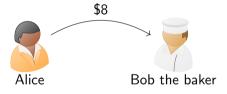
# Digital Money and Finance: What's New?

Darrell Duffie
Stanford Graduate School of Business

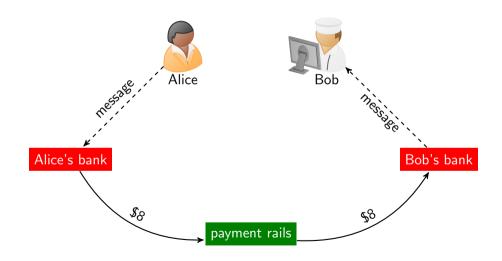
CEPR, SUERF and CBDC Seminar Series Event

October, 2022

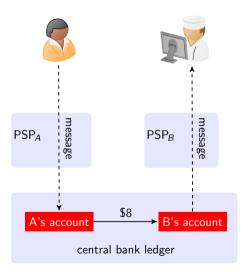
## A payment



## A bank-railed payment



## A CBDC payment



#### Private stablecoins



President's Working Group Report on Stablecoins, November, 2021:

"... legislation should limit stablecoin issuance, and related activities of redemption and maintenance of reserve assets, to entities that are insured depository institutions. The legislation would prohibit other entities from issuing payment stablecoins. Legislation should also ensure that supervisors have authority to implement standards to promote interoperability among stablecoins."

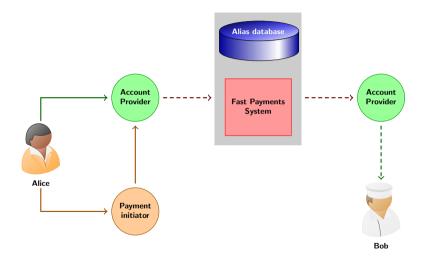
### Fast payment systems could increase competition

- Key defining properties:
  - 1.  $24 \times 7 \times 365$  availability.
  - 2. Real time gross settlement (RTGS).

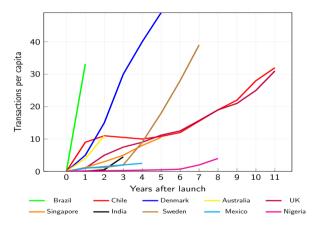
#### Examples:

- Korean Electronic Banking System, established 2001.
- Bank of Mexico's Sistema de Pagos Electrónicos Interbancarios.
- Swish, a private mobile payment system available in Sweden.
- ► The United Kingdom's non-profit utility, Faster Payments.
- Singapore: Fast and Secure Transfers (FAST).
- The European Central Bank TARGET Instant Payment Settlement (TIPS), based on the SEPA Instant Credit Transfer platform.
- The US: Real-Time Payments System and Fed RTGS fast payment system, FedNow.
- Brazil's Pix.

# Structure of a Pix payment

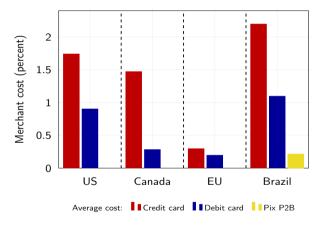


### Pix adoption has been rapid



Source: Duarte, Jon Frost, Gambacorta, Koo Wilkens and Shin, Bank for International Settlements, 2022.

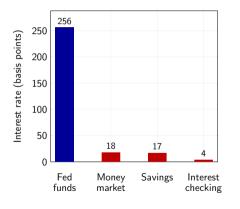
#### Merchant costs for cards and Pix



Source: Duarte, Jon Frost, Gambacorta, Koo Wilkens and Shin, Bank for International Settlements, 2022.

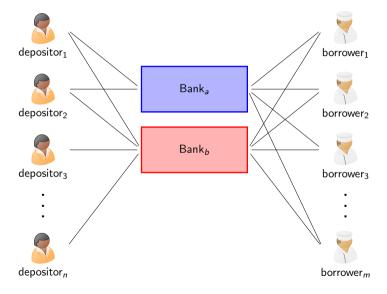
## Weak competition for deposits reduces bank funding costs

Wholesale and retail deposit rates, September 19, 2022



Data sources: FRED and FDIC.

## Banks fund borrowers with deposits and other funding



#### Central banks are worried about credit provision

"A widely available CBDC [...] could reduce the aggregate amount of deposits in the banking system, which could in turn increase bank funding expenses, and reduce credit availability or raise credit costs for households and businesses." *Money and Payments:* The U.S. Dollar in the Age of Digital Transformation, Federal Reserve, 2022.

The BIS and G7 central banks, including the Fed, suggest that "if banks begin to lose deposits to CBDC over time they may come to rely more on wholesale funding, and possibly restrict credit supply in the economy with potential impacts on economic growth." *Central Bank Digital Currencies: Foundational Principles and Core Features,* BIS, 2020.

#### **Policies**

- 1. Use regulations and fast-payment infrastructure to promote a more open, interoperable, and competitive bank-railed payment system.
- Allow entry by private stablecoins and fintech banks, subject to compliance and interoperability standards.
- 3. Continue developing CBDC technology. Deploy a CBDC when the key technology gaps are closed and the economics warrant a CBDC.
- 4. Support wholesale CBDCs for settlement systems and cross-border payments.
- 5. Analyze dollar-dominance risks and benefits carefully.