

Foreword:

We stand at a pivotal juncture in the evolution of global finance. The rapid intersection of decentralized infrastructure, artificial intelligence, dynamic machine learning, and central bank innovations is fundamentally altering how value is stored, exchanged, and secured. Yet, as the collection of insightful papers in this issue demonstrates, every advance in efficiency and access brings forth fresh systemic vulnerabilities, governance dilemmas, and behavioral friction points.

This issue brings together a rich tapestry of empirical research that dissects both the promise and the structural friction of our modern financial architecture. Across disparate geographies and technologies, a unified theme emerges: the presence of digital financial infrastructure does not automatically yield economic participation, market resilience, or flawless security.

Consider the dual realities of financial inclusion. Rahman's comparative analysis of digital financial services in rural India and New Zealand highlights the persistent structural and cultural gaps that leave millions unbanked or underserved, asserting that technology must be paired with hybrid, human-centric delivery models to drive real economic access. Similarly, Chen's examination of China's digital RMB reveals how even state-backed technological triumphs can struggle against established consumer habits, proving that utility, trust, and user habituation often outweigh technical availability when competing with legacy private platforms.

Concurrently, the mechanisms safeguarding and powering these digital networks face rigorous scrutiny. Du demonstrates the undeniable superiority of adaptive machine learning algorithms, specifically Random Forests, over rigid, rule-based systems in combating increasingly complex financial fraud. Yet, as transactions become faster and automated, venue-level liquidity remains highly sensitive to systemic shocks. Lim's granular investigation into the October 2025 liquidation cascade on Hyperliquid uncovers a stark "two-regime recovery". While top-level bid-ask spreads may quickly normalize after a crash, underlying market depth contracts persistently, that is, superficial liquidity metrics often mask underlying venue fragile state.

Finally, looking toward the emerging horizon of autonomous systems, Mafrur and Khusumanegara evaluate the ERC-8004 standard for AI agents. Their empirical findings reveal an ecosystem that is currently "registration-heavy but operationally shallow," underscoring the gap between creating agent identity on the blockchain and achieving a fully functional, decentralized agent economy.

Together, these authors offer a sobering yet optimistic roadmap. They remind us that building the future of finance requires equal parts innovative engineering, empirical vigilance, and thoughtful regulatory stewardship. It is our hope that this collection inspires researchers, policymakers, and practitioners alike to look beyond surface-level metrics and design ecosystems that are truly inclusive, resilient, and secure.

With warmest thanks,
Cuong Nguyen
On behalf of the JFDA Editorial Team