What role for technology and crypto in the SIU?

1. Contribution of technology to the development and efficiency of capital markets

1.1 Technology as a facilitator of retail participation and investor engagement

A regulator emphasised that technology is contributing to transform retail participation in capital markets by improving access and investor experience, thereby supporting the mobilisation of part of the large pool of household savings in Europe. Fintech platforms are playing a key role in this shift by reducing entry barriers, simplifying onboarding, lowering investment thresholds and facilitating cross-border access, thus attracting younger and first-time investors. These platforms also shape investor behaviour, influencing trading intensity and portfolio allocation, and can nudge investors either towards diversification and long-term investing or, conversely, towards more frequent and speculative activity. This places greater responsibility on firms and regulators to ensure that investment decisions remain informed and aligned with investors' risk profiles.

An industry speaker agreed that digital platforms, notably mobile apps and robo-advisory tools, are contributing to a gradual cultural shift by facilitating investor access, reducing costs and influencing investor behaviour. At present retail participation in capital markets remains limited in Europe due to strong risk aversion and the prevalence of pay-as-you pension systems, which absorb a large share of long-term savings. As a result, only 10% of household financial assets are invested in funds in Europe, compared to 20% in the US. It is however hoped that digital platforms will, over time, contribute to increasing retail participation, improving capital allocation and enhancing market liquidity.

Another regulator welcomed the increasing focus on DLT and related applications such as digital assets and tokenisation in discussions on technology, noting their genuine transformative potential for financial markets, in contrast to trends previously put forward such as the metaverse or NFTs. These developments are highly relevant for the SIU, which aims to better connect European savings with productive investment needs, including financing the green transition, innovation and strategic sectors such as defence.

The regulator however pointed out that more established technologies, such as those underpinning open finance and low latency trading should not be overlooked, as they can also significantly contribute to developing capital markets and improving investor outcomes, notably by enhancing product comparability and helping reduce product costs. This has been seen in other sectors such as energy or telecom, where simple comparison tools and improved data portability, allowing investors to transfer profiles and avoid repeated onboarding procedures, are key enablers of more efficient and competitive markets.

A second industry speaker underlined that tokenisation can further broaden access to financial markets building on the expansion of retail participation driven by neobrokers. By lowering investment thresholds through fractional ownership and opening access to a wider range of asset classes, it can support the inclusion of previously "unbrokered" investors.

A third industry speaker added that tokenisation combined with stablecoins can enable more direct and efficient interactions between investors and their investments, for example by allowing payments such as dividends to be processed instantly on-chain, thereby reducing costs and simplifying the user experience.

1.2 Crypto as an entry point to retail capital market participation

An industry speaker emphasised that the strong adoption of crypto as an asset class signals a shift in investor preferences, with over 55 million Europeans having engaged with crypto over the past decade and many younger investors entering financial markets through this channel. This reflects growing demand for more accessible, intuitive and digitally native investment experiences. Lessons can be drawn for the SIU from crypto investment platforms, particularly in terms of ease of access and user-centric design.

An official observed that crypto is increasingly functioning as an entry point into financial markets, particularly for younger investors, rather than a niche asset class, thanks to its low barriers to entry, intuitive digital interfaces and greater accessibility compared to traditional financial channels. Crypto and traditional finance are complementary rather than competing systems, with crypto increasingly acting as a first touchpoint in the investment journey.

Another industry speaker noted that traditional financial institutions are adapting to increasing competition from neobrokers and crypto platforms, which have reshaped the investment and asset management landscape through cost efficiency, user-friendly digital interfaces and more appealing investor experience. This has led to growing demand for crypto-related products, prompting many banks to expand their offerings and integrate crypto within broader multi-asset platforms alongside traditional instruments such as ETFs and bonds.

1.3 Efficiency gains and market infrastructure transformation

An industry speaker stated that DLT and tokenisation can lead to a structural transformation of financial

markets rather than a mere digitisation of existing processes, enabling new forms of liquidity aggregation, new ways of organising primary and secondary markets and more direct connections between issuers and investors.

Another industry speaker emphasised the growing adoption of DLT among financial institutions and large corporates, driven by its ability to streamline processes and reduce costs through shared ledger platforms. By reducing the need to reconcile transactions across multiple ledgers, as is currently the case in financial markets, DLT improves transaction efficiency, transparency and speed, while enabling new functionalities. These improvements translate into tangible economic benefits aligned with SIU objectives, including lower costs and faster execution of cross-border payments, as well as reduced costs of issuance, thereby widening access to capital markets for firms. DLT can also help to improve treasury and cash management, generating substantial cost savings for corporates, potentially in the range of around 1% to 1.5% of transaction values according to a recent survey. In addition, DLT can reduce liquidity needs across financial markets by limiting the need for pre-funding, with significant amounts (estimated at around €1.3 trillion) of currently "trapped" liquidity in the European system that could potentially be unlocked.

2. Obstacles and risks in the adoption of technology in capital markets

2.1 Structural and regulatory obstacles to digitalisation

An industry speaker noted that current pilots show that liquidity in DLT-based markets remains limited, with interoperability identified as a critical condition for scaling. Achieving interoperability requires both technical and regulatory bridges between traditional and tokenised infrastructures, allowing liquidity to flow efficiently across systems. At present, several barriers, particularly regulatory constraints such as capital requirements, limit market-making activity and liquidity provision, thereby constraining efficiency gains. Greater flexibility in capital allocation and hedging is therefore necessary to improve liquidity.

The industry speaker further highlighted that, despite progress at EU level, fragmentation persists in the practical implementation of capital market rules across Member States, creating operational challenges for firms active across borders or asset classes and seeking to innovate, and running counter the objective of the SIU of fostering more integrated EU capital markets. Differences in interpretation across National Competent Authorities (NCAs), for instance regarding the classification of tokenised assets under MiFID, custody requirements and investor protection standards, lead to legal uncertainty and inconsistent supervisory expectations. In addition, the interaction between regulatory frameworks, notably between MiCA and MiFID, raises clarity issues in practice and adds further complexity for firms operating at the intersection of traditional and digital markets, increasing compliance costs and slowing innovation.

2.2 Risks associated with technological developments in capital markets

A regulator stressed that, while technology brings clear benefits, it reshapes rather than eliminates risks and can support the SIU provided these risks are effectively managed. Several types of technology-related risks can be identified. Behavioural risks arise from digital platforms and social media communications, which may encourage excessive trading and speculative behaviour, particularly among younger and less experienced investors. The growing use of gamification techniques in digital interfaces raises additional concerns. Attention should therefore be given to appropriateness and suitability assessments in digital environments, where simplicity and speed may encourage impulsive decisions. As access to investment products becomes easier with technology, firms and regulators share responsibility for ensuring that investment decisions remain appropriate to investors' risk profiles and support longer-term outcomes.

The regulator further noted that technology also introduces operational and technological risks, including cyber threats, system outages and dependencies on third-party providers, underscoring the importance of frameworks such as DORA. In addition, risks related to AI, such as bias, lack of transparency and over-reliance on automated decision-making, may have significant consequences for investors. In the crypto space, there are also important concerns in terms of market integrity, misleading practices, unclear custody and ownership arrangements and money laundering.

An industry speaker agreed that crypto products raise specific challenges, notably due to their high volatility and the absence of advisory frameworks, placing greater responsibility on investors and creating reputational risks for financial institutions distributing these products. Financial education is essential to ensure that investors fully understand these risks.

3. EU regulatory framework and future policy priorities

3.1 Adequacy of the current EU digital framework

A regulator considered that regulatory approaches to digitalisation and crypto are broadly aligned at the international level, with global standards beginning to emerge, notably with the IOSCO 2023 recommendations on crypto and digital assets. A first implementation review across multiple jurisdictions including certain EU member states, shows that MiCA is largely consistent with these standards, positioning the EU alongside other leading jurisdictions such as Canada, Hong Kong and Singapore in terms of implementation of key safeguards in the cryptoasset space. Most jurisdictions are moving in a similar direction, with a majority actively implementing IOSCO standards. However, some

uncertainty remains, as the UK framework is still being implemented and the US approach is being finalised with a more innovation-driven orientation.

An industry speaker noted that, while the DLT pilot regime, where Europe has been a frontrunner, is a positive step, its limited scope and restrictive caps are insufficient to generate meaningful market development. Innovation needs to be tested at scale and across borders, implying the need for cross-border sandboxes with common rules and joint supervision. More broadly, despite strong market demand for technology-driven innovation in capital markets, regulatory fragmentation and the lack of clarity in requirements remain key obstacles to achieving the ambitions of the SIU and strengthening Europe's competitiveness.

A second industry speaker stated that current regulatory approaches in Europe do not sufficiently support innovation and competitiveness. Despite the introduction of MiCA, a significant share of crypto activity in Europe remains outside the regulated perimeter, with more than 50% of users still relying on global unregulated providers and major global stablecoins such as Tether continuing to dominate. In addition, while Europe focuses on regulating AI and protecting data, other jurisdictions place greater emphasis on developing and scaling technological capabilities. Moreover, Europe's approach to risk appears to be overly restrictive for supporting the use of new technologies. Investor protection frameworks often lead to excessive or ineffective disclosure, while attempts to limit gamification, an ongoing global trend, seem unlikely to be effective. Investor behaviour and interaction with technology have fundamentally changed, calling for a more pragmatic and technology-neutral approach, focused on outcomes rather than detailed prescriptive rules.

A third industry speaker considered that the EU has established a robust regulatory framework, notably through MiFID II, DORA and MiCA, and that the balance between innovation and risk mitigation is broadly appropriate. However, technological developments, particularly the rise of AI, require targeted enhancements to existing rules, including governance standards for AI-driven advice, behavioural design guidelines and greater transparency for algorithmic recommendation systems, to ensure that technology supports long-term investment rather than speculative behaviour.

The industry speaker also emphasised that regulation alone is insufficient and must be complemented by market-led initiatives. Industry participants should develop interoperable technical standards and common tokenisation protocols, while improving cost transparency for investors and incorporating default investment pathways that guide retail investors towards diversified and long-term portfolios. Stronger industry coordination will help address digitalisation risks more consistently and support more effective scaling.

3.2 Policy priorities to support technology adoption in the capital markets

An official highlighted that a key policy challenge is how to convert the initial engagement of investors with crypto into sustained participation in traditional capital markets. Several conditions were identified, including the need to strengthen financial literacy to support a shift towards longer-term investment behaviour beyond initial curiosity, to improve the accessibility and user experience of traditional investment platforms to match crypto app standards and attract a broader investor base, and to leverage technology, particularly DLT, to enhance the functionality of financial products and platforms. A further priority is to ensure that regulatory frameworks enable, rather than constrain, technological development, as overly restrictive regulatory frameworks could lead innovation to shift outside the EU or into unregulated environments.

The official moreover emphasised the importance of key MISP proposals in supporting the digitalisation of EU capital markets. In particular, the expansion of the DLT pilot regime is an important step towards integrating DLT solutions into mainstream financial markets, although questions remain regarding whether current proposals are sufficiently ambitious. The focus on post-trade integration and connectivity is also critical, as long-standing fragmentation across national infrastructures, particularly CSDs, may limit the effective integration of new digital solutions with existing market structures. The success of these initiatives will ultimately depend on their effective adoption and implementation.

A regulator added that regulatory responses should strike a better balance between supporting innovation and ensuring effective investor protection, while maintaining safe, transparent and reliable market conditions. Regulatory sandboxes are useful tools to test innovation in controlled environments and to help supervisors better understand emerging risks. Technology, including AI, can also strengthen supervision through improved risk assessment, monitoring and investor protection.

An industry speaker called for a broader shift in regulatory thinking to better support innovation, competitiveness and technological sovereignty in the context of the SIU, emphasizing the need for a genuinely technology-neutral approach that empowers investors, reduces unnecessary regulatory complexity and takes into account global competitive dynamics. For example, disclosure requirements, although essential for informed decision-making, should remain proportionate to the size and nature of investment and to how investors access and use these products.

Another industry speaker added that while technology and crypto can support key SIU objectives - including increased retail participation, improved access to funding for issuers, enhanced liquidity and price formation, greater operational efficiency and cross-border integration - unlocking these benefits requires supervisory convergence, robust governance (notably for digital advice) and a more scalable DLT frameworks (such as the reviewed DLT pilot regime). Looking ahead, the priority should not be the creation of new rules, but the effective implementation, interoperability and scalability of existing frameworks. Moving from experimentation, with initiatives such as sandboxes and

the DLT pilot regime, to large-scale integration is a critical step in fully realising the contribution of technology to the SIU.

3.3 Operational conditions for scaling technology

An industry speaker suggested that an effective integration of digital ecosystems with traditional financial systems is essential to avoid fragmentation and the emergence of parallel financial structures.

Another industry speaker underlined that a key constraint to the development of DLT-based financial markets at present is the absence of an effective "cash leg" for on-chain transactions. While progress is being made by the ECB on central bank digital money, it is not yet available at scale and the same applies to tokenised deposits. In this context, MICA-regulated stablecoins remain the only currently operational on-chain settlement option in Europe. The greater clarity provided in the Market Integration and Supervision Package (MISP) proposal on the potential use of regulated stablecoins (e-money tokens) for the settlement of transactions in financial instruments is welcome, but the overall pace of implementation remains too slow, with legislative timelines and subsequent licensing processes likely to delay market development. A faster regulatory process is essential to enable Europe to fully benefit from these innovations.

The industry speaker also noted that, while the development of euro-denominated stablecoins is a positive trend, many European firms require access to non-euro settlement, particularly in US dollars. The remaining uncertainty regarding the use of global US dollar stablecoins by EU firms for settlement purposes, due to the lack of clarity on how stablecoins issued outside the EU can be used under existing regulatory frameworks, remains a key obstacle to the development of DLT-based financial markets, requiring clearer policy guidance.

Wrap up

The Chair concluded that the discussion highlighted significant and rapid changes in financial markets driven by technological developments, including digital platforms, cryptoassets and DLT-based infrastructures, which are reshaping both market functioning and the way investors, particularly younger ones, engage with financial investments. These developments, seen by the panellists as meaningful innovations complementing existing financial systems rather than passing trends, were considered to bring clear benefits in terms of accessibility and efficiency, while requiring adjustments in market practices and regulatory frameworks. Current EU policy initiatives regarding capital markets, including the MISP, still provide only limited coverage of technological developments, focusing primarily on incremental adjustments such as targeted changes to existing regulations (including CSDR and SFDR) and the scaling of the DLT pilot regime.

Three further points emerged from the discussion regarding policy priorities. First, the importance of ensuring legal clarity, particularly in areas such as tokenisation, stablecoins and the DLT pilot regime, to provide a predictable environment for innovation. Second, the need to avoid additional regulatory complexity and lengthy processes, and to rely more on market-driven solutions. Third, the importance of interoperability, both within the EU and potentially at global level, as a key condition for scaling these technologies and supporting a well-functioning single market.