

# Building the EU's digital financial ecosystem

## 1. The case for building an effective European digital financial ecosystem

The chair opened the discussion by noting that Europe's financial sector stands at a pivotal moment, as technological innovation, regulatory transformation, and geopolitical tensions converge to redefine how markets operate, underscoring the need for a secure, integrated, and future-proof EU digital financial ecosystem.

Europe's long-standing legacy systems remain reliable, but distributed ledger technology (DLT) and related digital infrastructures are now mature enough to move beyond experimentation, with the potential to transform how value is stored, transferred, and transactions are settled. Regulatory progress is also accelerating. Frameworks such as MiCA, DORA, and the DLT Pilot Regime are providing greater legal certainty and laying the foundations for digital transformation, while other jurisdictions, notably the US with the proposed GENIUS Act, are also adapting their approaches. Finally, amid mounting geopolitical pressures, rising cyber-risks, and strategic dependencies, Europe must secure the foundations of its future financial ecosystem in order to reinforce its resilience, competitiveness, and digital sovereignty.

An official underscored the strategic urgency of developing a European digital infrastructure through an analogy with the Galileo satellite navigation system. In the early 2000s, critics questioned the need for Galileo given the existence of the US GPS network, citing high costs and unclear benefits. Two decades later, Galileo has become indispensable for European industry, supporting millions of users, driving innovation, and ensuring strategic autonomy. Europe now faces a similar crossroads in digital finance: whether to depend on global, often non-European infrastructures, or to invest in its own digital public infrastructure to support competitiveness, innovation, and sovereignty in the decades ahead.

## 2. Objectives and opportunities of the EU digital financial ecosystem

### 2.1 Vision and strategic objectives

An official outlined an ideal vision for Europe's future digital financial ecosystem based on a network of interoperable ledgers or a shared ledger infrastructure providing a "common set of rails" that ensures reachability, open access, and compatibility across

institutions and services. What must be avoided, however, is an uncoordinated proliferation of DLT platforms that could exacerbate market fragmentation.

An industry speaker added that tokenisation and digital assets will fundamentally transform capital markets. Tokenisation enables an ever-wider range of assets – goods, services, or even personal data – to become tradable instruments and also provides decisive improvements for traditional financial instruments such as bonds, equities, and derivatives. This also creates new constraints with the need to maintain a robust technical environment providing sufficient integrity and resilience for such assets.

### 2.2 Opportunities created by DLT and tokenisation

An official emphasised that DLT and tokenisation provide an opportunity to overcome long-standing inefficiencies in current market infrastructures and to build a more integrated and harmonised digital capital markets union.

Another official described DLT as a new paradigm rather than a simple technological upgrade. It enables programmability, automation, atomic settlement, and deeper integration across financial processes, resulting in faster settlement, lower counterparty risk, improved liquidity management and greater transparency.

An industry speaker highlighted three key transformational attributes of DLT.

First, the creation of a single shared record eliminates costly reconciliation and friction by replacing today's intermediated system, in which multiple ledgers are maintained and continuously reconciled by different entities. Second, greater accessibility and inclusion, as DLT platforms allow a broader range of participants to hold and settle securities directly within the post-trade ecosystem and enable the fractional ownership of instruments such as sovereign bonds or ETFs, making them more affordable for retail investors and advancing the objectives of the Savings and Investments Union (SIU). Third, programmability, through smart contracts that automate operations on tokenised instruments, such as tax payments or repo transactions, thereby reducing operational risk and administrative burden.

At the same time, the industry speaker cautioned that these benefits come with challenges that require collective solutions. As DLT adoption scales, issues around pre-funding and netting will become increasingly important, while programmability, despite being one of DLT's greatest strengths, raises new questions about liability, code governance, and accountability, particularly in decentralised finance (DeFi) environments.

### 2.3 Progress in implementation and public-private cooperation

An official explained that DLT spans the entire payments and securities value chain, requiring an integrated approach to both market infrastructure and regulation. In this context, the Eurosystem acts as a coordinator and catalyst for greater harmonisation and standardisation across euro-area financial markets.

Two complementary initiatives are being developed to advance this goal. The first, Pontes, focuses on the short term, aiming to ensure the availability of central-bank money as a settlement asset for DLT applications in both wholesale payments and securities. This availability must be scaled up in a stable and secure manner. Without such a risk-free settlement option, innovation could slow down or shift toward riskier private settlement assets, undermining market stability. To address this, the Eurosystem is developing a DLT-based link between DLT platforms and TARGET Services, with a pilot project planned by the end of next year to establish a safe and scalable foundation for digital-asset settlement. The second, Appia, is a longer-term project designed to build a safe, innovative, and interoperable European digital ecosystem that also ensures seamless and secure interaction with global financial markets.

A second official noted that Appia is also a relatively near-term project that has already started in parallel of Pontes. It will build on Pontes by providing financial markets with new opportunities based on central bank money settlement on DLT, as well as private settlement assets such as commercial bank money. Some governance and liquidity issues remain to be addressed, but these are manageable, and extensive experimentation has already demonstrated the technical feasibility of the technology.

The official moreover recalled that the Banque de France has conducted more than 30 experiments over the last 5 years across a wide range of use cases, including primary bond issuance, secondary-market transactions, repo operations, foreign-exchange settlement, and automated margin calls. These were real-life trials involving actual institutions, platforms, and money. In 2024 alone, the Eurosystem settled €1.6 billion in central-bank money through 58 use cases involving 64 institutions across 11 jurisdictions, reflecting strong public-private collaboration.

A third official added that Austria is also experimenting with deploying DLT in the capital markets through the DELPHI project, launched by the Austrian National Bank in 2021. Initially aimed at tokenising and settling on-chain an existing bond with the participation of Austria's two largest commercial banks and its export service bank, DELPHI later expanded cross-border in partnership with the Banque de France, using wholesale Central Bank Digital Currency (wCBDC) infrastructure for settlement. The BdF project now involves over 60 institutions in 11 countries. Reflecting on its outcomes, the official highlighted three lessons: first, collaboration among regulators, central banks and commercial banks is indispensable to ensure that innovation serves shared objectives. Second, DLT platforms can promote market

integration provided they are well designed. Third, even smaller institutions, central banks or financial firms, can act as catalysts for innovation, driving change across larger ecosystems.

Finally, an industry speaker noted that the public sector is playing a crucial role in advancing the infrastructure and regulatory groundwork needed to support the development of safe and efficient digital finance, alongside the private sector's efforts to drive innovation.

## 3. Conditions for building an effective digital financial ecosystem

### 3.1 Ensuring standardisation and interoperability

An official stressed that building an integrated digital financial ecosystem requires clear standards, robust governance, and close cooperation between public authorities and the private sector to avoid an uncoordinated proliferation of platforms and ensure overall market cohesion.

Another official added that interoperability across platforms and strong international cooperation are essential, as digital assets inherently move across borders.

An industry speaker stressed that achieving scale and operational efficiency in the issuance and transacting of digital assets requires deep technical and legal standardisation. Although several digital-asset issuance initiatives, such as digital bonds, are already under way in Europe, they remain fragmented and small in scope. The sector must now shift from experimentation to business-case-driven deployment, supported by an integrated environment that ensures interoperability and standardisation. The principle of platform choice must also be maintained, allowing investors to decide freely where to buy, hold, and settle securities within a harmonised framework.

### 3.2 Providing suitable settlement assets

An official emphasised that the 24/7 availability of a risk-free on-chain cash leg is a key condition for realising the full benefits of DLT, particularly in the post-trade environment. Tests conducted by the Banque de France and the ECB, notably for the issuance and settlement of tokenised securities, have shown that wCBDC is the most suitable solution to enable safe and efficient settlement, unlocking the advantages of DLT while preventing the emergence of fragmented private DLT platforms that cannot interact effectively. Nevertheless, wCBDC is not intended to cover all use cases. As in today's two-tier monetary system, there is a need to consider the role of tokenised commercial bank money and possibly stablecoins issued by banks. In this framework, and adequacy with bank regulations, participants wishing to settle in stablecoins issued by banks should be able to do so.

However, the official stressed that central banks need a clearer view of market developments in the area of private settlement assets to support innovation

effectively. Under MiCA, banks are authorised to issue stablecoins but show greater interest in tokenised deposits, while non-banks, often outside Europe, currently dominate stablecoin issuance. These instruments differ markedly: tokenised deposits replicate traditional bank money, whereas non-bank stablecoins raise concerns for monetary-policy transmission, liquidity, and lender-of-last-resort mechanisms. Understanding how these products will evolve and potentially complete wCBDC is essential to guide central-bank strategy.

Expanding on this, the official also highlighted the distinction between bank-issued and non-bank-issued stablecoins. According to the BIS, non-bank stablecoins face two structural weaknesses: a lack of elasticity, since they operate like narrow banks fully backed by existing securities, and no access to a lender of last resort, which could trigger destabilising fire sales in a crisis. By contrast, bank-issued stablecoins benefit from credit-creation capacity and access to central-bank liquidity, making them more effective for monetary-policy transmission and financial stability, and they are supported by the resilience of banks that are closely regulated and supervised. While non-banks may hold deposits with banks, this is not equivalent to direct bank issuance.

An industry representative considered that, eventually, settlement assets will likely comprise a mix of tokenised deposits, stablecoins, and CBDCs and emphasised that the payments layer is a linchpin of market confidence. A recent survey found that 80% of investors refrain from engaging in crypto, stablecoins, or other digital assets because they lack a safe and regulated environment. To attract these investors, the digital market must be structured to deliver safety, efficiency, and trust, avoiding new forms of fragmentation.

Another official noted that the ECB's two-step approach addresses many of the concerns expressed. The Pontes initiative operationalises settlement in central-bank money on DLT, building directly on recent Eurosystem trials, while Appia will serve as the longer-term framework to bring together CBDC and different forms of tokenised money onto DLT platforms. Appia's design will be developed collaboratively with public and private stakeholders, with a launch paper expected in the first half of 2026, followed by a blueprint outlining the integrated architecture for the future European digital settlement ecosystem.

### 3.3 Adapting the regulatory framework

An official stressed that developing a digital financial infrastructure is not only a matter of design and technology but also of establishing an adequate and future-proof regulatory framework to support it. Key European regulations, such as the Central Securities Depositories Regulation (CSDR) and the Settlement Finality Directive (SFD), were drafted before the advent of DLT and now create potential obstacles. These stem from outdated definitions (of e.g. "securities account" or "book-entry form") and provisions affecting risk management, including participation criteria, outsourcing, and cash settlement arrangements that require re-examination in the context of DLT. The goal is

to design a coherent, long-term framework that enables innovation while maintaining strong risk management and financial crime prevention standards, as risks may evolve or appear in new forms in a digital environment.

Work is underway to prepare the necessary regulatory changes. The European Commission is preparing an ambitious post-trade reform package, and the DLT Pilot Regime should be extended to act as a transitional framework until a permanent regime allows authorised DLT infrastructures to obtain standard licences under permanent legislation. The range of activities covered by the pilot regime should also be broadened, and issuance limits increased. Inspiration can also be drawn from the UK sandbox approach, where supervisory expectations evolve progressively as firms mature and gain experience.

An industry speaker suggested that building a sufficiently integrated environment that ensures interoperability and standardisation will require adapting CSDR and potentially creating a "28th regime" explicitly covering the payments and settlement dimensions of digital assets.

### 3.4 Strengthening financial crime prevention

An industry speaker emphasised that a digital financial ecosystem can only function sustainably if it is secure and financial crime risks are effectively mitigated. The digitalisation of finance will inevitably attract more sophisticated criminal activity, and lead to consumers being increasingly targeted by scams. According to a recent European Financial Crime Report, around \$750 billion in illicit funds, roughly 2.3% of Europe's GDP, moved through European financial systems in 2023, with around a quarter of those funds moving cross-border. These figures show that criminals are already exploiting the interconnected, real-time nature of global payments to launder money and transfer funds at unprecedented speed and scale. As financial systems become faster and more automated, the potential for fraud continues to expand.

To counter these threats and strengthen the financial system's resilience, the industry speaker called for the adoption of AI-based, data-driven, and collaborative approaches. Criminals are already using the latest technologies to defraud consumers, and financial institutions must match this sophistication by investing in AI, big data, and cloud-based systems to overcome the limitations of legacy infrastructures and secure their digital environments. Trust must also be built among public authorities, private institutions, and consumers, which requires placing fraud prevention and consumer protection at the core of the digital ecosystem's design.

The industry speaker further emphasised that effective financial-crime prevention in a digital ecosystem demands industry-wide collaboration between regulators, banks, law-enforcement bodies, and technology providers. The first priority is to align financial crime prevention approaches through clear regulatory guidance. Regulators should define specific typologies of financial crime to help banks allocate resources efficiently toward the highest-risk areas.

Second, cross-border coordination and information-sharing must be enhanced to close loopholes created by fragmented national regulations. A consistent anti-money laundering (AML) and fraud-prevention framework is also needed to standardise procedures and clarify responsibilities across jurisdictions. Finally, the regulatory framework must be future-proof, capable of evolving as both criminal tactics and technological tools continue to develop.

Responding to a question from the chair about how criminal activity might evolve in a digitalised ecosystem, the industry speaker observed that a more digitalised environment will bring both risks and opportunities. Technologies such as generative AI can strengthen defences by automating detection and prioritising investigative efforts, freeing compliance teams from repetitive “checkbox” tasks. Yet these same tools also empower criminals, enabling deepfakes and synthetic digital identities. This creates an AI-versus-AI race, in which technological sophistication on both sides continues to escalate. DLT, while offering many benefits, may also introduce new vulnerabilities, as criminals inevitably learn to infiltrate new systems.

Another industry speaker added that certain structural challenges related to DLT must also be addressed from an AML perspective. One key issue is shareholder identification, as the use of omnibus wallets, similar to omnibus accounts, limits transparency regarding the ultimate owners of assets. A collective decision will be needed on whether to maintain such models or move toward segregated wallets, which offer clearer identification but greater operational complexity.

## Wrap up

Closing the session, the chair underlined that building Europe's digital financial ecosystem will require close public-private cooperation. The panel agreed on the need to move beyond experimentation toward concrete implementation, with the Eurosystem's extended pilot phase serving to bridge the gap until the Pontes solution becomes operational at the end of 2026. Panellists also stressed the importance of advancing swiftly and collaboratively to shape a shared vision of the future ecosystem, with Appia providing the long-term framework that will integrate payments and settlement and allow Europe to capture the full benefits of digitalisation.

The chair moreover emphasised that progress must unfold on both technical and regulatory fronts, including the review and expansion of the DLT Pilot Regime. While the final configuration of Europe's digital ecosystem remains uncertain, there is broad confidence that the EU can strike the right balance between ambition and feasibility. Given the cost and complexity of this transformation, it is crucial to define clear, stable objectives to guide collective efforts and sustain momentum.