FINANCIAL INNOVATION

IMPLICATIONS FOR PAYMENTS AND POLICY

FEDERAL RESERVE BANK OF KANSAS CITY
JACKSON HOLE, WYOMING
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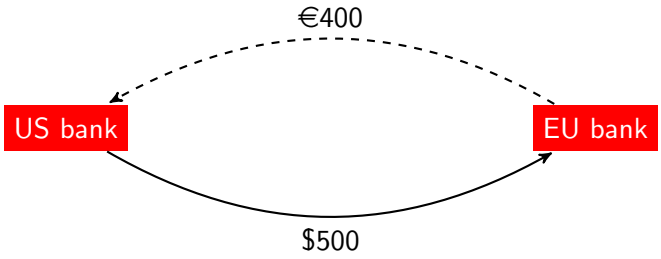
FEDERAL RESERVE BANK OF KANSAS CITY

Tokenized finance and the perimeter of central banking

1. Financial markets will eventually go to 24x7 programmable ledgers.
2. Financial stability will require core-market settlement in central-bank money.
3. Fragmentation may initially increase central-bank balance sheets.
4. Ultimately, intraday settlement will reduce the demand for reserves.

Smart-contract settlement of a tokenized foreign-exchange trade

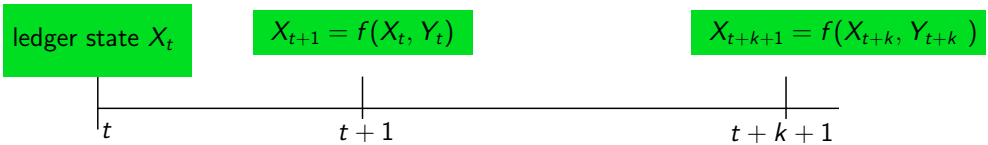


Avoiding settlement risk, each payment is cryptographically assigned contingent on the other.

Examples:

Project Jura (Swiss National Bank and Banque de France).
Project Cedar (New York Fed and Monetary Authority of Singapore).

Settlement of an FX trade on a programmable ledger



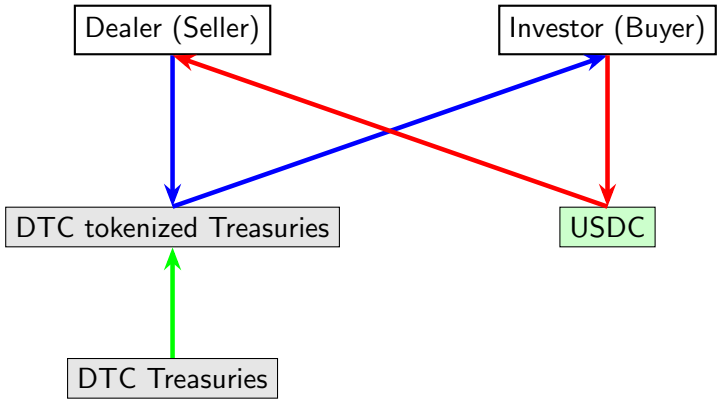
US bank

US Bank signs Y_t:
Pay EU Bank $500 contingent on Y_{t+k}.

EU bank

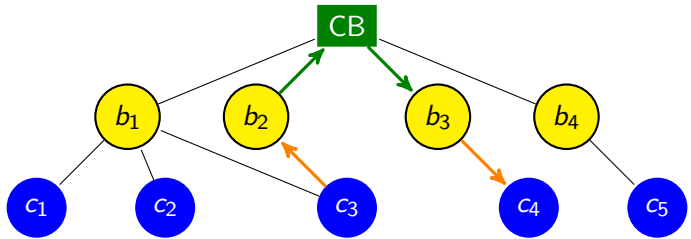
EU Bank signs Y_{t+k}:
Pay US Bank €400.

Atomic settlement of a US Treasuries purchase or repo leg

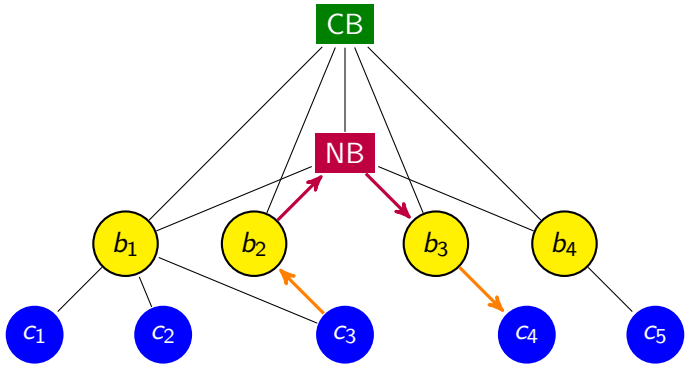


Executed on Canton, August, 2025.

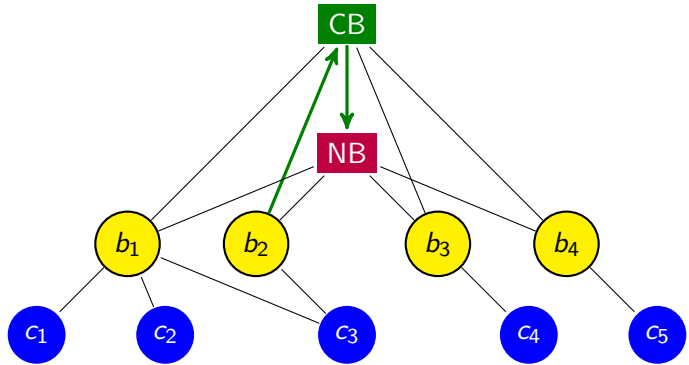
Settlement in central-bank money



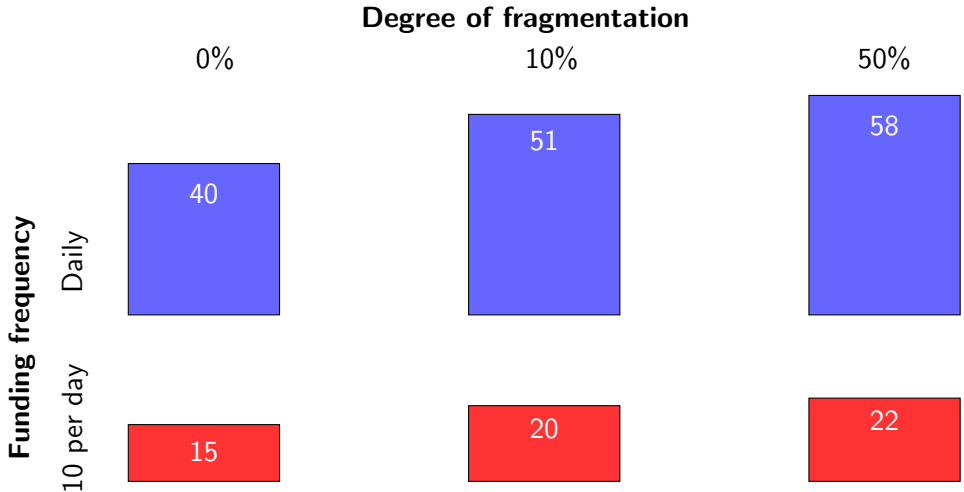
Settlement in narrow-bank money



Replenishing a narrow-bank account



Safe and effective forms of money for on-chain finance

1. Tokenized central bank deposits. Example: Swiss National Bank.
2. Synchronization of a programmable asset ledger with cash settlement in conventional central bank deposits. Testing at ECB, Bank of England, and SNB.
3. A narrow bank that issues tokenized deposits. Example: Fnality.
4. Stablecoins backed by on-chain assets with par market value each day.

Reserves demand depends on fragmentation and funding frequency