# The rise of on-chain finance and its impact on traditional systems



In the evolving landscape of financial operations, blockchain technology is emerging as a pivotal component that not only disrupts but enhances traditional financial systems. The recent discourse elucidates the concept of on-chain finance and its capacity to reshape financial operations through key attributes such as programmability, immutability, and transparency.

On-chain finance refers to conducting financial activities—including asset management, trading, and record-keeping—utilising blockchain technology. It leverages a decentralized ledger to track asset ownership and employs smart contracts to facilitate various financial operations. This paradigm promises to cultivate innovation across historical financial sectors by integrating the distinct features of blockchain to refine existing financial solutions.

While often conflated with Decentralized Finance (DeFi), on-chain finance primarily focuses on enhancing traditional financial mechanisms, while DeFi explicitly refers to financial services that operate independently of central intermediaries through the use of smart contracts on blockchain platforms.

Among the numerous advantages of on-chain finance, three central themes stand out:

Firstly, **permissionless access** enables anyone with internet connectivity to utilise blockchain platforms, effectively dismantling barriers to financial services, particularly for underbanked populations. This facilitates a broader array of financial products accessible to a more diverse global demographic while maintaining lower operational costs.

Secondly, **programmability** through smart contracts eradicates redundant manual tasks, hastening financial workflows and reducing human error. This automation allows for the creation of innovative financial applications that can adapt dynamically to market fluctuations, which in turn significantly enhances overall operational efficiency.

Lastly, **transparency** characterises on-chain finance as each transaction and smart contract becomes visible and traceable. This transparency fosters trust and accountability in financial dealings, a crucial feature in sectors like asset management and regulatory compliance, where it mitigates fraud risk.

Several practical applications of on-chain finance exemplify its benefits, including:

* Tokenization of Assets: High-value assets, such as real estate and commodities, can be tokenised to enhance liquidity and allow fractional ownership. A prime example is Blackrock’s BUIDL fund, which tokenises U.S. Treasuries, cash, and repurchase agreements by functioning similarly to traditional financial products with the benefits of blockchain technology.
* Decentralized Finance (DeFi): Operationally robust, DeFi has become a considerable market segment facilitating billions of dollars in daily transactions. It utilises smart contracts to eliminate intermediaries in financial services such as lending and borrowing, thereby improving asset management strategies for institutional investors in a transparent environment.
* Stablecoins: These digital currencies maintain a stable value for transactions and can be pivotal for treasury management within institutional finance. As evidenced in December 2024, stablecoins facilitated nearly $975 billion in transactions, reflecting substantial adoption and operational efficiency in cross-border transaction settlements.
* Supply Chain Finance: The utilisation of blockchain in supply chain finance provides enhanced transparency and efficiency. Through the tokenisation of invoices and trade-related documentation, it accelerates financing processes while ensuring reliable data to diminish fraud risks.
* Insurance: In the insurance sector, blockchain automates the claims process and contributes to fraud detection, thus enabling more accurate risk assessments and swifter claim resolvement. Consequently, this results in reduced operational costs and improved reliability of insurance offerings.

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Looking towards the future, as major financial institutions begin to incorporate various aspects of blockchain solutions, the demand for on-chain finance is projected to rise. With numerous opportunities for exploration still available, the capacity to program and automate complex financial processes is anticipated to serve as a catalyst for future innovations in financial products and services.

This comprehensive assessment of on-chain finance illustrates its transformative potential across multiple sectors, providing insight into a dynamic fiscal landscape shaped increasingly by digital technologies.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

* <https://tokeny.com/tokeny-insights-june-2020-what-is-onchain-finance/> - Corroborates the concept of on-chain finance, its focus on compliant finance on a decentralized infrastructure, and the use of permissioned tokens and on-chain identities.
* <https://koinly.io/crypto-glossary/on-chain/> - Explains what on-chain activities are, including transactions and data recorded on a blockchain, and highlights the benefits of transparency, immutability, and decentralization.
* <https://www.babypips.com/crypto/glossary/on-chain> - Defines on-chain transactions and their verification by miners or validators, contrasting them with off-chain transactions.
* <https://tokeny.com/tokeny-insights-june-2020-what-is-onchain-finance/> - Details the advantages of on-chain finance, such as the validation of KYC & AML checks and significant administrative cost savings.
* <https://koinly.io/crypto-glossary/on-chain/> - Describes how on-chain activities, including smart contracts, are executed and verified on the blockchain, enhancing operational efficiency.
* <https://tokeny.com/tokeny-insights-june-2020-what-is-onchain-finance/> - Highlights the transparency and trust fostered by on-chain finance, particularly in asset management and regulatory compliance.
* <https://www.babypips.com/crypto/glossary/on-chain> - Clarifies the distinction between on-chain and off-chain transactions, which is crucial for understanding the operational benefits of on-chain finance.
* <https://koinly.io/crypto-glossary/on-chain/> - Discusses the scalability and cost considerations of on-chain activities, which are important for the practical application of on-chain finance.
* <https://tokeny.com/tokeny-insights-june-2020-what-is-onchain-finance/> - Mentions the potential of on-chain finance to save the industry significant costs, such as the 90% administrative cost savings reported by BIS.
* <https://koinly.io/crypto-glossary/on-chain/> - Explains how on-chain finance can enhance various financial operations, including asset management, trading, and record-keeping, through blockchain technology.