

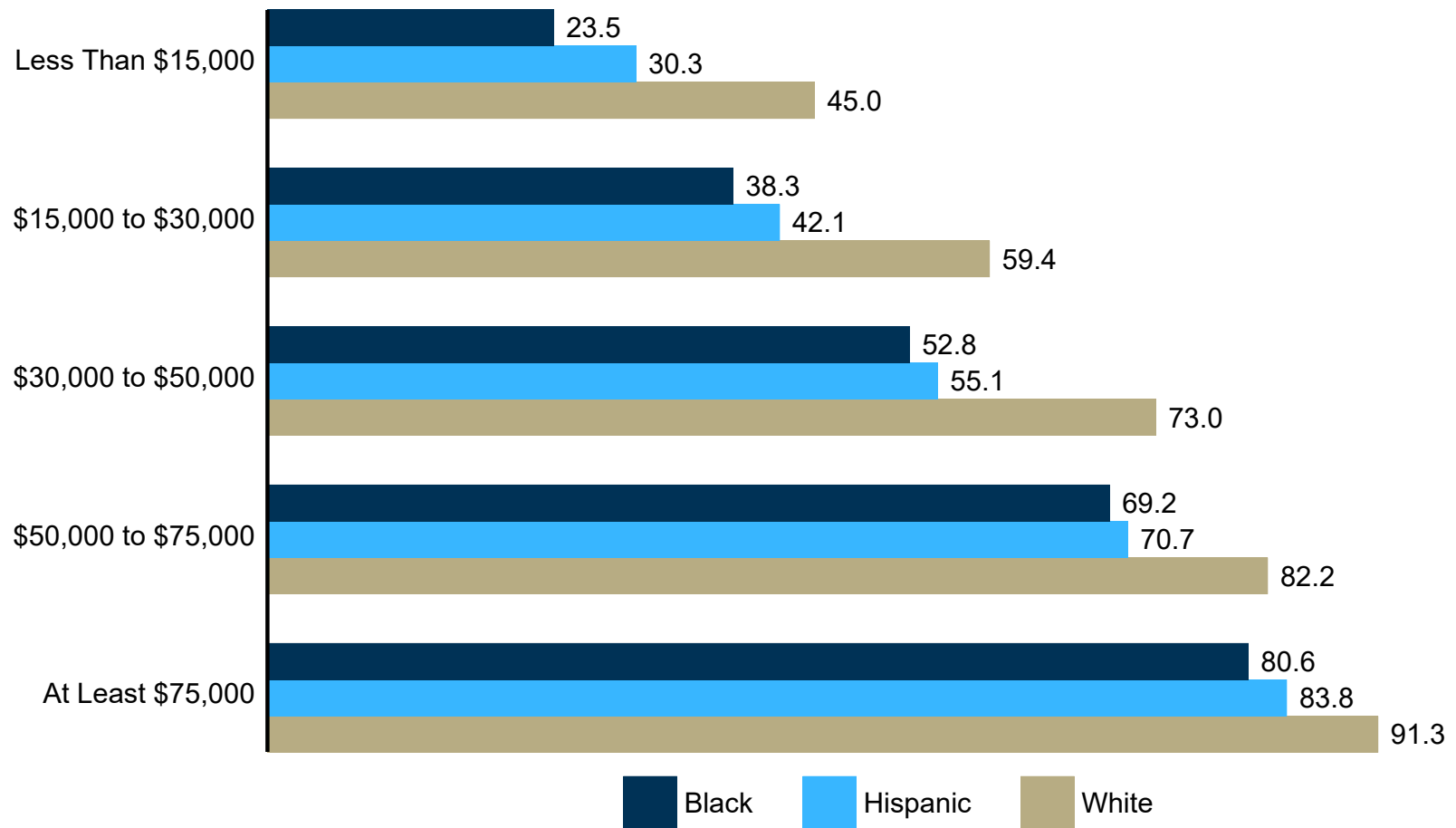
**Discussion of  
Credit lines, bank deposits or CBDC?  
Competition & efficiency in modern  
payment systems  
Piazzesi and Schneider**

By Andy Atkeson  
November 9, 2020

# People do like to use bank credit

## What difference does that make?

Figure ES.7 Bank Credit Use by Household Income Level and Race and Ethnicity, 2019 (Percent)



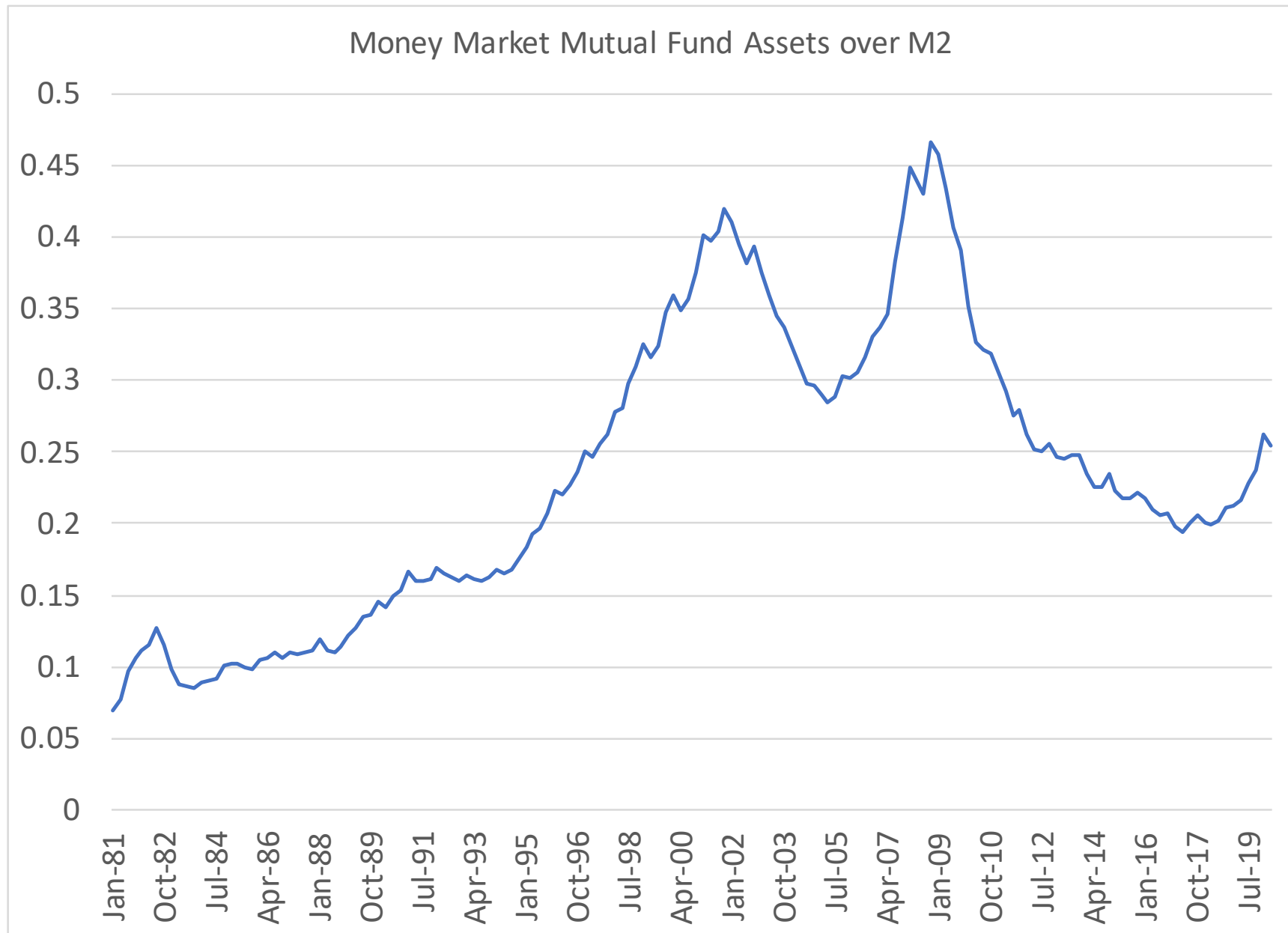
2019 FDIC Survey

How America Banks: Household Use of Banking and Financial Services

# Plan for Discussion

- Can this model be used to assess the welfare implications of the historical introduction of money market mutual funds?
- Is a direct to consumer/firm central bank digital currency plausible?
  - It takes branches and employees to get deposits
  - Deposits earn quasi-rents
- Payments vs. liquidity services
  - Are payments the more likely business segment to be impacted by a CBDC?
- How could we put that into the model?
  - Credit provision to support payments settlement (Fedwire)
  - Is this relevant at the retail level? (see Fintech payment players)

# The growth of MMMFs



# The Model and MMMFs

- Banks offer a deposit and credit line joint product subject to regulation
- Money Market Mutual Funds offer a deposit-only option
  - Lower cost due to regulatory advantage
  - Important for funding banks
- What are the additional social costs?
  - Asset management costs?
  - Excess liquidity in the system?
- What social costs would this model imply?

# Is it plausible that a CBDC would compete with banks for deposits?

- We already have a CBDC (Reserves)
  - Consumer access to the CBDC is intermediated through banks
- Consumer access to physical currency is also intermediated through banks
- It takes labor and physical capital to market and provide financial services to consumers and firms

# It takes branches to get deposits

**Top 15 bank holding companies by total deposits**

Total deposit rank			Branches		Total deposits		Market share	
2020	2019	Company (ticker)	2020	YOY change (%)	2020 (\$B)	YOY change (%)	2020 (%)	YOY change (bps)
1	1	Bank of America Corp. (BAC)	4,254	-1.9	1,747.26	28.0	11.21	56
2	2	JPMorgan Chase & Co. (JPM)	4,980	-0.9	1,704.65	30.0	10.94	70
3	3	Wells Fargo & Co. (WFC)	5,413	-2.9	1,486.67	14.3	9.54	-62
4	4	Citigroup Inc. (C)	710	-0.1	664.06	20.6	4.26	-4
5	5	U.S. Bancorp (USB)	2,774	-6.9	398.45	16.3	2.56	-12
6	NA	Truist Financial Corp. (TFC)*	2,921	-1.0	391.22	18.2	2.51	-7
7	6	Capital One Financial Corp. (COF)	452	-7.4	375.55	14.9	2.41	-14
8	7	Toronto-Dominion Bank (TD)	1,227	-1.4	351.56	29.8	2.26	14
9	8	PNC Financial Services Group Inc. (PNC)	2,324	-3.1	338.09	25.5	2.17	7
10	9	Charles Schwab Corp. (SCHW)	3	0.0	301.66	44.7	1.94	31
11	10	Morgan Stanley (MS)	3	0.0	241.63	34.4	1.55	15
12	14	Goldman Sachs Group Inc. (GS)	5	0.0	220.73	57.7	1.42	32
13	13	Bank of New York Mellon Corp. (BK)	51	-1.9	216.68	33.7	1.39	13
14	15	Fifth Third Bancorp (FITB)	1,137	-7.1	162.44	25.0	1.04	3
15	16	HSBC Holdings PLC (HSBA)	158	-30.1	160.68	26.6	1.03	4
Top 15 bank holding companies			26,412	-3.0	8,761.34	24.9	56.20	145
U.S. total			85,045	-1.6	15,588.51	21.7		

Data compiled Sept. 18, 2020.

NA = not applicable

Data is based on the FDIC Summary of Deposits filings as of June 30, 2019, and June 30, 2020.

Ranking based on deposit market share.

\* BB&T Corp. and SunTrust Banks Inc. completed their merger-of-equals transaction on Dec. 6, 2019. Prior year data reflects FDIC Summary of Deposits filings by both BB&T Corp. and SunTrust Banks Inc. for the twelve months ended June 30, 2019.

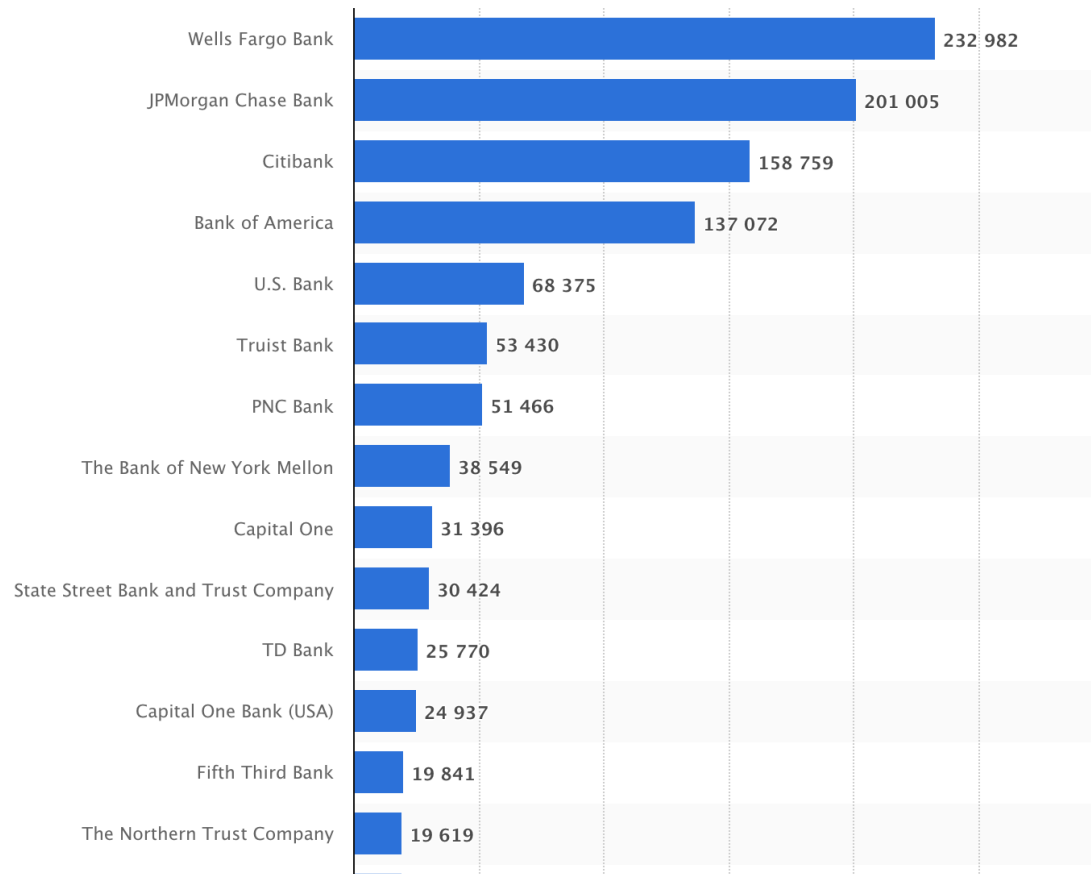
Tickers are shown for the home country stock exchange.

Sources: S&P Global Market Intelligence; FDIC

# And employees

Finance, Insurance & Real Estate › Banks & Financial Services

## Leading banks in the United States as of December 31, 2019, by number of employees



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### Release date

April 2020

### Region

United States

### Survey time period

December 31, 2019

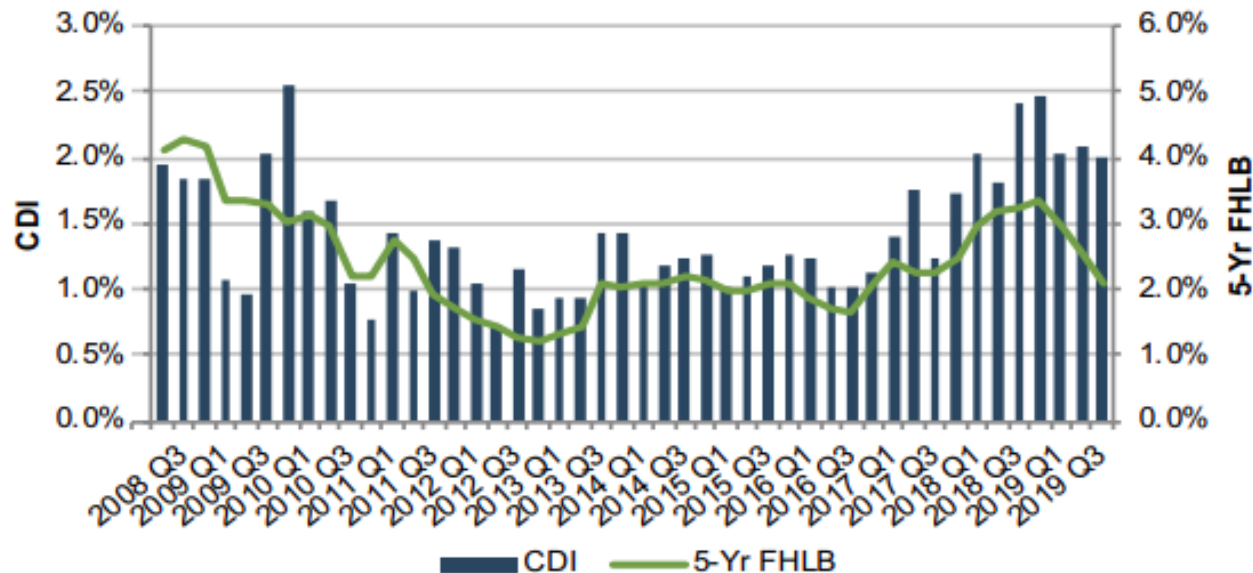
### Supplementary notes

Figures have been rounded.



# Deposits are costly to acquire and yield large quasi-rents

Figure 2 :: CDI as % of Acquired Core Deposits



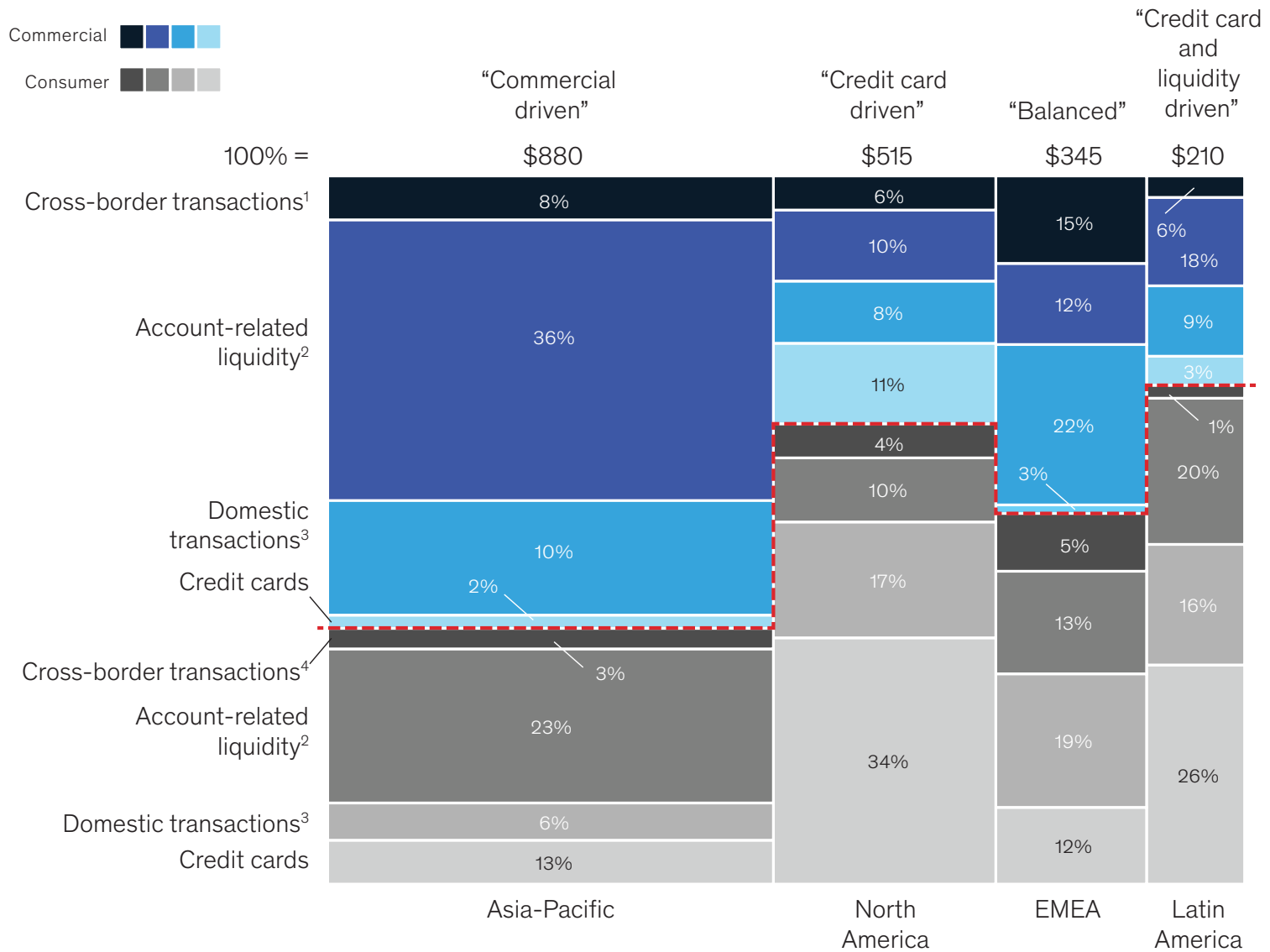
**Mercer Capital on Core Deposit Intangible Values**

# Payments vs. Liquidity Services

- Payments services are where the profits are
  - Banks compete with nonbank payments services providers
- Central bank has a true (unfair) advantage in providing credit to support payments settlements
  - Fedwire and intraday credit
- What implications does this have for a CBDC linked to a payments settlement system relative to what we already have?
  - Why are Square and PayPal so valuable?

# Payments vs. Liquidity services revenue globally

Payments revenue, 2018, % (100% = \$ billion)



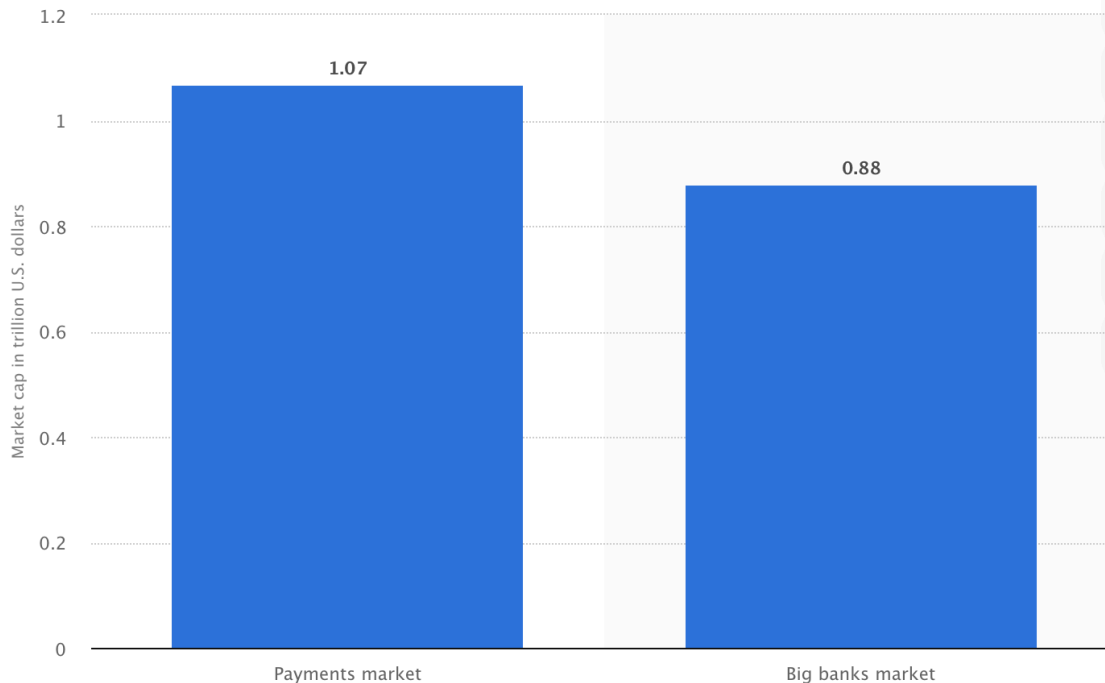
# Payments are where the profits are

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PREMIUM +

## Market capitalization of four large payment companies vs the "big six" banks on Wall Street as of September 2020

(in trillion U.S. dollars)



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September 2020

### Region

United States

### Survey time period

September 2020

### Supplementary notes

Payment companies: Square, Visa, PayPal, and MasterCard.

"Big six" banks: JPMorgan, Bank of America, Wells Fargo, Citigroup, Morgan Stanley, and Goldman Sachs.

[Additional Information](#)

# Summary

- Great contribution to focus on banking as a business
- Potential for big contribution for understanding interaction of bank and nonbank intermediaries with regulation
- Why should the Central Bank get into this business?
  - Why not the pizza business?