

# Monetary Policy and Payments: The Distributed Ledger Technology

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## ➤ Payment Systems and the Federal Reserve

A central function of the Federal Reserve is to manage the payment system:

"A U.S. payment system that is safe, efficient and broadly accessible is vital to the U.S. economy, and the Federal Reserve plays an important role in promoting these qualities as a leader, catalyst for change and provider of payment services to financial institutions and the U.S. Treasury."<sup>1</sup>

Effectiveness criterion:

"A **ubiquitous, safe, faster** electronic solution(s) for making a broad variety of business and personal payments, supported by a flexible and **cost-effective** means for payment, clearing and settlement groups to settle their positions rapidly and with **finality**."<sup>2</sup>

<sup>1</sup>"Strategies for Improving the U.S. Payment System," Federal Reserve System 1/26/15 page 1.

<sup>2</sup>"Federal Reserve System Faster Payments Task Force Charter," mission 2015.

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- Distributed Ledger Technology
- Overview: Bitcoin => Blockchain => Distributed Ledger

“Distributed ledger” is a collective term that encapsulates continuously-growing decentralized consensus databases that authenticate ownership provenance by recording transactions and that are secured by cryptography

Alternative to classic double entry bookkeeping maintained by central authority

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- Distributed Ledger Technology
  - Potential Benefits: Greater transparency of ownership and the ability to safely transfer more quickly at lower cost without the need for an intermediary
    - Ubiquity: Broad application and accessibility if standardization
    - Safety and Security: Non-falsifiable cryptographic integrity without central authority or “trusted third party”
    - Speed: Nearly instantaneous
    - Cost Efficiency: Eliminates intermediaries and infrastructure costs (allows direct settlement)
    - Finality: Immutable record which cannot be altered retrospectively

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- Distributed Ledger Technology
- Potential Challenges: Operational, technological, legal, regulatory, and other hurdles
  - Ubiquity: Lack of standardization and interoperability, including across jurisdictions
  - Safety and Security: Issues of privacy and transparency, hacks, who has permission to update the code and to legally enforce transactions, compulsory anti-money-laundering and know your customer processes
  - Speed:
  - Cost Efficiency: Question of scalability
  - Finality: How to satisfy regulatory requirements, how are disputed claims handled

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## ➤ Summary

The distributed ledger, while not yet ready for wide scale adoption, may be a transformative technology that provides **ubiquitous, safe, faster** electronic solution(s) for making a broad variety of business and personal payments, supported by a flexible and **cost-effective** means for payment, clearing and settlement groups to settle their positions rapidly and with **finality**.

## ➤ “The Blockchain and its Implications for Corporate and Securities Law and Practice” (joint with David J. Berger and Joseph A. Grundfest)

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