



FedNow and Faster Payments in the US

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68th Research Conference of the Federal Reserve Bank of Boston,
November 15-16, 2024

Roadmap

- ❖ Why payments matter
- ❖ Classifying payment systems
- ❖ Motives for payments and demand for speed
- ❖ Faster payments in US, UK and Brazil
- ❖ Use cases for FedNow and requirements for increased adoption



Roadmap

❖ Why payments matter

❖ Classifying payment systems

❖ Motives for payments and demand for speed

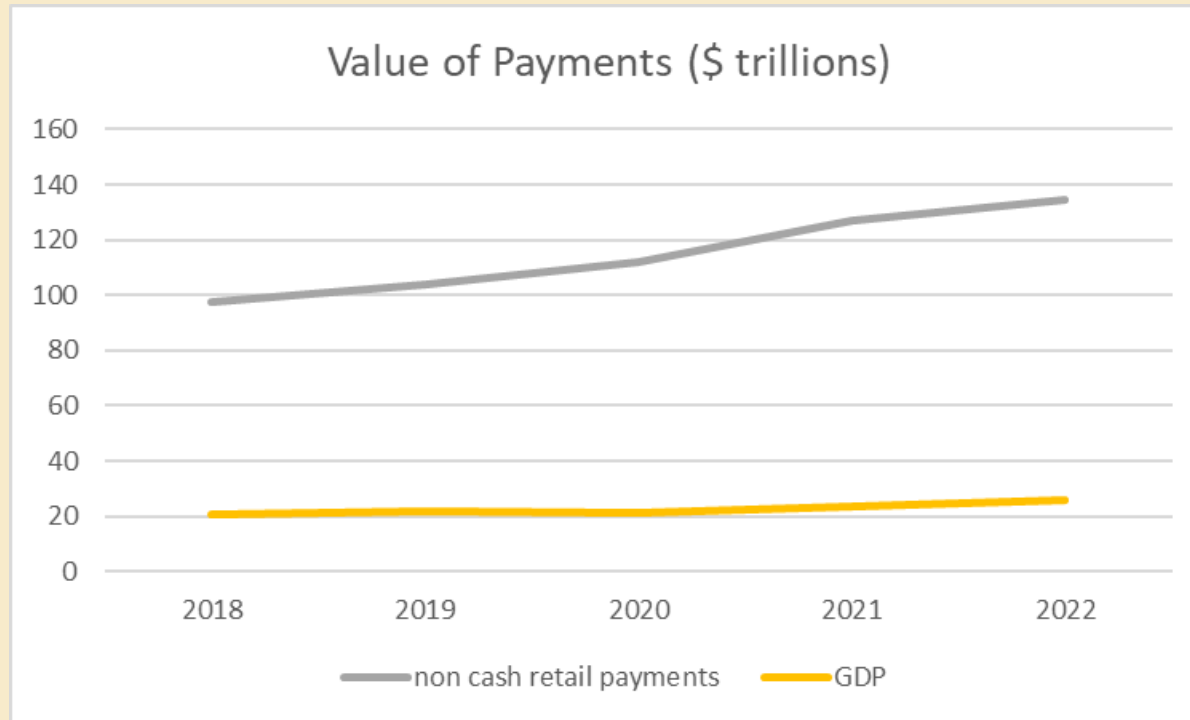
❖ Faster payments in US, UK and Brazil

❖ Use cases for FedNow and requirements for increased adoption



❖ Why Payments Matter

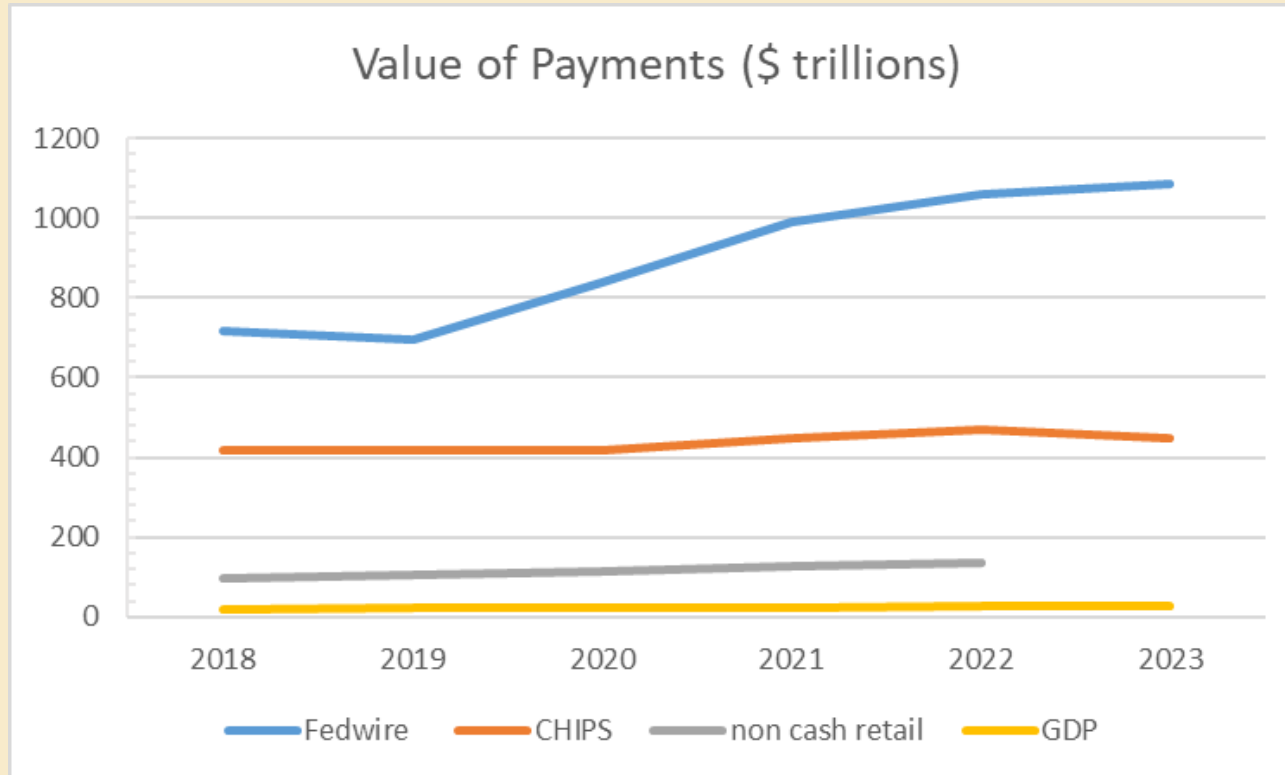
- Size



Source: BIS

❖ Why Payments Matter

- Size



Source: BIS, Federal Reserve, The Clearing House

❖ Why Payments Matter

Changes to Retail Payment Technology

- *In US, cards most frequently used form of payment, but may be reaching saturation*
- *Meanwhile new forms of payment services are becoming mainstream*



Demos, WSJ, Nov 2, 2024

Finance



PayPal



Cash App



Zelle



Venmo



Pay

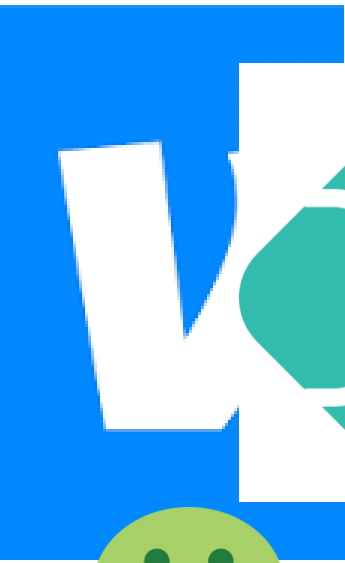
zelle[®]



PayPal



Alipay



powered by Banco Central



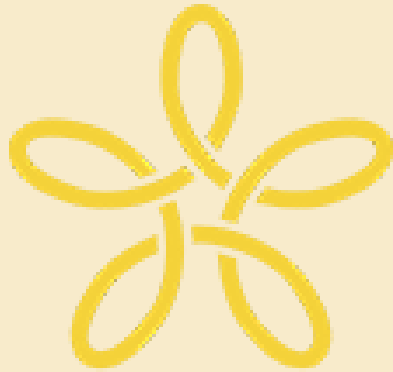
WeChat

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- Effects on Industrial Organization
in payments and financial industries
- Competition
- Customer safety
- Dangers of fragmentation
- Threats to monetary sovereignty (at least abroad)



- Experiments with Central Bank Digital Currency



SANDDOLLAR

Digital
€



- Faster Payments



**Faster
Payment
System**

- Faster Payments

FedNow[®]
24/7
INSTANT PAYMENTS



The Clearing House[®]

RTP[®]

Finance

COLLEGE *of* BUSINESS
at ILLINOIS



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- Faster Payment

1. Transaction is instantly observable
2. Funds immediately available
3. Transaction is irrevocable

-FedNow, “What are Faster and Instant Payments?”;
-CPMI [2023]



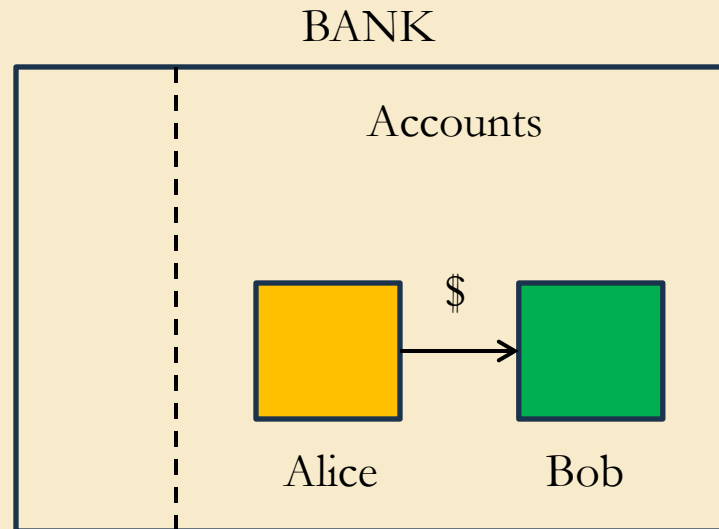
- Account-Based Payment
- payments are effected by crediting and debiting accounts on some other institution's books
- contrast store-of-value (or “token-based”) payment, transferring physical cash or some bearer-based instrument.

-Kahn and Roberds [2009]



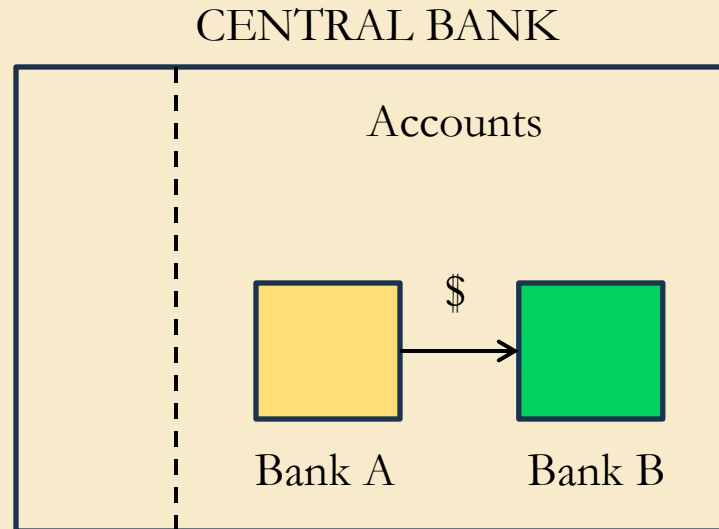
- Account-Based Payment

- “On Us”



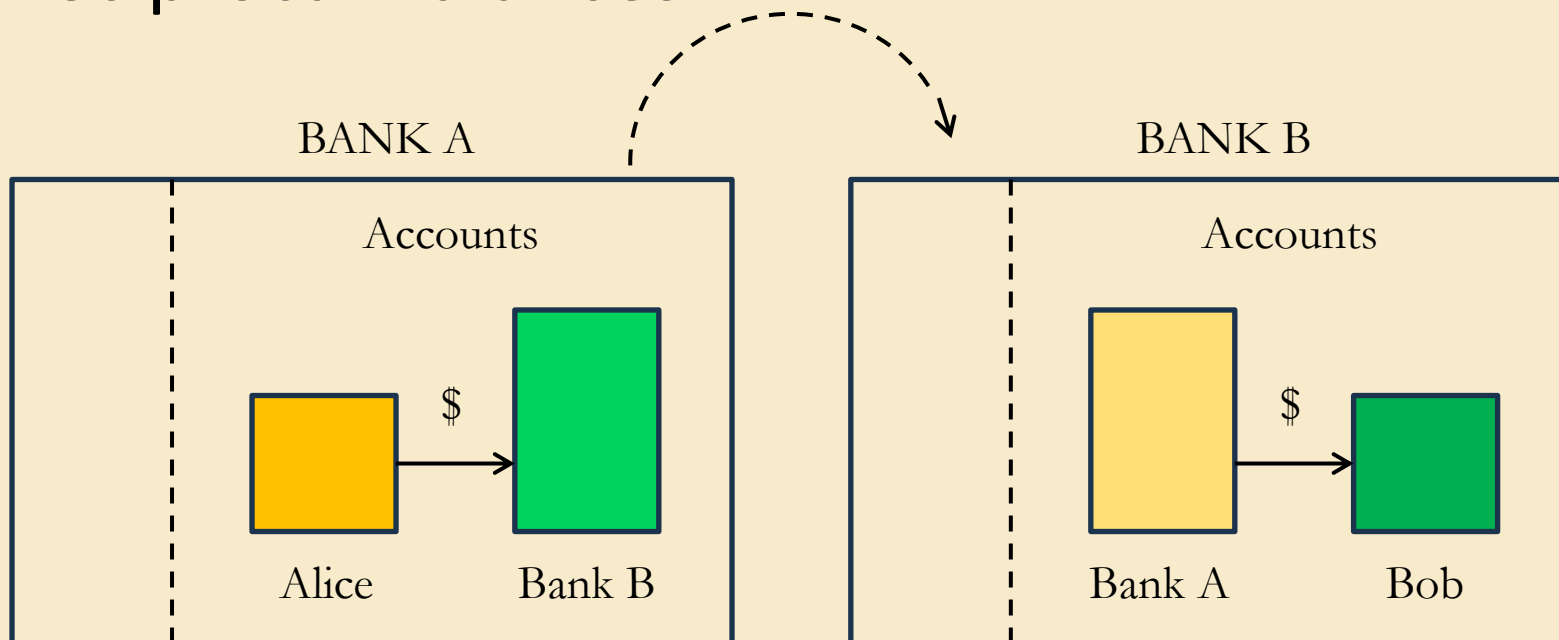
- Account-Based Payment

1. “On Us”



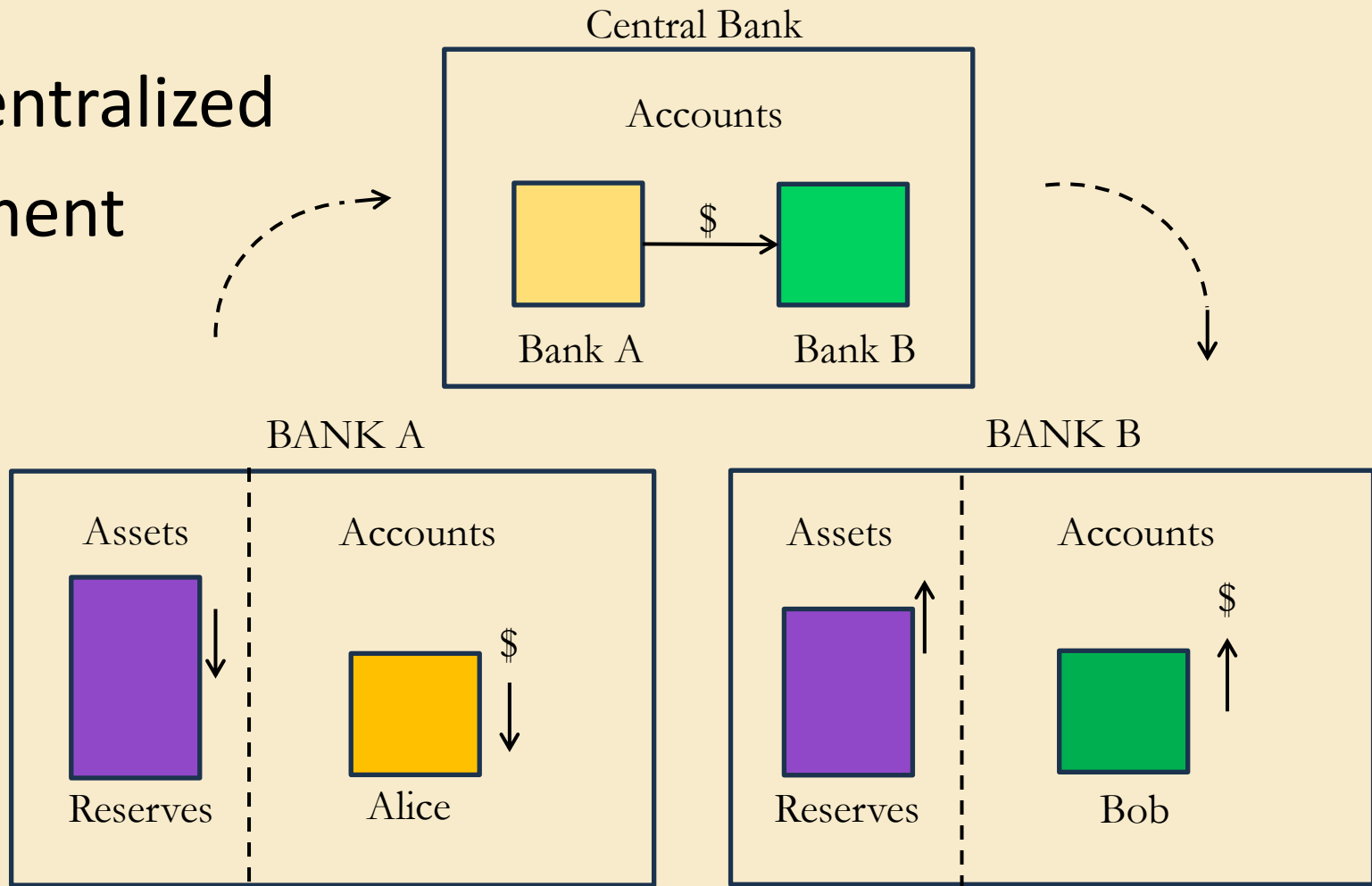
- Account-Based Payment

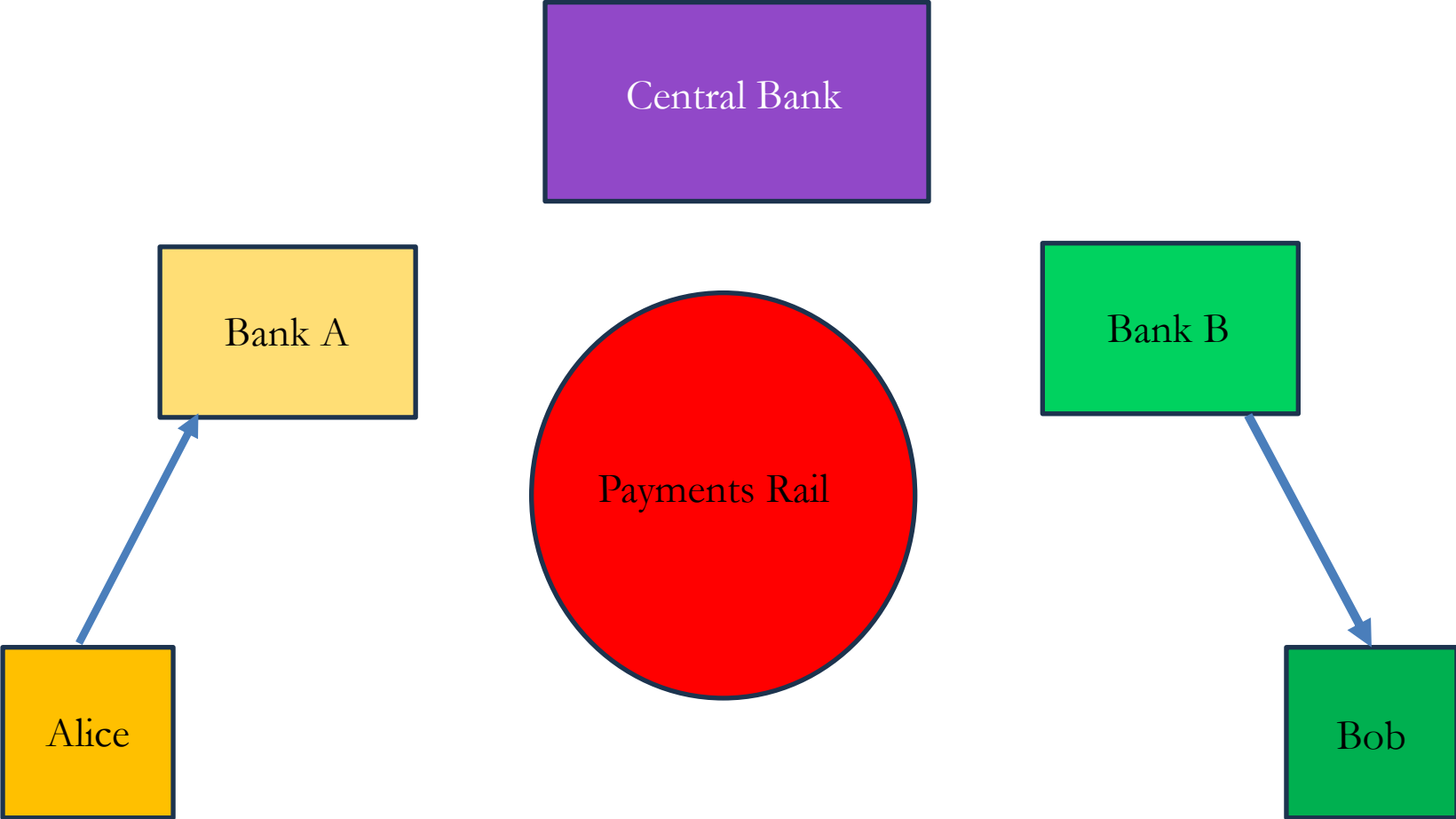
2. Reciprocal Balances



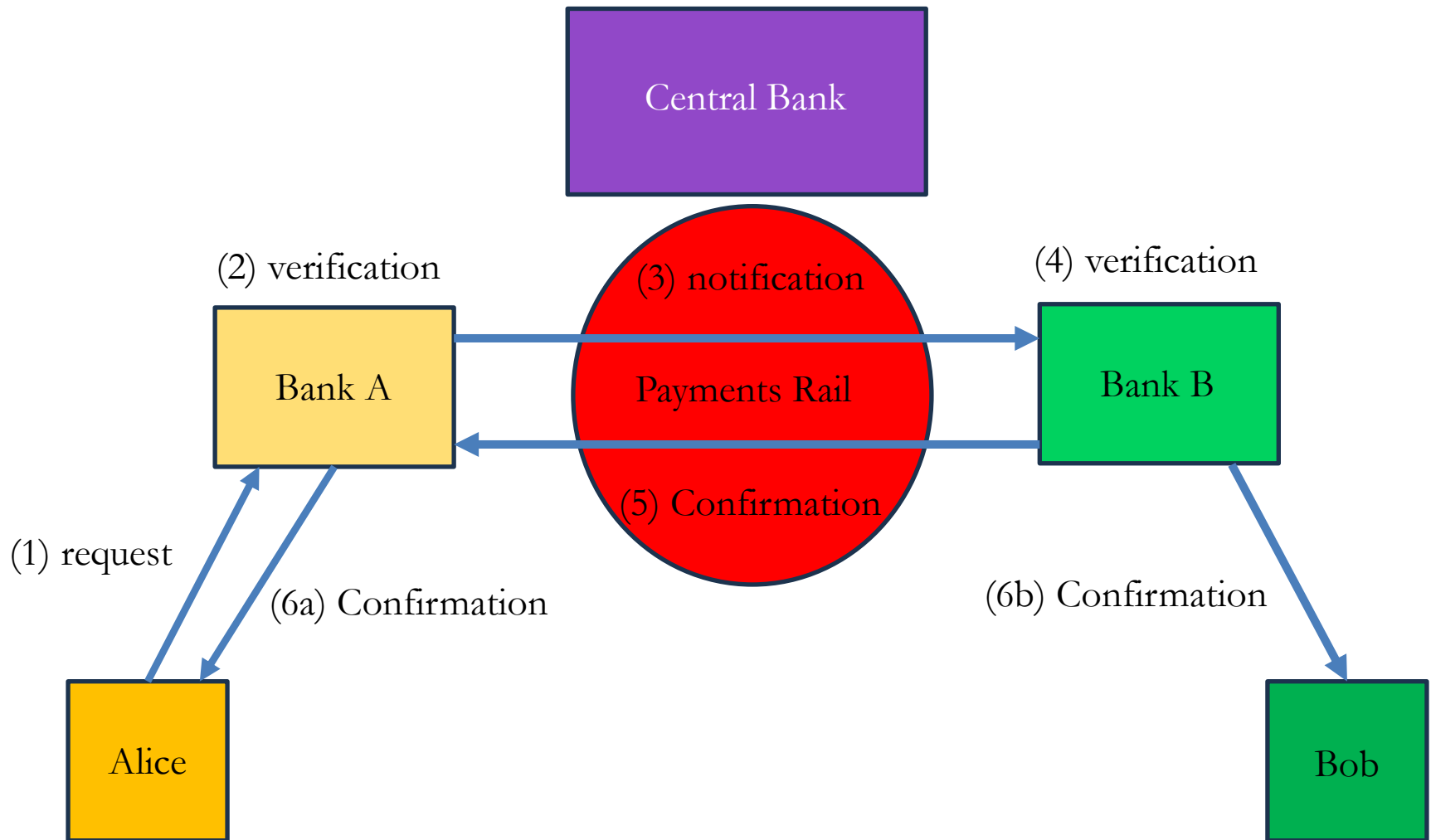
- Account-Based Payment

3. Centralized Payment

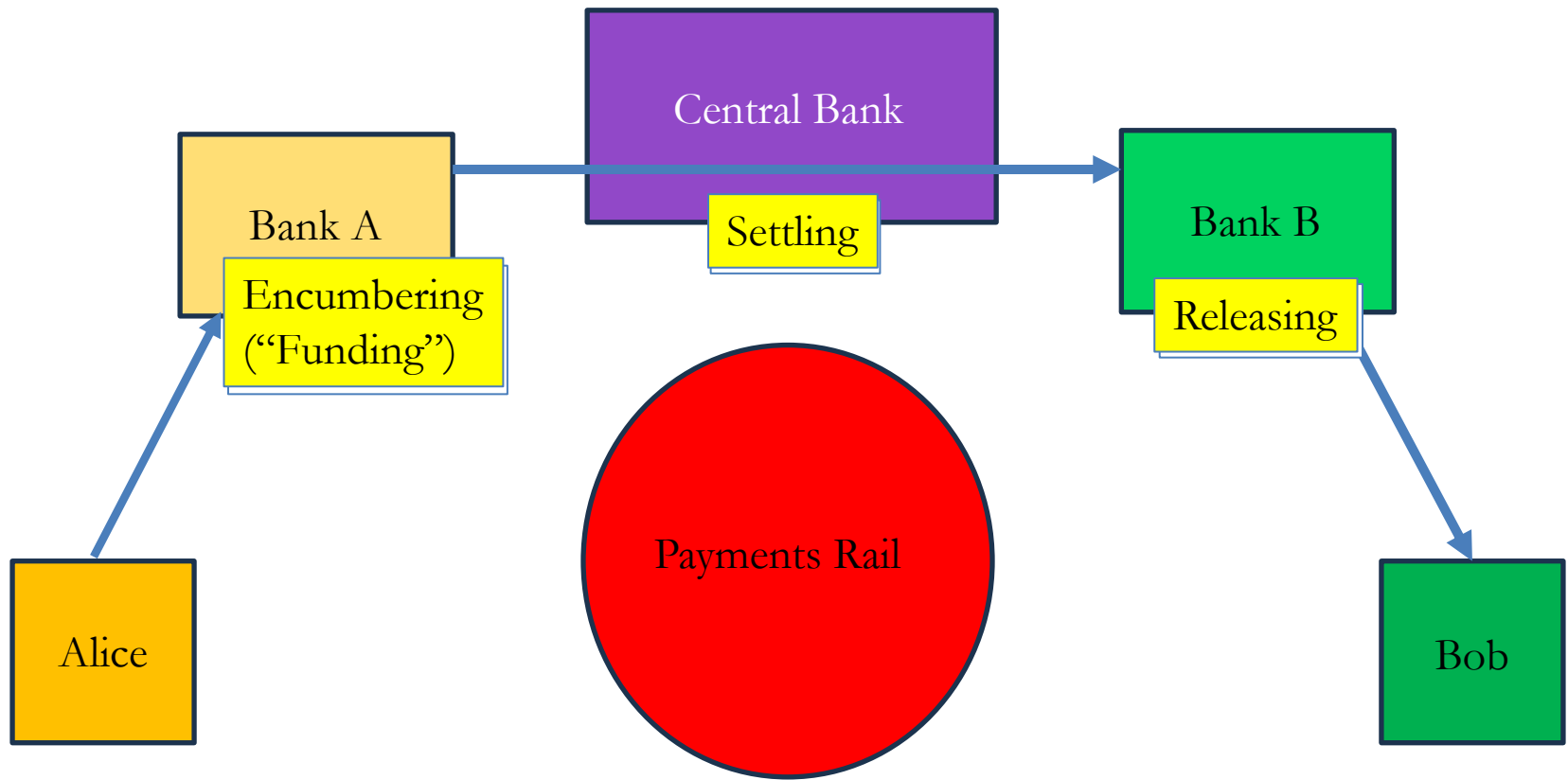


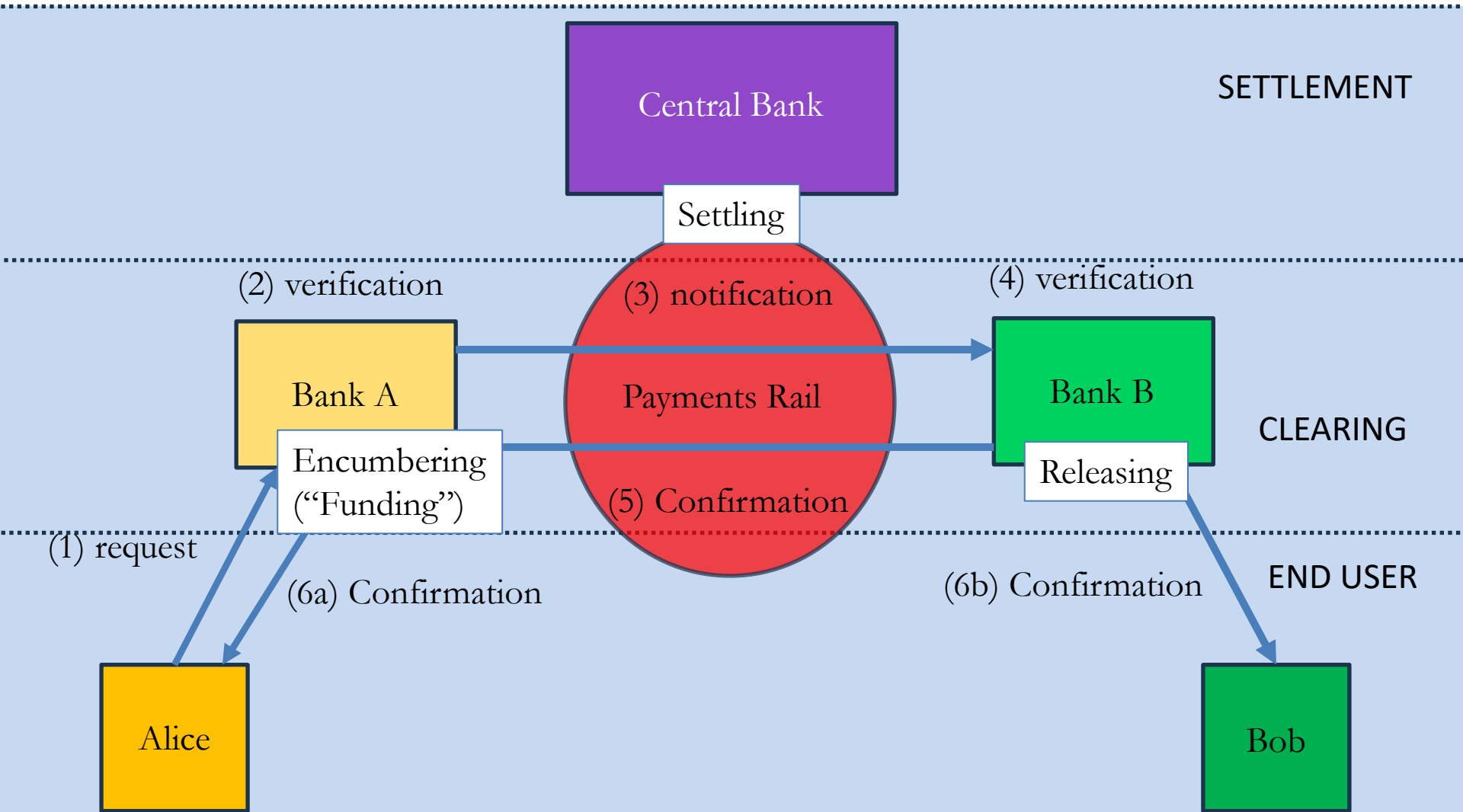


- Faster Payments Messages and Processes



- Faster Payments Funds Transfers





- Multiple Rails for Bank to Bank Payments
- Large Value: FedWire, CHIPS
- Instant: FedNow, RTP
- Batch: ACH
- Card Rails



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- Demand for Faster Payment
- For the typical payment, speed not important to consumers (Schuh and Stavins 2015)
- Generally not important in situations with enduring relationships
- But varies enormously in particular circumstances



- Why Pay?
- Extinguish Obligation (bill payment, settling debt)
- Monetary leg of spot transaction (“DvP”)



- Bill payment

faster payment is valuable when payee has higher discount rate

- liquidity constrained
- occasional emergencies
- no alternative source of funding
- unbanked
- irregular employment



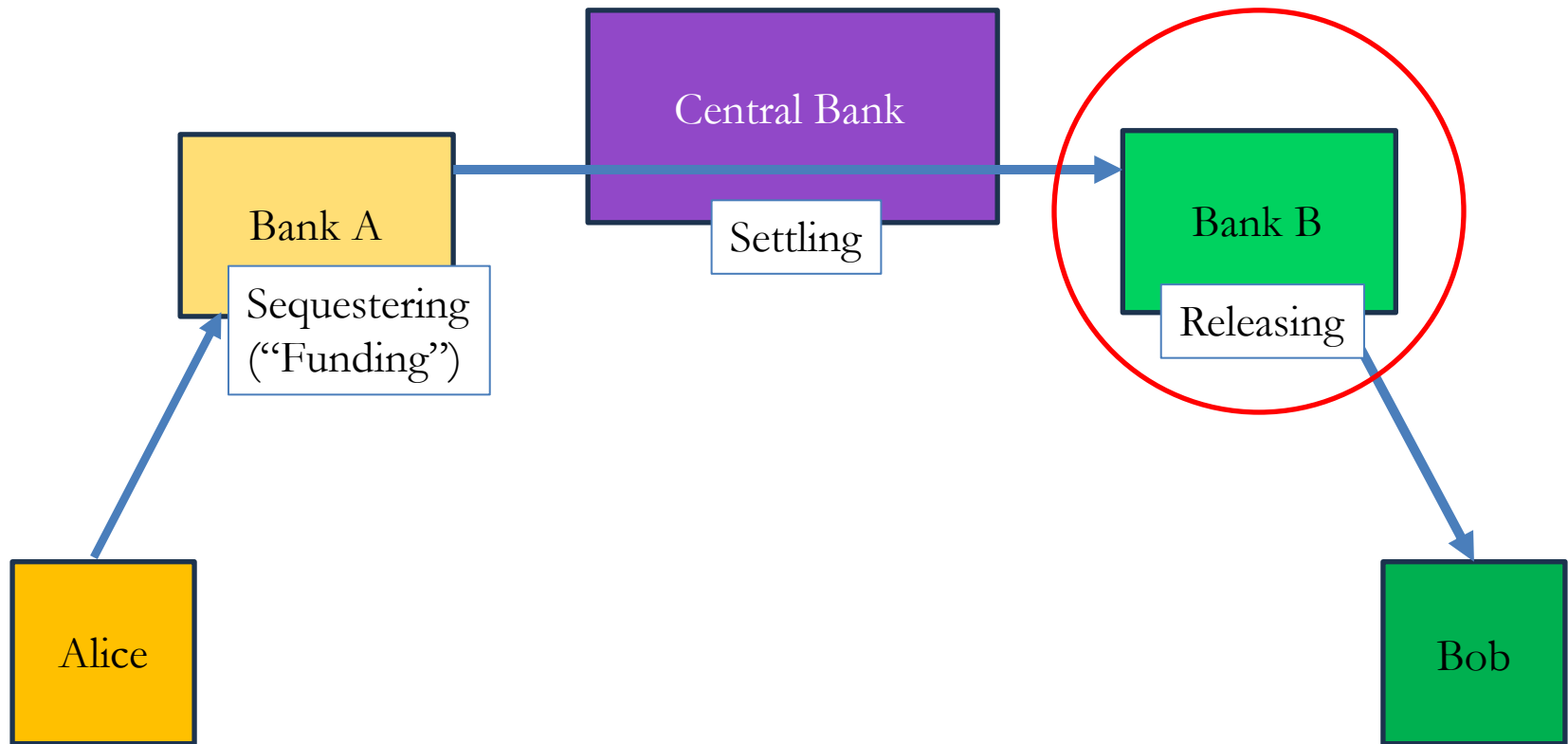
- DvP
- source of demand for payment is lack of trust
 - Casual, one-time purchases
 - Internet transactions
- before goods can be shipped, need assurance that money will come



- What do we mean by “faster”
- For obligations, “faster” relates to release of funds
- For DvP, “faster’ relates to sequestering of funds
- Where does settlement come in?



- Why settlement matters



- Real Time Gross Settlement
- Reduces systemic risk in Large Value Systems
- Less concern in retail systems

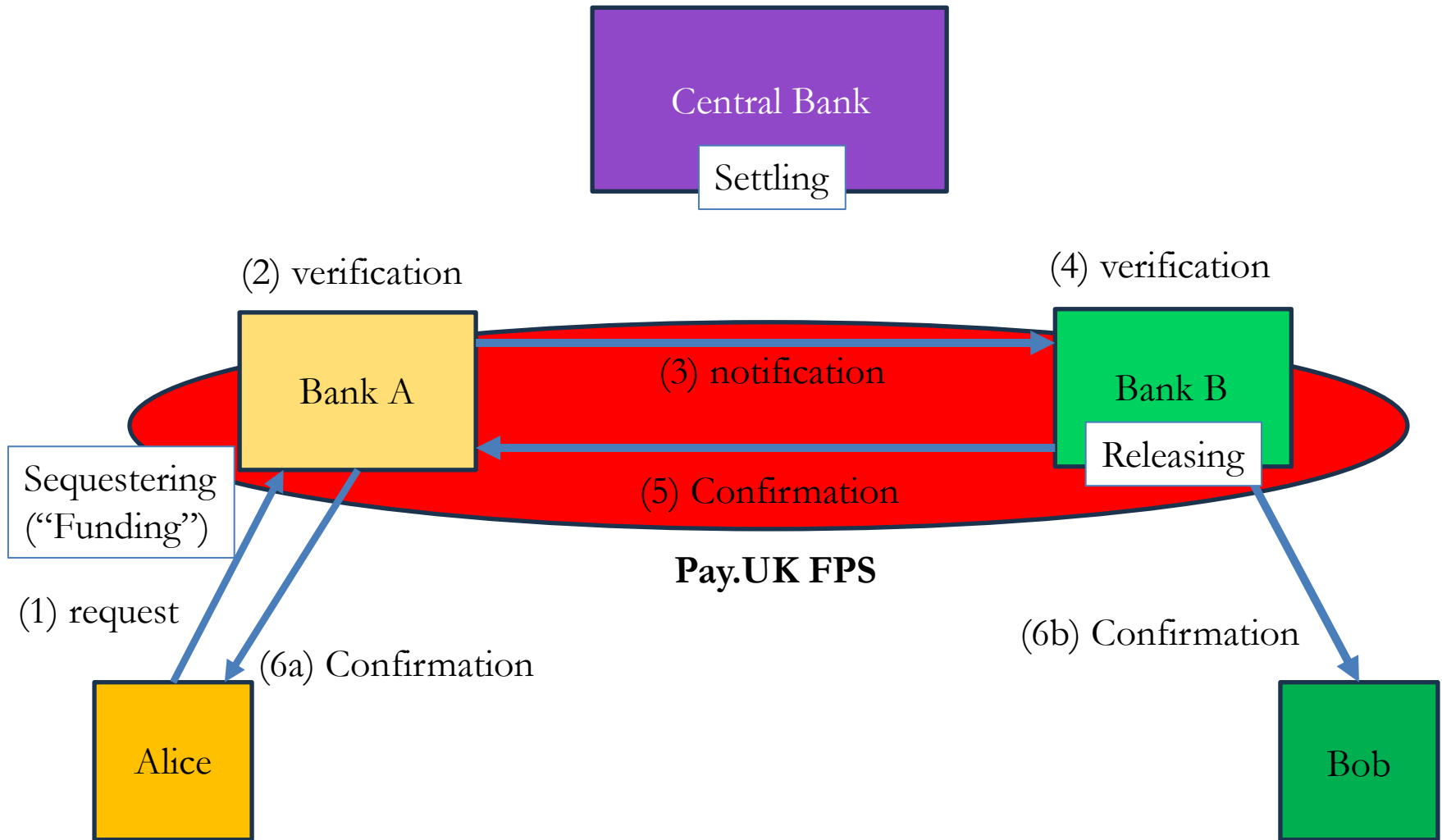


Roadmap

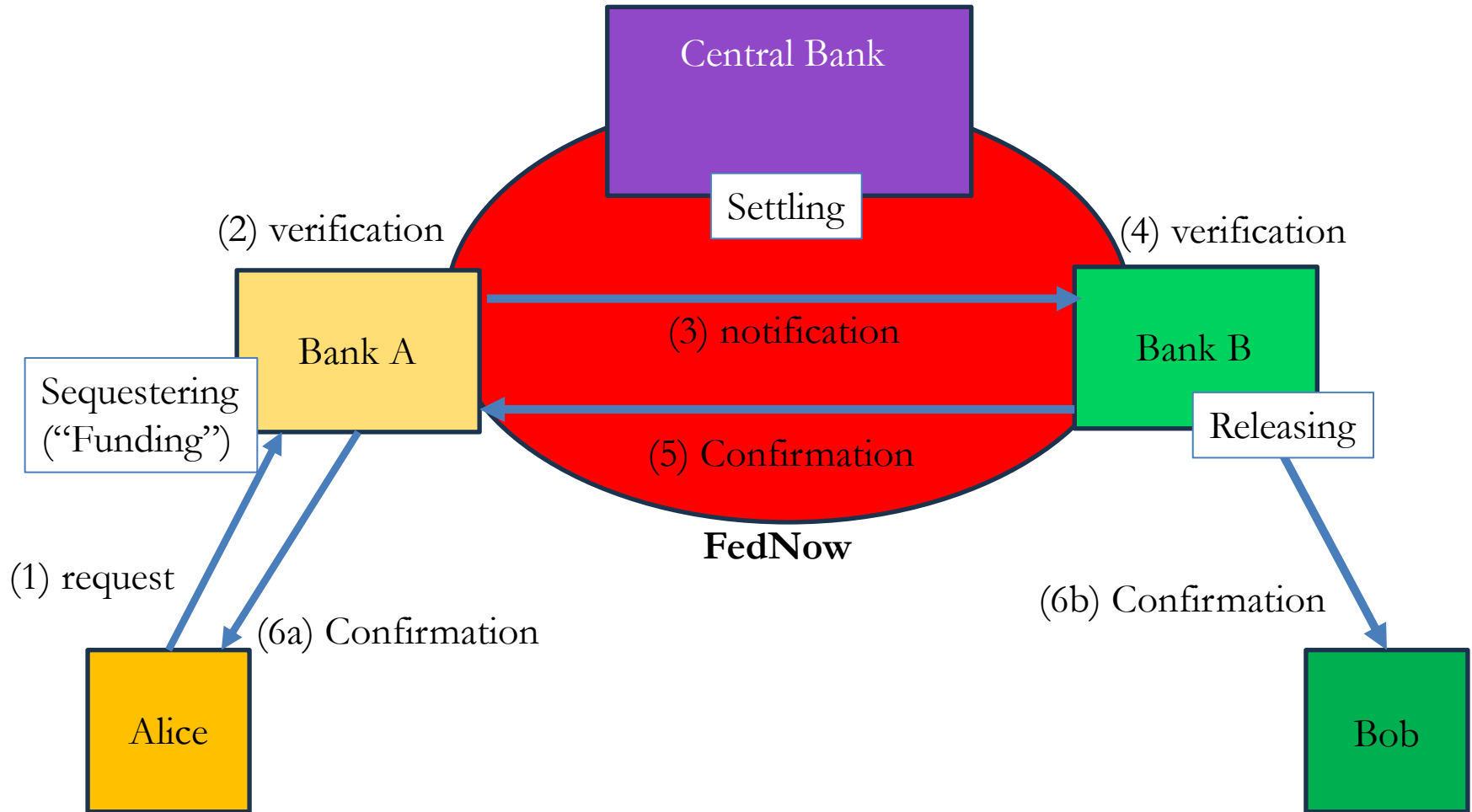
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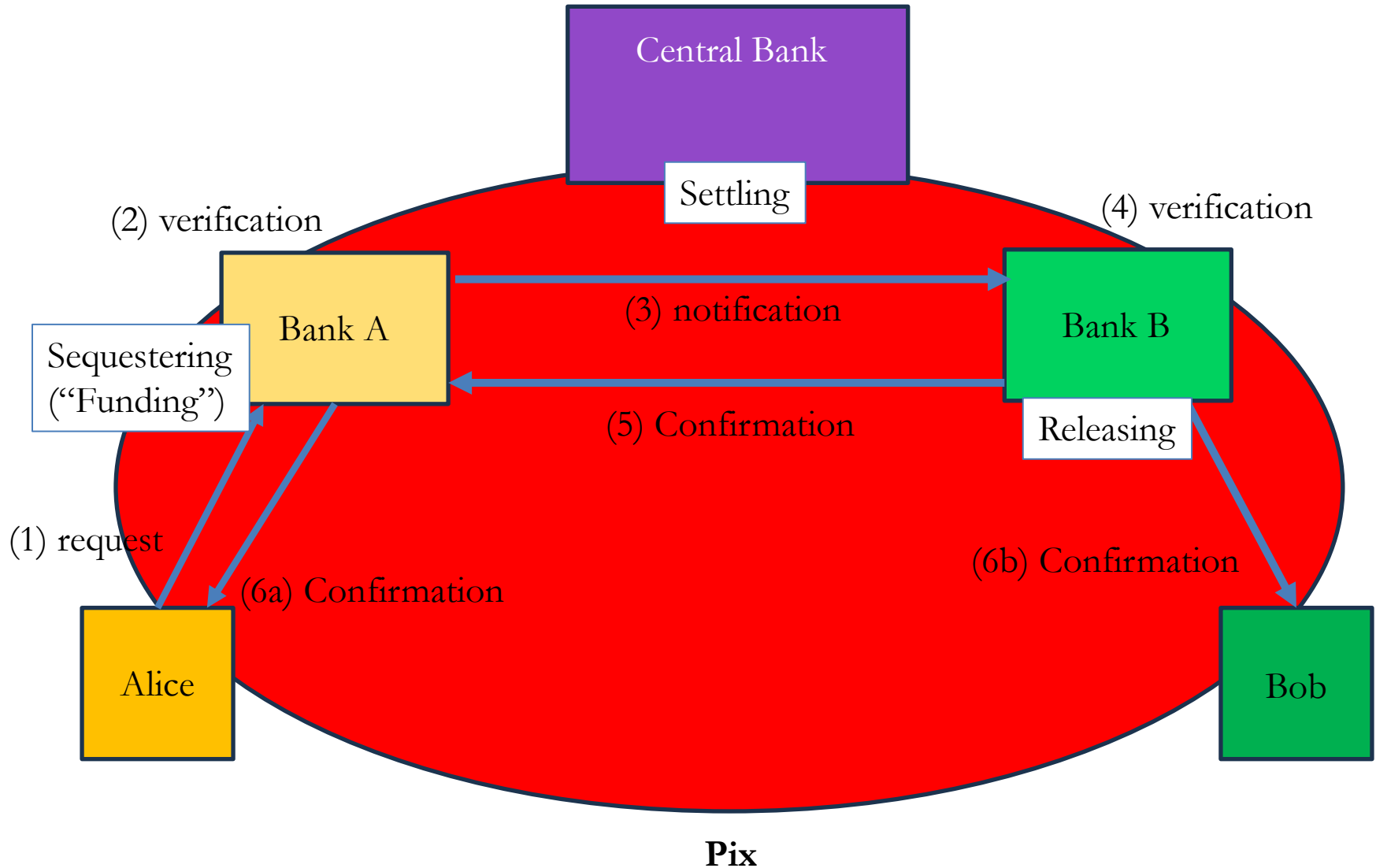
- UK System: Fast clearing, batch settling



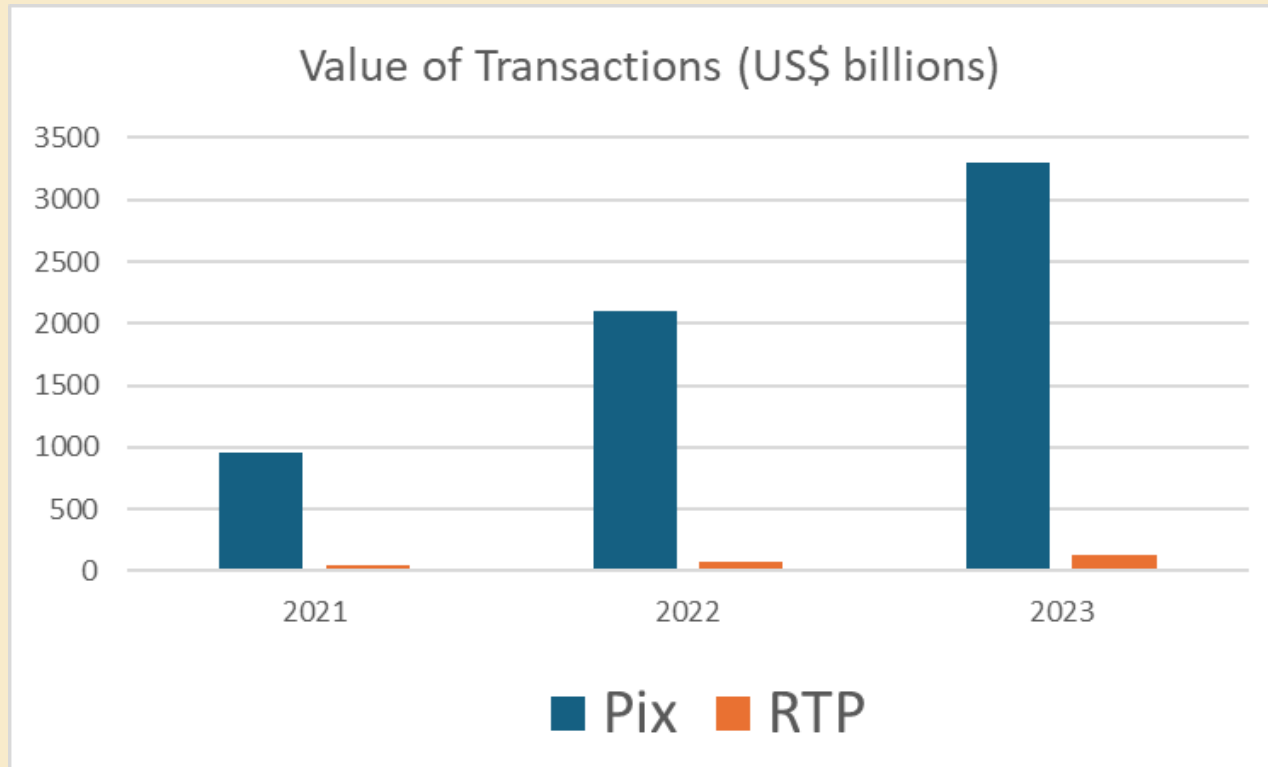
- US System: Instant clearing and settlement



- Brazil System: End-to-End Standardization

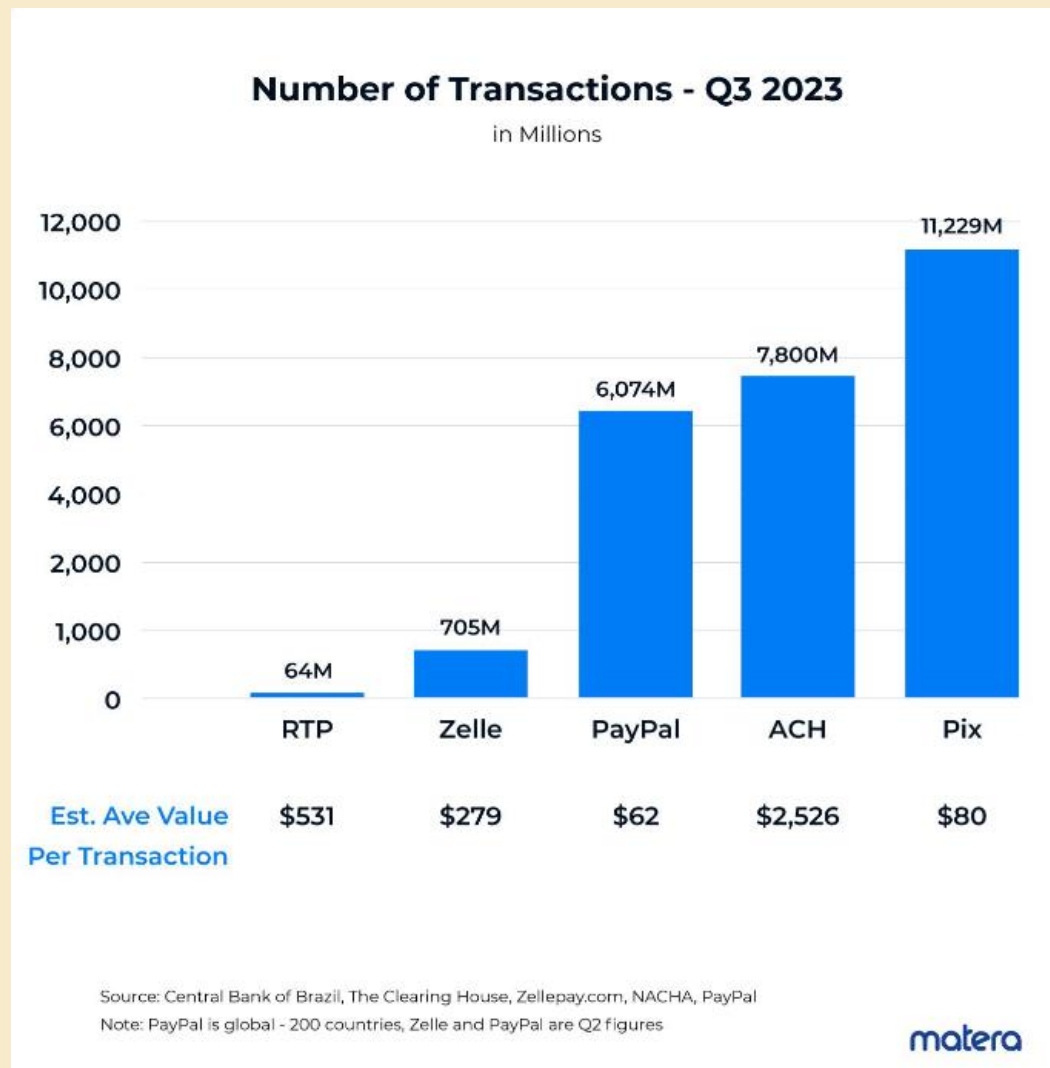


Results



Source: <https://paymentscmi.com/insights/pix-in-brazil-what-to-expect-in-2024-and-ahead/>

Results



- <https://www.matera.com/en/whitepapers/> "Pix by the numbers Q3 2023"



Political Economy

- Limited Powers of Fed
 - Adoption
 - End user pricing
 - Standardization
 - Cost Recovery
- Large Banks vs Community Banks



- Result US market structure:
public/private duopolies

	Federal Reserve	The Clearing House
Large value	Fedwire	CHIPS
Batch	FedACH	EPN
Instant Payments	FedNow	RTP

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- Potential and Actual Use Cases For FedNow
- Large value
- Account loading
- Business to individual
- Government payments
- “Pay by Bank”



- Requirements going forward

Directories or QR

“Pull” capabilities

Relaxed requirements for master accounts



Summary

- Framework for payments rails
- Motives for payments and relation to demand for speed
- FedNow vs UK and Brazil
- Reason for differences



Summary

- Other motivations for FedNow
- Speed of adoption dependent on ancillary programs





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