A payment

Alice -> $8 -> Bob the baker
A bank-railed payment

Alice

Bob

Alice’s bank

Bob’s bank

message

payment rails

$8

$8
A CBDC payment

PSP_A message → A's account

PSP_B message → B's account

A's account → B's account

central bank ledger

$8
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 × 7 × 365 availability.
2. Real time gross settlement (RTGS).

Examples:
- 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.
- Brazil’s Pix.
Structure of a Pix payment

Payment initiator

Account Provider

Fast Payments System

Alias database

Account Provider

Alice

Bob
Pix adoption has been rapid

Merchant costs for cards and Pix

<table>
<thead>
<tr>
<th>Country</th>
<th>Credit card</th>
<th>Debit card</th>
<th>Pix P2B</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>1.7</td>
<td>1.0</td>
<td>0.0</td>
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<tr>
<td>Canada</td>
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<tr>
<td>Brazil</td>
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<td>1.5</td>
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</tr>
</tbody>
</table>

Average cost:
- Credit card
- Debit card
- Pix P2B

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

\[\text{Bank}_a \]  \quad \text{Bank}_b

\text{depositor}_1 \rightarrow \text{Bank}_a \rightarrow \text{borrower}_1

\text{depositor}_2 \rightarrow \text{Bank}_a \rightarrow \text{borrower}_2

\text{depositor}_3 \rightarrow \text{Bank}_a \rightarrow \text{borrower}_3

\vdots

\text{depositor}_n \rightarrow \text{Bank}_a \rightarrow \text{borrower}_m
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.

2. 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.