Optimal Design of Tokenized Markets

Michael Junho Lee
Federal Reserve Bank of New York, NY, USA

Antoine Martin
Federal Reserve Bank of New York, NY, USA

Robert M. Townsend
Massachusetts Institute of Technology, Cambridge, MA, USA

Abstract

Trades in today’s financial system are inherently subject to settlement uncertainty. This paper explores tokenization as a potential technological solution. A token system, by enabling programmability of assets, can be designed to eradicate settlement uncertainty. We study the allocations achieved in a decentralized market with either the legacy settlement system or a token system. Tokenization can improve efficiency in markets subject to a limited commitment problem. However, it also materially alters the information environment, which in turn aggravates a hold-up problem. This limits potential gains from resolving settlement uncertainty, particularly for markets that depend on intermediaries.

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