assumed inseparable and recombine them in new ways. Private money may circulate on infrastructures that were not developed by its issuer, while public money may be connected to DLT platforms. Commercial-bank money may similarly be extended into infrastructures that differ from traditional payment and settlement systems. Conversely, the same infrastructure may support different forms of money. Tokenization thus does not eliminate the institutional boundaries between public and private money, or between different infrastructures. It changes how far these boundaries can be crossed. The columns of Table 1 should therefore not be understood as vertical silos, but as reference points within a broader design space. A monetary system can therefore be understood as a particular configuration of these dimensions, while the architecture of money defines the broader design space of possible configurations.

The relevant question is therefore not simply which monetary instrument exists, nor which technological arrangement it follows, but which forms of money can interact, on which infrastructures, and under which institutional conditions. The architecture of money is therefore a strategic and geopolitical choice, closely tied to the question of financial sovereignty in the age of tokenization.

Geopolitics of digitalization

The geopolitical implications of tokenization follow the same two foundational elements identified in the previous section. The first concerns the infrastructural dimension: which institutions and platforms will govern the networks through which money, securities and collateral circulate? The second concerns the monetary dimension: which currencies and forms of money will become the dominant settlement assets within tokenized financial markets? Together, these dimensions determine the infrastructures and instruments that underpin the next generation of global financial markets.

Private monetary infrastructures and financial authority

Recent geopolitical developments have demonstrated the strategic importance of financial infrastructure. Financial sanctions, restrictions on payment and financial messaging networks, and the freezing of financial assets have shown that international financial influence depends not only on the currencies in which claims are denominated, but also on the infrastructures through which they are held, transferred and settled. The infrastructure through which a transaction takes place can become a source of influence in its own right. The existing financial system already illustrates a form of dependence. European financial institutions rely on international infrastructures such as SWIFT for financial messaging and, for cross-border transactions, on correspondent banking relationships and access to foreign payment and settlement systems. Dollar-denominated transactions, in particular, often depend on access to US-dollar clearing and settlement infrastructures.

Tokenization creates the possibility of reproducing this pattern and digital platforms may become an additional channel through which financial power is exercised. If even Europe develops competitive tokenized markets, it could remain dependent on non-European infrastructures through which assets are issued, transferred and settled. Such a reliance on infrastructures governed outside Europe may limit the capacity to enforce European law, guarantee access to essential financial services and preserve operational autonomy under changing geopolitical conditions.

This creates a strategic trade-off. European financial infrastructures must remain sufficiently open and interoperable to connect European markets to global financial activity, while retaining sufficient control over critical functions to preserve operational and regulatory autonomy. Other major financial powers face the same tension. They have incentives not only to develop infrastructures under their own jurisdiction, but also to attract foreign issuers, intermediaries and investors onto those infrastructures.¹¹

Such incentives may increasingly shape the organization of international financial markets. Jurisdictions with particularly important financial assets, commodities or sources of liquidity may be motivated to develop infrastructures through which access to those markets is organized. The strategic objective is consequently not simply to build an alternative infrastructure, but to make it sufficiently attractive, liquid and interoperable for other market participants to use it. As digital infrastructures become more closely integrated with the issuance, trading and settlement of tokenized assets, control over these infrastructures may itself become a source of geopolitical influence. Jurisdictions that succeed in attracting financial activity onto infrastructures they govern may gain influence over the rules and conditions under which financial transactions take place. The same logic applies to the monetary layer, where the settlement asset used within these infrastructures can also become a source of strategic influence.

Digital dollarization

While both the US and the EU seek to support financial innovation, they have adopted distinct approaches to integrating tokenized money into the financial system.

The US focuses on private-sector innovation. In particular, the GENIUS Act establishes a federal framework for privately issued dollar stablecoins.¹² On the one hand, this approach may increase demand for US dollar-denominated safe assets used as reserves. On the other hand, expanding private money brings liquidity and financial-stability risks. Stablecoins are reserve-backed and promise redemption at par, making their credibility dependent on the quality and liquidity of their reserves. If confidence weakens, large-scale redemptions can create liquidity pressures and force the liquidation of reserve assets, transmitting stress to broader financial markets. These risks become particularly relevant when

11. A. Odier, “Les banques centrales, enjeux et outils des rivalités géopolitiques”, *Études de l’Ifri*, Ifri, March 2026, available in French at: www.ifri.org.

12. “Guiding and Establishing National Innovation for U.S. Stablecoins Act”, U.S. Congress, 2025.

private money is embedded in tokenized infrastructures, where liquidity, collateral and settlement are increasingly interconnected.

We note that the US approach does not necessarily imply a displacement of the existing banking system. By incorporating privately issued stablecoins into a regulated framework, it can instead accommodate stablecoins within the existing monetary and banking system, including through bank deposits as reserve assets. The objective is therefore not simply to replace bank-based money with stablecoins, but to integrate private digital money into the existing financial system.

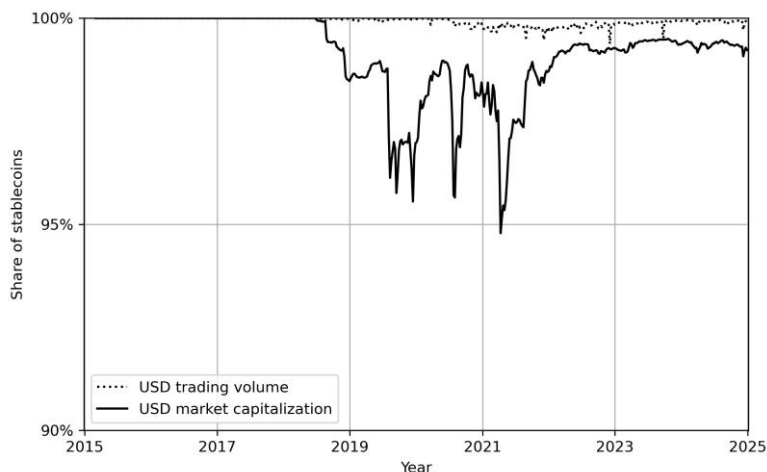
The European approach has placed greater emphasis on prudential regulation and the continued role of central bank money in settlement. Through the Markets in Crypto-Assets Regulation (MiCA), the EU has established common requirements concerning authorization, governance, reserve assets and redemption for stablecoin issuers.¹³ These regulatory choices therefore extend beyond financial stability. By shaping the conditions under which different forms of private digital money can develop, they may also affect which currencies become central to tokenized finance. Currently, we observe that US dollar-denominated stablecoins account for the overwhelming majority of stablecoin market capitalization and an even larger share of trading volume, as shown in Figure 2.

The dominance of dollar-denominated stablecoins, particularly in trading activity, suggests that the dollar's international role could extend beyond the traditional banking system and into the monetary layer of emerging digital markets.¹⁴ In response, Europe will also need competitive euro-denominated digital money to avoid a form of digital dollarization. Otherwise, even if Europe develops competitive settlement infrastructures for tokenized finance, payments within those infrastructures could still rely predominantly on dollar-denominated tokenized money. Competition will therefore extend beyond financial innovation to the organization of the global financial system itself.

13. “Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets (MiCA)”, *Official Journal of the European Union*, European Union, 2023.

14. L. Reichlin, B. Sangers, and J. Zettermeyer, “A New Strategy to Contain Stablecoin Risks in the European Union”, *Policy Brief*, No. 09/2026, Bruegel, 2026.

Figure 2: Currency composition of stablecoin market capitalization



Notes: The figure shows the share of USD-denominated stablecoins in total stablecoin market capitalization and trading volume. Market capitalization and trading volume are aggregated at weekly frequency. Stablecoins are classified by reference currency based on explicit currency tags and, where these are unavailable, the currency indicated in the asset name.

Source: CoinMarketCap.

The financial archipelago

Historically, currencies, financial infrastructures and jurisdictions largely evolved together. Tokenization weakens this correspondence by allowing monetary instruments, financial assets and settlement platforms to become increasingly independent of one another. The separation between the monetary and infrastructural layers of finance may fundamentally reshape how the global financial system is organized. The resulting configuration need not reproduce the institutional geography of the pre-tokenization system. Financial activity may increasingly be organized around interoperable digital networks rather than nationally bounded financial systems.¹⁵ Monetary influence will therefore depend not only on which currencies circulate internationally, but also on which infrastructures connect market participants and facilitate settlement.

This evolution creates a new paradox. As the Financial Stability Board notes,¹⁶ limited interoperability could create separate pools of assets and liquidity, reproducing fragmentation in new technological forms. Different jurisdictions and private institutions are developing distinct combinations of settlement assets, DLTs, regulatory frameworks and governance arrangements. While tokenization may reduce fragmentation within individual ecosystems, it may increase fragmentation between them. The

15. M. K. Brunnermeier, H. James, and J.-P. Landau, “The Digitalization of Money”, *NBER Working Paper*, No. 26300, National Bureau of Economic Research, 2019.

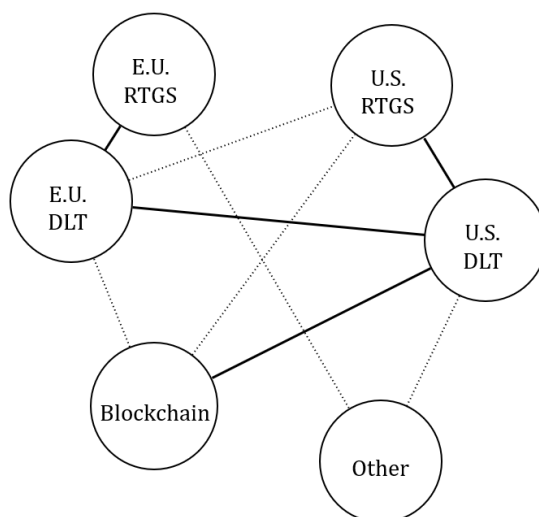
16. “The Financial Stability Implications of Tokenization”, *Technical Report*, Financial Stability Board, 2024.

emergence of such a framework does not require financial systems to become completely disconnected. It can result from the coexistence of several forms of connectivity. Some infrastructures may be directly interoperable, allowing assets or payment instructions to move between networks. We may also observe monetary instruments denominated in the same currency that circulate across multiple infrastructures without the infrastructures themselves being directly connected. Other systems may instead develop around shared platforms in which several jurisdictions participate.

Recent multi-CBDC initiatives illustrate how such connectivity can emerge. In particular, project mBridge, developed by the BIS Innovation Hub together with the central banks and monetary authorities of China, Hong Kong, Thailand and the United Arab Emirates, provides an example of a common-platform approach.¹⁷ The project developed a shared DLT platform on which participating jurisdictions could conduct cross-border payments and settlement in different CBDCs, while retaining their respective currencies and institutional arrangements.

In light of this fragmentation and the various types of connectivity, a plausible outcome of tokenization is therefore an archipelago of partially interconnected financial ecosystems, as illustrated in Figure 3.

Figure 3: The financial archipelago—infrastructure and monetary connectivity



Notes: Stylized representation of the emerging architecture of tokenized finance. Circles represent financial infrastructures. Solid lines indicate interoperability between infrastructures, while dotted lines indicate that the same currency-denominated monetary instruments can be used across infrastructures.

Source: Author's elaboration.

17. "Project mBridge Reaches Minimum Viable Product Stage and Invites Further International Participation", BIS Innovation Hub, Bank for International Settlements, 2024.

Figure 3 illustrates these different forms of connectivity. Solid connections represent interoperability between infrastructures, while dotted connections represent the circulation of the same currency-denominated monetary instruments across otherwise distinct infrastructures. The mBridge model illustrates a further form of connectivity, in which several jurisdictions participate in a shared platform while maintaining distinct currencies and institutional arrangements. These forms of connectivity need not coincide, allowing financial ecosystems to become integrated along some dimensions while remaining fragmented along others. The resulting framework is therefore a network of networks rather than a single integrated system, in which connectivity can be established between selected infrastructures, currencies or institutions.

Within this network of networks, several ecosystems may emerge as important nodes, with their relative importance evolving over time. Network effects may reinforce the concentration of activity around particular ecosystems, but they may also work in the opposite direction. If the risks associated with a particular monetary or infrastructural ecosystem become sufficiently salient, users, issuers and investors may have incentives to shift toward alternative ecosystems offering greater perceived safety. In this sense, an ecosystem's attractiveness depends not only on its liquidity and efficiency, but also on the credibility and resilience of its monetary arrangements. A US-led ecosystem may therefore benefit from strong first-mover and network effects, but excessive financial or monetary risk could weaken these advantages if market participants increasingly value the safer institutional environment offered by European alternatives.

As such, Europe's challenge is not to prevent this transformation, but to shape its outcome. Strategic autonomy therefore requires neither isolation nor technological self-sufficiency, but the capacity to participate in an increasingly networked financial system without becoming structurally dependent on ecosystems governed elsewhere.

A European strategy for the architecture of money

The preceding analysis suggests that Europe's challenge is not simply to adopt tokenization, but to shape the architecture of money through which tokenized finance develops. Europe therefore requires a strategy built around three complementary priorities. First, it must preserve a European monetary and settlement layer capable of supporting tokenized financial markets. Second, it should ensure that the design of private digital money reinforces, rather than weakens, European financial integration. Finally, as tokenized finance becomes increasingly interconnected, supervision should evolve from monitoring individual institutions toward safeguarding the resilience of the financial architecture as a whole.

Preserving a European monetary and settlement layer

Europe's first priority should be to ensure that European settlement infrastructures can support the development of tokenized financial markets. The objective is not to reproduce existing financial infrastructures on DLT, nor to develop a single European technological standard. Rather, European infrastructures should provide a reliable basis for the issuance, transfer and settlement of tokenized assets, while remaining sufficiently open and interoperable to connect with other financial networks. Tokenization, therefore, creates an opportunity to extend the integration already achieved through European financial market infrastructures into new digital environments.

European market infrastructures are developing in parallel. Clearstream's D7 platform supports the issuance of digital securities while complementing existing issuance and post-trade infrastructures.¹⁸ Euroclear's D-FMI similarly explores the development of digital financial market infrastructures. In this context, Appia provides a blueprint for greater interoperability between European DLT-based infrastructures.¹⁹ Together, these initiatives aim to ensure that emerging digital infrastructures remain compatible and connected at the European level.

18. "D7 DLT Platform", Clearstream, 2025 [accessed: 2026-05-10].

19. "Exploratory Work on New Technologies for Wholesale Central Bank Money Settlement", European Central Bank, 2024 [accessed: 2026-05-10].

The same principle applies to the monetary layer. Tokenized financial assets require a compatible settlement asset, and Europe should ensure that euro-denominated forms of money remain available and competitive within these emerging markets. This does not require choosing between stablecoins, tokenized deposits and central bank money. These instruments can perform different functions and coexist within the same financial architecture. The relevant policy objective is instead to ensure that market participants can access euro-denominated settlement instruments that are sufficiently liquid, credible and compatible with tokenized financial infrastructures. Otherwise, tokenized markets could increasingly grow around foreign-denominated digital money, particularly dollar-denominated stablecoins.

The key challenge is therefore to connect these two layers. Developing European infrastructures and euro-denominated digital money separately would not be sufficient: monetary instruments must be usable within the infrastructures on which tokenized financial assets circulate. The objective is therefore to preserve a European monetary and settlement layer that is both diverse and interconnected. Different forms of digital money should be able to coexist, while European settlement infrastructures should remain able to connect them to tokenized financial markets.

Shaping private money to support European financial integration

The growth of private digital money can also create strategic opportunities for European financial markets. As ECB President Lagarde has argued, Europe must not simply regulate digital money but ensure that the monetary foundations of tokenized finance remain compatible with European strategic objectives.²⁰

If private digital money generates persistent demand for high-quality reserve assets, the composition of those reserves becomes a strategic question. Europe could therefore use reserve requirements not only to strengthen the resilience of private digital money, but also to reinforce demand for euro-denominated high-quality liquid assets. Such a framework could strengthen the connection between the expansion of private digital money and European capital markets.²¹ This could, in turn, support the development of a deeper market for euro-denominated safe assets, including European government securities. The strategic question is therefore not only how to regulate private digital money, but

20. C. Lagarde, “Stablecoins and the Future of Money: Separating Functions from Instruments”, Speech at the Banco de España, LatAm Economic Forum, Roda de Bará (Spain), May 8, 2026.

21. R. Ahmed and I. Aldasoro, “Stablecoins and Safe Asset Prices”, *BIS Working Papers*, No. 1270, Bank for International Settlements, 2025.

also how its growth can contribute to the financing and integration of European capital markets.

The EU and US regulatory frameworks already differ in this respect. While both permit reserves to include high-quality liquid assets, MiCA requires issuers to hold a substantial share of reserves in bank deposits, whereas the US GENIUS Act allows a broader set of eligible assets, including Treasury bills, reverse repos and central bank reserves.²² The European approach therefore creates a stronger link between stablecoin issuance and bank funding, while the US framework allows stablecoins to be more directly connected to government securities and money markets.²³

This choice also affects financial stability. Reserve assets must remain sufficiently liquid and safe to support redemption at par and preserve confidence in the monetary instrument.²⁴ Large-scale redemptions could otherwise transmit stress from private digital money to the assets and institutions supporting it. Reserve composition, eligible backing assets, redemption arrangements and liquidity requirements therefore shape both the resilience of private digital money and its contribution to the broader financial architecture.

The European objective should consequently be to shape private digital money so that its growth reinforces, rather than fragments, European financial markets. Regulation can influence not only the resilience of private money, but also the assets for which its expansion creates demand and the extent to which this demand contributes to European financial integration.

Towards an architectural approach to financial supervision

Payments, banking, securities settlement and collateral management have historically evolved through distinct institutions and infrastructures. As a result, traditional regulatory frameworks largely monitored individual institutions and financial market infrastructures separately. As money, securities, collateral and settlement become increasingly integrated, risks may increasingly arise from their interactions rather than from individual institutions viewed in isolation.

22. Ibid.

23. P. Hernandez de Cos, “Pushing the Monetary Frontier: Stablecoins and Tokenized Deposits”, Speech at the Jackson Hole Economic Symposium, August 28, 2026; J. van’t Klooster, E. D. Martino, and E. Monnet, “Cryptomercantilism vs. Monetary Sovereignty: Dealing with the Challenge of US Stablecoins for the EU”, *Monetary Dialogue Papers* (PE 760.274), European Parliament, 2025.

24. “Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023”, op. cit.

The post-2008 regulatory framework has therefore increasingly incorporated the network dimension of systemic risk, including through the supervision of systemically important institutions, central counterparties and financial market infrastructures.²⁵ Tokenization may alter this network structure yet again by changing how assets, money and infrastructures are connected. New forms of concentration may emerge around digital settlement assets, tokenized platforms, interoperability arrangements or service providers. The key issue for systemic resilience is therefore how their interdependencies are structured and how shocks can propagate across the resulting network.

More fundamentally, tokenization invites a broader reconsideration of the object of monetary policy and financial regulation. Money has traditionally been viewed as a financial instrument, while supervision has focused on the resilience of the institutions issuing or intermediating it. Yet if money increasingly exists within an integrated ecosystem linking balance sheets, collateral, settlement infrastructures and shared platforms, safeguarding financial stability requires understanding of the architecture through which settlement assets are issued. This shift has important implications for financial stability analysis. We identify three dimensions.

First, monitoring liquidity flows, balance-sheet interconnections and the transmission of shocks across tokenized infrastructures may become as important as supervising individual issuers or platforms. Supervisors may need to monitor, for example, whether several issuers rely on the same reserve assets, whether multiple tokenized markets depend on the same settlement platform or interoperability provider. Regulators also need to assess whether large-scale redemptions or liquidity withdrawals from one digital money instrument could propagate to other markets through shared collateral or settlement channels. The objective is not to replace institution-based supervision, but to complement it with a system-wide perspective that captures interactions among money, collateral, settlement and liquidity within increasingly integrated financial networks.

Second, a concrete application of this architectural approach is the monitoring of the convertibility link between private monetary liabilities and the assets backing them. Because stablecoins and other privately issued settlement assets are redeemable at par against portfolios of financial assets, existing supervisory frameworks already monitor elements of this relationship, including reserve composition, liquidity and redemption capacity.

25. “The Interdependencies of Payment and Settlement Systems”, *Technical Report*, No. 84, Committee on Payment and Settlement Systems, Bank for International Settlements, 2008; “Analysis of Central Clearing Interdependencies”, *Technical Report*, Financial Stability Board, Basel Committee on Banking Supervision, Committee on Payments and Market Infrastructures, and International Organization of Securities Commissions, August 2018.

Third, the architectural approach would complement these requirements by monitoring how the market value and liquidity of backing portfolios interact with the issuer's liabilities and its wider financial connections. In practice, this could involve assessing how a decline in the value or liquidity of reserve assets would affect the issuer's ability to meet redemption requests, and whether large-scale redemptions could generate additional pressure through banks, securities markets or other tokenized infrastructures. This is particularly important under stress, when the market value of backing assets may diverge from their accounting value, and large-scale redemptions may generate additional pressure on those assets.

These risks may become more material as tokenized money moves from largely permissioned or institution-specific arrangements towards more interoperable and cross-border ecosystems. Ultimately, the challenge posed by tokenization is not simply how to regulate new financial technologies, but how to govern an evolving monetary architecture. As the architecture of money changes, the architecture of supervision must evolve with it.

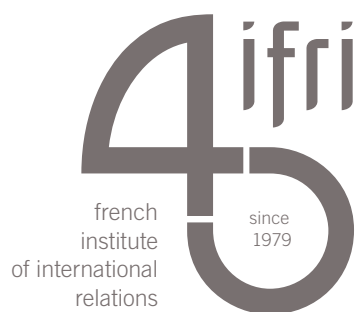
Conclusion

Tokenization is not simply a technological innovation. It changes the architecture through which money, securities and collateral circulate. By allowing monetary instruments, financial assets and settlement infrastructures to become increasingly separable, it creates new combinations of institutional arrangements and therefore new forms of monetary competition, geopolitical dependence and financial risk.

Europe enters this transformation with important institutional strengths. TARGET Services, T2S and the Eurosystem's collateral infrastructure provide an integrated foundation for European financial markets, but infrastructure integration has not eliminated the legal, institutional and operational fragmentation of European capital markets. Tokenization may further improve coordination, but its effects will depend on the monetary architecture that develops alongside it.

The central strategic question is therefore which monetary instruments, infrastructures and institutions will underpin tokenized financial markets of tomorrow. Dollar-denominated stablecoins and privately governed infrastructures may create new forms of financial dependence, while limited interoperability may produce an archipelago of partially interconnected financial ecosystems. Europe's response should consequently focus on preserving resilient European infrastructures, competitive euro-denominated settlement instruments alongside strategically designed forms of private digital money, and supervisory frameworks capable of monitoring the architecture as a whole. In practical terms, this means supporting European infrastructures where dependence on foreign platforms would create strategic vulnerabilities; ensuring that euro-denominated public and private settlement assets remain available for tokenized transactions; and designing the regulatory framework for private digital money so that innovation and international adoption do not come at the expense of monetary stability or excessive dependence on non-European issuers and infrastructures. It also means extending supervision beyond individual issuers to the interactions between money, assets and settlement infrastructures. None of these objectives can be pursued in isolation: greater European control may strengthen resilience and monetary sovereignty but reduce openness or liquidity, while greater reliance on global infrastructures and foreign settlement assets may increase market depth and interoperability while creating new forms of strategic dependence.

Strategic autonomy should not mean technological isolation. European financial markets must remain open and interoperable with global markets while preserving credible European alternatives for systemically important monetary and settlement functions. The challenge is therefore not simply to participate in the next generation of financial markets, but to shape the monetary, institutional and infrastructural architecture on which they will operate.



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