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DIGITAL CAPITAL MARKETS: TAKING THE STACK ON-CHAIN

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ABOUT

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The Point Zero Forum is an annual gathering of 2,000 leading central bankers, regulators, policymakers, industry leaders, technologists, and investors from around the world. Over three days of dialogue and collaboration, we work to align policy, finance, and technological roadmaps to advance sustainability, inclusivity, innovation, and efficiency in the global financial ecosystems.

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INTRODUCTION

This report summarises the discussions of a cross-sector roundtable on the future of digital capital markets at Point Zero Forum 2026 in Zurich. The discussion explored four questions: the value proposition of taking capital markets on-chain, the allocation of functions between on-chain and off-chain infrastructures, the respective roles of permissionless and permissioned blockchain infrastructures, and the potential of blockchain to support emerging applications such as agentic finance. The report synthesises the principal themes, highlighting areas of consensus as well as the points on which perspectives diverged.

Key findings:

1. While participants identified multiple operational benefits to taking capital markets on-chain, others cautioned that there needs to be real commercial gains to drive adoption.
2. Participants generally agreed on a functional split between on-chain and off-chain activities, but viewpoints diverged on specific unresolved areas, like cash settlement and netting.
3. Participants veered towards a future where hybrid blockchain infrastructure would persist, but with the expectation of permissionless blockchains growing in importance over time.
4. Agentic finance was seen as a strong fit for blockchain rails, notwithstanding unresolved governance questions around the use of agentic systems in commerce.

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1. WHY TAKE CAPITAL MARKETS ON-CHAIN?

The discussion showed that there is no single value proposition for taking capital markets on-chain. Instead, participants described several interconnected benefits, with differing views on which aspects provide the greatest value. While operational improvements were widely recognised, many participants argued that the true value lies in the broader transformation of market infrastructure and in enabling more efficient allocation of capital.

1.1. Operational and Capital Efficiency

Operational efficiency was consistently identified as one of the primary advantages of on-chain capital markets. Participants argued that distributed ledger technology (DLT) enables greater automation through smart contracts, programmability and straight-through processing, thereby reducing manual processes and simplifying post-trade operations.

However, the discussion also emphasised that the principal benefit extends beyond operational cost reduction. Faster settlement was viewed as a mechanism that allows capital and collateral to circulate more efficiently throughout the financial system. By shortening settlement cycles, financial institutions can improve balance-sheet efficiency, reduce settlement-related constraints and make more effective use of financial resources. Faster settlement is not unambiguously beneficial, however. Instantaneous (atomic) settlement eliminates counterparty risk, but it also removes the liquidity benefits of netting and can increase intraday funding requirements, since participants must pre-fund gross rather than net amounts. The optimal settlement speed is therefore a design choice, a point taken up again in the discussion of netting below.

Several participants identified collateral mobility as a particularly important benefit. The ability to move collateral more efficiently across markets, for example, through intraday repo against tokenized collateral, could unlock additional liquidity and materially improve the utilisation of assets.

At the same time, some participants cautioned against overstating operational efficiency as the primary driver for adoption, as this aspect alone is insufficient to transform capital markets. Instead, technological improvements must create tangible commercial value that influences market participants' behaviour and investment decisions.

1.2. Expanding Market Access and Integration

Beyond efficiency gains, the discussion highlighted the potential to improve both access to and integration of capital markets. Participants argued that digital issuance processes can lower barriers for issuers by making fundraising faster, simpler and less costly, particularly for small and medium-sized companies that have traditionally faced limited access to capital markets.

Bringing different asset classes onto a common digital infrastructure was also seen as an opportunity to reduce fragmentation within financial markets. Rather than relying on separate settlement systems for each asset class, a shared infrastructure could support integrated settlement processes and enable new approaches to collateral management. Some participants further suggested that common on-chain infrastructure could contribute to greater integration across jurisdictions by reducing the dependence on fragmented national market infrastructures.

1.3. Interoperability as an Adoption Requirement

Institutional tokenized capital markets are still in an early stage of development, and successful adoption depends on the availability of supporting infrastructure, including reliable digital settlement mechanisms.

A recurring concern was interoperability. Participants argued that new blockchain-based infrastructure must remain connected to existing financial market systems. Without effective integration between traditional and digital infrastructures, tokenization risks creating new forms of fragmentation rather than resolving existing inefficiencies.

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2. WHAT SHOULD GO ON-CHAIN AND WHAT SHOULD NOT?

The discussion demonstrated that tokenized financial markets are unlikely to become fully on-chain in the foreseeable future. Instead, participants advocated a selective approach, in which blockchain is applied selectively to functions that benefit from decentralization, shared verification, and programmability, while other processes remain off-chain where privacy or legal considerations prevail.

2.1. Principles for Allocating Functions On-Chain

Participants generally agreed that blockchain should be reserved for functions where a distributed ledger provides clear operational or legal advantages. Functions considered well suited to on-chain implementation include:

- Ownership records
- Asset issuance
- Settlement instructions
- Lifecycle events (e.g. corporate actions and coupon payments)
- Collateral management

These activities benefit from shared records, deterministic outcomes and automation through smart contracts.

The value of placing ownership records on-chain depends critically on the applicable legal framework. Where legislation recognizes the ledger entry as constitutive of ownership, as for example under the Swiss DLT Act's ledger-based securities, the on-chain record delivers genuine legal certainty and settlement finality. Where the ledger merely mirrors an off-chain golden record, tokenization risks adding a layer of duplication rather than removing one and brings about a reduction in ownership rights. The allocation question is therefore as much legal as it is technical.

Participants further emphasised that the decision to move a process on-chain should remain functional rather than technology-driven. Blockchain was primarily characterised as a settlement and ledger layer, while other components of market infrastructure may continue to operate off-chain. Moving functions on-chain also entails costs and technical constraints, including latency and processing limitations, reinforcing the case for a selective rather than comprehensive implementation.

2.2. Functions Best Kept Off-Chain

There was broad agreement that certain information should remain off-chain because of privacy, confidentiality and regulatory requirements. This includes:

- Personal data
- Transaction details
- Proprietary business information
- Books and records
- Legal and compliance documentation

Several participants suggested that such sensitive information could be linked to blockchain transactions through verifiable credentials or cryptographic proofs where required, preserving privacy while retaining verifiability.

Some operational processes were also viewed as more suitable for off-chain environments due to latency and complexity constraints, including price discovery, trade matching and trading engines. However, participants noted that technological advances could shift some of these functions on-chain over time.

2.3. The Cash Leg and Netting: The Unresolved Questions

Cash settlement represented one of the principal areas where opinions diverged. One perspective favoured moving the cash leg on-chain, with stablecoins, tokenized deposits, central bank digital money and other digital settlement assets discussed as potential approaches. A contrasting perspective favoured greater flexibility, arguing that settlement should not necessarily require on-chain cash, and that links to existing payment infrastructure and support for multiple settlement models should be maintained to facilitate broader adoption. Despite these differences, participants generally agreed that the appropriate settlement model depends on the specific use case rather than a universal approach.

Views on netting were similarly divided. Netting involves offsetting multiple transactions or obligations so that only the resulting net amount is settled. Moreover, because netting carries regulatory and accounting significance, offsetting exposures reduces capital requirements, One perspective maintained that netting should remain off-chain because it relies on batching transactions over time and on trusted coordination. Others argued that blockchain technology does not require immediate settlement and is equally capable of supporting scheduled settlement windows. According to this view, netting could continue while settlement ultimately occurs on-chain, allowing participants to determine the timing according to market needs. Practical experience shared during the discussion indicated that some market participants continue to prefer end-of-day settlement despite the availability of more immediate technological alternatives.

The observation that demand for settlement speed is bounded by liquidity management practices, not by technology, reinforces the funding-cost trade-off identified above.

2.4. Market Readiness

Beyond technical design, several participants highlighted that the allocation of functions between on-chain and off-chain environments is ultimately constrained by market readiness. Despite significant technological progress, many financial institutions continue to favour a gradual approach, retaining existing trading processes, settlement cycles and operational arrangements while selectively introducing blockchain where immediate value can be demonstrated. As a result, participants widely expected traditional and blockchain-based infrastructures to coexist for an extended period, requiring institutions to maintain parallel systems and justify additional investment through clear and measurable business benefits.

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3. PERMISSIONLESS VERSUS PERMISSIONED BLOCKCHAIN INFRASTRUCTURE

Rather than choosing between permissionless and permissioned blockchains, participants broadly favoured hybrid infrastructure supported by interoperability and common standards.

3.1. Hybrid Infrastructure Models

Several participants challenged the premise that permissionless and permissioned blockchains should be viewed as competing alternatives. Instead, they argued that each serves distinct purposes within digital capital markets. Permissioned infrastructures were regarded as particularly suitable for functions such as issuance, clearing and settlement, where liability, settlement finality and regulatory compliance remain central considerations. In contrast, permissionless blockchains were recognised for providing broader liquidity, composability and market access, making them attractive for applications requiring wider participation and broader market access.

This complementary perspective led to the conclusion that the future lies in hybrid infrastructures rather than a single dominant blockchain model. 'Hybrid' can refer to at least three different models in this context:

- **Functional hybridity:** different functions deployed on different chains (e.g. issuance and settlement on permissioned infrastructure, distribution on permissionless networks);
- **Permissioned-on-public chains:** permissioned environments operating on top of permissionless chains, such as allowlisted smart contracts, compliant token standards or institutional subnets and layer-2 networks, a model which is increasingly used for institutional fund and money-market products on public networks;
- **Traditional–DLT coexistence:** blockchain-based infrastructure running alongside conventional systems during an extended transition.

Several participants also argued that blockchain infrastructure should remain chain-agnostic, allowing market participants to determine the most appropriate deployment model.

3.2. The Case for Greater Use of Permissionless Blockchains

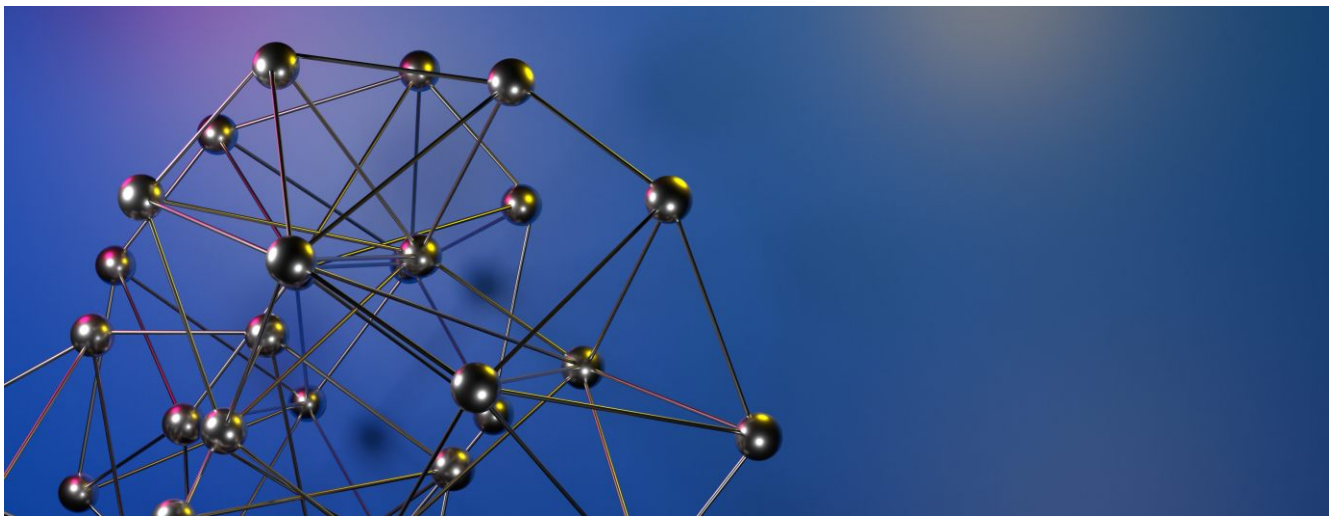
Although hybrid models dominate today, many participants expected permissionless blockchains to become increasingly important as markets mature. Reasons cited included:

- Existing liquidity on public networks
- Lower infrastructure costs
- Greater accessibility
- The ability to build on established technological ecosystems
- Reduced market fragmentation
- Stronger developer ecosystems

Several participants also drew comparisons with earlier technological transitions, such as the evolution from intranets to the internet or from private to public cloud infrastructure. These analogies illustrated the expectation that markets may initially favour controlled environment before gradually migrating towards public infrastructure as the technology matures and confidence in its operation grows. Speakers nevertheless acknowledged that private infrastructures are unlikely to disappear entirely, particularly where specific operational or regulatory requirements persist.

3.3. Interoperability and Standards

Participants repeatedly identified interoperability, both across chains and between chains and legacy infrastructure, as the key enabler among various chains of scalable digital capital markets. They warned that, without common technical, data, legal and regulatory standards, markets risk recreating the fragmented structures that DLT seeks to overcome.



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4. AGENTIC FINANCE: BLOCKCHAIN AS THE NATIVE RAILS FOR AI AGENTS

The discussion broadly supported the view that blockchain technology offers important advantages for the development of agentic finance. Participants argued that blockchain provides a suitable digital infrastructure required for autonomous agents to execute transactions, interact with tokenized assets and automate financial processes. At the same time, they emphasised that wider adoption of agentic finance requires appropriate governance, compliance frameworks and common standards alongside the underlying technology.

4.1. Blockchain as the Digital Infrastructure for Agentic Finance

Blockchain enables capabilities that are difficult to replicate within traditional financial infrastructure. Autonomous agents can control digital wallets, sign transactions cryptographically, and interact directly with tokenized assets and smart contracts, making blockchain a natural execution environment for AI-driven financial processes. While participants agreed that AI agents are not yet capable of consistently making autonomous investment decisions, they were considered well suited to improving operational efficiency and automating portfolio construction and execution. The combination of tokenization and AI was viewed as expanding investor access to both public and private assets while enabling increasingly personalised portfolio management.

4.2. Governance and Adoption Challenges

Despite these advantages, participants stressed that the deployment of AI agents introduces governance and adoption challenges that technological capability alone cannot resolve. In particular, AI agents should remain identifiable, operate within clearly defined and machine-verifiable mandates, and be subject to mechanisms allowing their authority to be revoked when necessary. Participants suggested that existing technologies for digital identity, verifiable credentials and delegated authority could provide mechanisms to support these requirements, provided that common standards are established across blockchain and AI applications.

More broadly, adoption will depend on resolving questions of legal accountability, regulatory compliance and risk management. When an autonomous agent executes an erroneous or harmful transaction, liability must be clearly allocable among the agent's operator, its developer and the principal on whose behalf it acts.

The discussion also briefly highlighted quantum computing as a future technological development that may create both new opportunities and additional challenges for digital market infrastructure.

5. PARTICIPANTS

The roundtable took place in Zürich on 23 June 2026, as part of the Point Zero Forum. Hosted by the Swiss National Bank, the session was moderated by Thomas Moser, Alternate Member of the Governing Board. Participants included:

- **Lucas Bruggeman**, CEO of BX Swiss AG and Chief Digital Assets Officer at Boerse Stuttgart Group
- **Roy Choudhury**, Managing Director and Senior Partner, BCG
- **Georgina Jarratt**, Managing Director, Head of FinTech & Digitalisation, International Capital Market Association
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- **John O'Neill,** Managing Director, Digital Assets & Currencies, CIB, HSBC
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