



Blockchain: harmonizing global financial systems

Blockchain promises an efficient, secure, and integrated financial infrastructure for managing a diverse class of modern assets.

By Rachid Ajaja

Blockchain technology marks a significant transformation in financial infrastructures. It envisions a unified framework designed to address the operational inefficiencies, data discrepancies, and inflexible systems commonly found in today's investment banking sector.

Traditional banking structures, which operate in silos for various asset classes, have historically led to duplication, increased error rates, and a lack of adaptability. This often makes it challenging for them to keep up with the constantly evolving needs of financial markets. The emergence of blockchain technology, coupled with its innovative solutions, promises a practical answer to these challenges.

1) Operational inefficiencies

The current financial landscape often operates in silos, leading to operational inefficiencies. This compartmentalization requires repeated processes, increased resource allocation, and extended transaction times. Blockchain's decentralized nature offers the potential to unify these isolated systems, streamlining asset management, enhancing efficiency, and ultimately reducing costs.

2) Data integrity issues

The isolation of financial infrastructures compromises

data accuracy, putting financial institutions at risk of errors and disparities. Blockchain's immutable ledger serves as a consistent and trustworthy data repository, effectively mitigating reconciliation complexities.

3) Inflexibility to adapt

Traditional systems, designed for specific asset classes, struggle to adapt to swiftly changing market conditions. In contrast, blockchain networks provide the agility needed to seamlessly integrate updates and innovations without requiring a complete overhaul of existing systems.

Innovative solutions reimagining asset management

Innovative solutions developed by using blockchain technology can remedy the long-standing challenges inherent in financial infrastructures. Two important ones are:

1) Unifying financial infrastructures with ODCs

On-chain Data Containers (ODCs), built on the foundational capabilities of blockchain, introduce a new standardization protocol for various asset classes. These advanced smart contracts facilitate the consistent handling of assets within a mutable, extendable, and composable framework. ODCs enable real-time adaptation of asset representation to align with

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market demands while preserving the core stability of the underlying system. They ensure dynamic asset management with built-in compliance mechanisms, streamlining the process within a decentralized ecosystem.

2) Integrating RWA tokenization

One of the transformative applications of ODCs is the tokenization of Real-World Assets (RWAs). This innovative process involves the securitization of tangible and intangible assets on the blockchain, ushering in a new era of liquidity and investment opportunities across diverse markets. Through ODCs, RWAs such as real estate, art, and commodities are tokenized with consistent standards, ensuring market harmony and preventing fragmentation. ODC-facilitated tokenization empowers standardization and interoperability, both critical factors for a consolidated and efficient asset market.

Benefits of a unified financial infrastructure

Unifying financial infrastructures using blockchain technology presents many benefits. First and foremost, it promotes interoperability, enabling the smooth interaction of multiple

systems, streamlining complex processes.

This unified approach also enhances accessibility, extending the reach of financial markets to a broader and more diverse audience. In terms of security, blockchain’s inherent transparency works to mitigate fraud and bolster trust, a critical aspect in financial systems.

Moreover, the adoption of an automated blockchain infrastructure results in more efficient processes, triggering reduced infrastructure, operational and transactional costs. A recent report by Juniper Research revealed that, by the end of 2030, blockchain deployment will enable banks to realize savings on cross-border settlement transactions of up to \$ 27 billion, reducing costs by more than 11% per on-chain transaction.

This unified infrastructure leads to more transparent regulatory compliance frameworks, promoting trust through the stricter adherence to legal standards.

Lastly, tokenization, a pivotal innovation of this unified approach, not only increases the liquidity of traditionally illiquid assets, but also enables fractional ownership. In tokenized

forms, assets gain wider market access through increased connectivity, transforming the way asset management functions. In May this year, EY Parthenon surveyed 300 institutions and high net worth investors, revealing that 55% of those surveyed are expressing plans to allocate funds to tokenized assets within the next one to two years.

Challenges and the path forward

The integration of blockchain technology into financial infrastructures is not without hurdles. One of the major obstacles is the diversity of regulatory frameworks, which can vary significantly from one region to another. Established financial systems, with their set practices and structures, often resistant to change, present another substantial challenge. Additionally, concerns regarding the security of public blockchains and the need for robust governance structures are areas that require significant development to ensure the success of this integration.

As the industry progresses towards a decentralized financial system, it becomes clear that achieving a balance between innovation and regulatory compliance is paramount. To overcome these challenges, industry stakeholders must prioritize collaboration, invest in technological advancements, and advocate for a forward-looking regulatory approach. Only through such concerted efforts can blockchain technology gain the widespread acceptance necessary for it to truly harmonize global financial systems. ■



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SUMMARY

Blockchain addresses operational inefficiencies via decentralization, streamlining asset management. Its agility allows the seamless integration of updates, unlike traditional systems.

Real-World Asset tokenization using On-chain Data Containers securitizes assets, increasing liquidity and market access.

A unified infrastructure promotes interoperability, accessibility, security, cost reduction, regulatory compliance, and fractional ownership.

Challenges include diverse regulations, resistant financial systems, security concerns, and governance issues.

Achieving a balance between innovation and compliance is crucial for blockchain’s adoption into unified financial infrastructure.