

How mass deployment of AI agents will reshape financial infrastructure

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Executive Summary



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With consumers relying more and more on AI to handle their everyday financial affairs, automation of payments, deposits and saving vehicles will become increasingly common. As a result, financial infrastructure designed to be used by humans will have to be redesigned for AI-compatibility including a shift toward machine-readable inputs and mechanisms that accommodate the delegation of authority.

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AI as financial services' customer interface

Generative AI use is evolving beyond the chatbot query format into an agentic phase where AIs themselves execute tasks and transactions. According to Imperva's Bad Bot Report¹, more than 50% of global web traffic was automated, by AI or otherwise, in 2024 for the first time in a decade. In 2025, the automated share of web traffic increased further. Humans are being supplanted by nonhumans, including AIs, as the predominant web user. Going forward, AI agents are expected to increasingly access a wide range of services via the web.

E-commerce in particular is at the leading edge of this transition to so-called agentic commerce, exemplified by Amazon's former AI shopping-assistant Rufus². Rufus would help users of Amazon's website or mobile app to make shopping decisions by searching on their behalf for merchandise on the Amazon site and gathering relevant product information. Among Japanese companies, Rakuten offers Rakuten AI and aims to roll out an agentic ecosystem that serves as its user interface (UI).

This trend is spreading into the financial sector as well. Insurify, a US insurance-comparison platform, offers an app that can provide auto insurance quotes and comparisons within ChatGPT conversations. Japanese financial players also have announced partnerships with OpenAI. In addition, DOCOMO SMTB Net Bank unveiled NEOBANK ai, which dynamically generates UI screens based on chat dialogue. AI is thus beginning to take on customer-facing roles even within the financial sector.

NOTE

¹) A research report on automated online programs (bots) published annually by Imperva, a cybersecurity company.

²) In the US, Rufus was converted into Alexa for Shopping.

First steps toward making financial infrastructure AI-compatible

Customer interfaces and financial infrastructure do not evolve independently of each other; changes in the former force the latter to adapt in response. As AI is increasingly deployed in customer-facing roles, incompatibilities will likely crop up between AI interfaces and a subset of settlement, securities and reconciliation infrastructure that is dependent on back-office operating hours or involves batch processing or manual exception-handling. Continuous processing of high-frequency, small transactions is particularly prone to bottlenecks due to factors such as transaction-by-transaction authentication or authorization checks, anomaly detection and fixed processing costs. Deployment of AI in customer-facing roles will very likely result in rapidly mounting pressure to make financial infrastructure AI-compatible.

In the payments space, distributed ledger technology, stablecoins and tokenized deposits are seen as having substantial potential to bridge interoperability gaps given their high degree of AI-compatibility. AI agents will likely be able to hold and manage a wallet themselves and independently transfer funds and make payments. Meanwhile, incumbent players will likely make their services more AI-compatible through such means as adding API connectivity to credit cards.

In fact, securities market infrastructure is already undergoing changes highly conducive to 24/7 trading by AI agents. In the US, the Depository Trust & Clearing Corporation has developed a securities tokenization service. In July 2026, it conducted a limited live-trading trial with 30+ participants. The NYSE and Nasdaq also are preparing to launch trading of tokenized securities on a nearly round-the-clock basis. Retail traders can already trade tokenized stocks and ETFs on Kraken's xStocks platform. To date, xStocks' cumulative trading volume exceeds \$38 billion inclusive of trades, issuance and redemptions. The stock of tokenized real world assets³ (RWAs) ex stablecoins stands at \$38.2bn, \$15.6bn of which are linked to US Treasury securities, per RWA.xyz.

³) RWAs are tokenized assets that have value in the real world.

In Japan, SBI Holdings and Startale Group in February 2026 jointly announced plans to launch an onchain financial asset trading platform named Strium Network. Explicitly designed to host trading by AIs, Strium Network aims to rebuild market infrastructure in toto instead of adapting it piecemeal on a product-by-product basis. Strium is currently in its proof-of-concept phase.

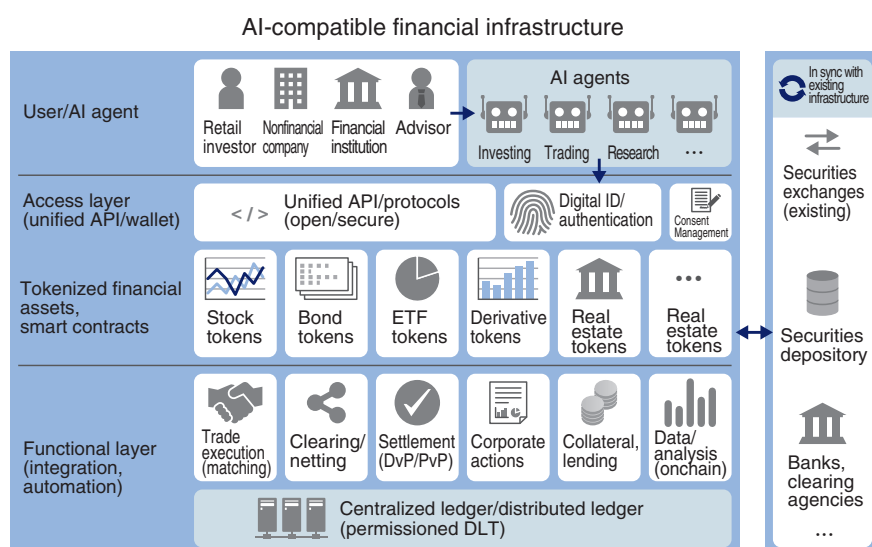
The imperative of redesigning financial infrastructure

As settlement and portfolio management become increasingly automated alongside the deployment of AI in customer-facing roles, the fundamental principles underlying financial infrastructure design will also need to change. At a minimum, the required changes will include

- (1) machine-readable publication of prices, terms, inventories and availability,
- (2) AI gateways (e.g., APIs) that enable seamless, end-to-end workflows encompassing everything from search to contract execution, settlement, modification and cancellation,
- (3) delegation-of-authority protocols that include agent authentication, spending caps, expiration dates and purpose restrictions, and
- (4) machine-to-machine (e.g., Agent2Agent) interaction protocols encompassing know-your-customer (KYC) and know-your-agent (KYA) screening, guardrails and audit logs.

These changes will be realized by both adding API connectivity to existing financial infrastructure and by implementing AI-native processes onchain (see diagram).

Layer (1) consists of financial products' prices, terms, inventories and availability disclosed in AI-readable format. It will entail upgrading existing infrastructure with API feeds for, e.g., product information and rendering account balances and chain-of-ownership records machine-readable on the onchain side. Cross-



Source: NRI

sectional standardization with respect to, e.g., suitability and purchase-quantity limits will remain a challenge, even with tokenization.

Layer (2) is where searching, contract execution, settlement, modification and termination take place through a seamless chain of API calls. In the commerce space, agentic payment protocols such as Google's AP2, Visa's Trusted Agent Protocol and MasterCard's Agent Pay are gaining traction. Financial services will likewise require similar authorization and settlement functionality. For machine-to-machine transactions, the x402 protocol is expected to be used for ad-hoc payments and smart contracts for conditionally executed transactions.

Layer (3) specifies in a machine-readable format the terms under which authority is delegated. Such terms include to whom, until when and for what purpose authority is delegated, in addition to any limits on transaction amounts. Substantiation analogous to AP2's signed mandates or credit card issuers' permission-controlled payment credentials will likely be required.

Layer (4) lays the groundwork for machines to cooperate with each other in conjunction with identity, limitations on agents' actions and auditing. Potential Layer (4) protocols include Google's Agent2Agent and Anthropic's Model Context Protocol for legacy infrastructure and distributed-ledger audit trails or identifiers such as decentralized identifiers (DIDs) or Ethereum Name Service (ENS) names on the onchain side. Issues such as KYA standards and the allocation of responsibility for chain transactions have yet to be resolved and will need to be dealt with going forward.

The extent to which financial institutions can systematically invest in new infrastructure while addressing ripple effects of mass AI adoption as design challenges may become the next axis of competition in the financial sector.

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