

SCALING TOKENIZATION TO SUPPORT SIU



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From sandbox to scale: unlocking the EU's tokenised securities framework

The EU has built the most advanced regulatory framework for tokenised securities globally, yet the architecture is not yet fully sufficient to support largescale tokenised capital markets. While the foundations are firmly in place, the conditions for industrial scale adoption remain a work in progress. In this context, the EU has implemented the DLT Pilot Regime, establishing a statutory regulatory sandbox that permits the issuance, trading, and settlement of tokenised securities through DLT based market infrastructures while providing for targeted exemptions from certain traditional rules. Despite this significant regulatory innovation, practical market uptake has been limited.

A 2025 review by ESMA revealed only a handful of authorised DLT market infrastructures and relatively low activity

levels. The barriers to scale are not rooted in the legal validity of tokenisation itself, but rather in restrictive transaction thresholds, the temporary nature of the sandbox, and the absence of an on-chain cash settlement mechanism. The DLT Pilot Regime also sits within a broader EU policy agenda to foster integrated and innovative capital markets, reflected in the European Commission's Market Integration and Supervision Package (MISP), which seeks to deepen market integration and create conditions conducive to financial innovation.

When analysing the development of tokenised securities in Europe, the current framework's limitations and the proposed MISP fixes become clear. While secondary trading is legally viable, the original DLT Pilot Regime choked growth by imposing strict market capitalisation thresholds, aggregate activity caps, and rigid limits on eligible instruments. MISP directly addresses this by proposing to remove asset specific caps, significantly raising the aggregate market value limit for DLT financial instruments from €6 billion to €100 billion, and creating a simplified, more flexible regime for smaller operators handling up to €10 billion.

Settlement remains highly complex because of hurdles in defining exactly when legal settlement finality occurs on chain, navigating the interplay with legacy post-trade infrastructures, and enabling on-chain Delivery versus Payment (DvP). The Commission's proposal to replace the Settlement Finality Directive with a modernised Settlement Finality Regulation aims to bridge these gaps by recognising DLT arrangements. Furthermore, digital custody is increasingly manageable, but it presents unique supervisory friction points around private-key management, the segregation of client assets on shared ledgers, and operational resilience.

Tokenisation introduces novel supervisory challenges that strain traditional, nation-centric oversight. Disintermediated market structures, where traditional middle-tier institutions are bypassed, blur the lines of liability and operational risk. When an error or exploit occurs on a decentralised ledger, it becomes difficult to legally assign fault between autonomous smart contract code, distributed network nodes, and the underlying platform operators. Managing these core vulnerabilities of distributed ledgers and smart

contracts requires specialised technical competencies that currently vary among national competent authorities (NCAs), leaving the financial ecosystem exposed to fragmented supervision and systemic operational blind spots. This vulnerability is further compounded by the unique digital operational resilience profile of DLT platforms, where validation failures among shared network nodes, and complex smart contract dependencies present acute IT integrity risks that legacy operational frameworks were never designed to police.

To address this supervisory fragmentation, the EU supervisory convergence model must evolve to better take into account the new DLT realities of market infrastructure. To ensure consistent supervision whilst fostering innovation in a competitive environment, ESMA must work to ensure that these emerging risks and vulnerabilities are addressed in a consistent manner by NCAs. Crucially, DORA should provide the common operational resilience framework underpinning the supervision of DLT market infrastructures. By applying existing supervisory convergence tools to DORA, these bodies can for example issue joint regulatory guidelines on smart contract auditing, coordinate Common Supervisory Actions specifically targeting DLT custody and private key security. Such structured cooperation ensures that all NCAs benchmark operational resilience and software vulnerabilities against the exact same rigorous European standards.

EU MISP reforms advance tokenised markets. Scale hinges on laws, digital settlement and Convergence.

Ultimately, the MISP reforms prove that the EU is moving toward an institutional grade ecosystem for tokenised capital markets. However, achieving true scale will depend on the final legislative implementation, the seamless availability of wholesale digital settlement money, and the successful coordination of convergent supervisory standards across all Member States.