# Unintended Consequences of Post-Crisis Liquidity Regulation

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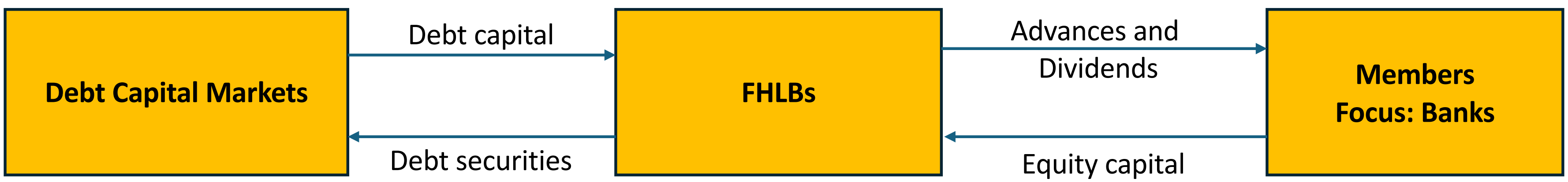
## Research Questions

- How did the introduction of bank liquidity regulations (LCR) and Money Markets Regulations affect the interaction of banks and MMMFs with the Federal Home Loan Banks?
- How did liquidity risk and fragility migrate in the network?
- What was the subsidy enjoyed by the FHLBs and its allocation between Banks and Borrowers?

# An Overview of the nexus between FHLBs, Banks & MMMFs




- **Implied guarantee of FHLB debt (GSE).**
- **Tax and regulatory exemptions.**
- **$4 billion credit line with the Treasury.**
- **Super lien status ahead FDIC.**

- **Key objective: support mortgage lending.**
- **FHLBs provide liquidity to members during crises.**
- **10% of income earmarked for community housing assistance**

- **Banks, Insurance companies, thrifts CDFIs, and Credit Unions**
- **Over-collateralization.**
- **FHLBs are jointly and severally liable.**

- FHLBs enjoy a significant subsidy in their debt issuance.
- Subsidy gets allocated to Banks & borrowers via advances, Affordable housing, & FHLBs.
- FHLBs are regulated by FHFA; MMMFs by SEC; Member banks by OCC, Fed and FDIC - fragmented regulation.
  - Banks and MMMFs were subject to regulations that FHLBs were not.

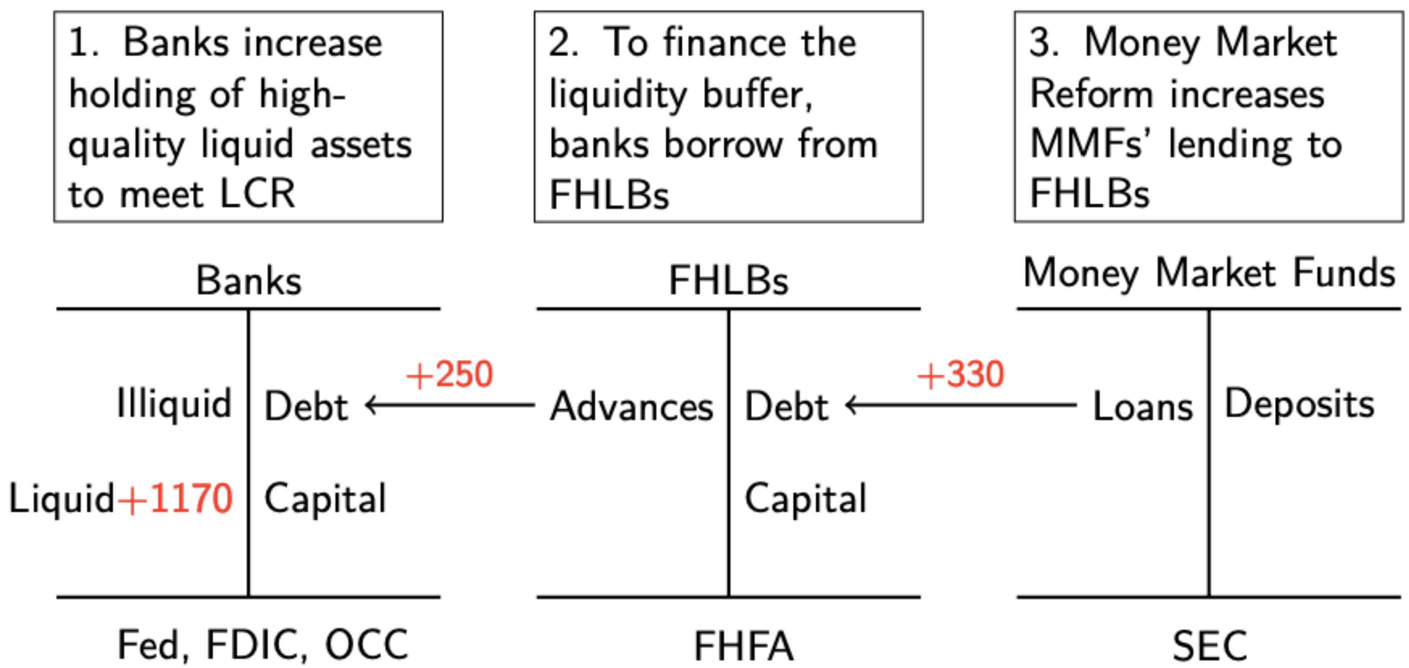
## Results Overview

- Banks are increasingly relying on Federal Home Loan Banks (FHLBs) for liquidity.
- FHLBs obtain liquidity from Money Market Funds (MMFs) due to Money Market Reforms.
- This has created a new intermediation chain that may introduce systemic risks.

## Results Overview

- Banks’ borrowing from FHLBs increased by 60% post-regulation.
- FHLBs’ assets grew by nearly 50% from 2012 to 2017.
- MMFs have become the largest creditors of FHLBs.

# Results Overview



# Results Overview

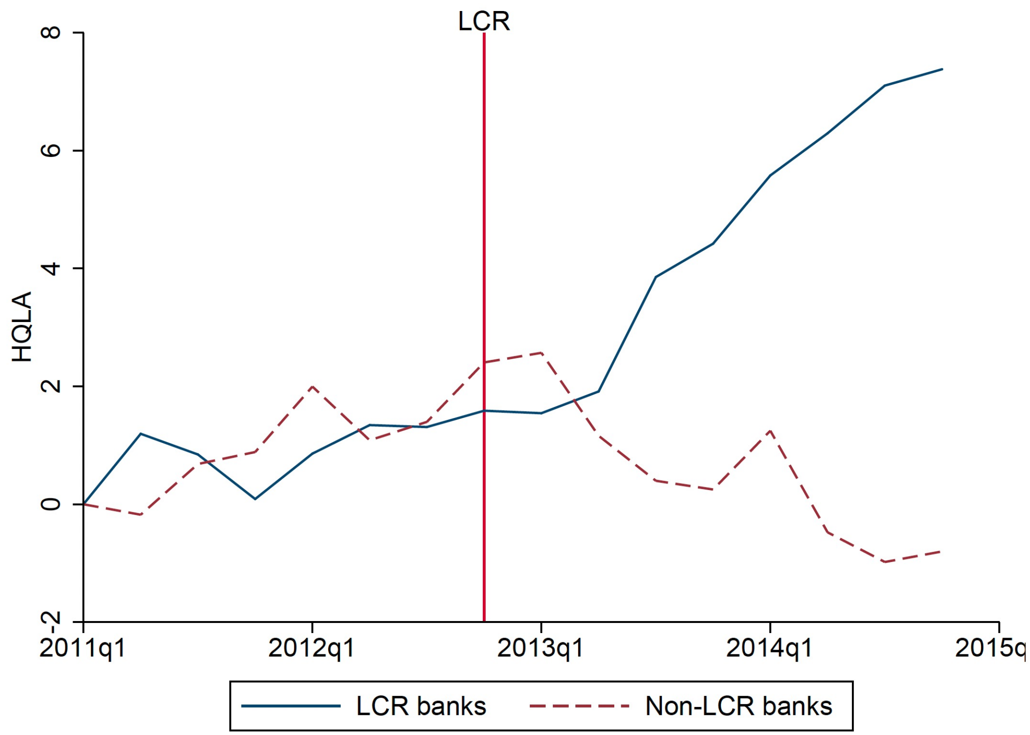
- Estimation of subsidies from FHLBs to members:
    - We estimate the subsidy at about $10 billion.
    - As a benchmark, CBO estimates in its 2024 report the subsidy in the range $5.3 billion to $8.5 billion.
- Allocation of subsidy to members:
    - How much of the subsidy goes to residential borrowers? [a small fraction].
    - After the introduction of LCR, the subsidy pass-through is even less.

# Results Overview

- We argue that the migration of liquidity risk and fragility is a consequence of fragmented regulation
  - MMMFs – regulated by SEC
  - Banks – regulated by OCC, The Fed and FDIC
  - FHLBs – regulated by FHFC
- Policy recommendation: The regulators need to interact with each other to coordinate the migration of illiquidity and fragility from one part of the network into another.

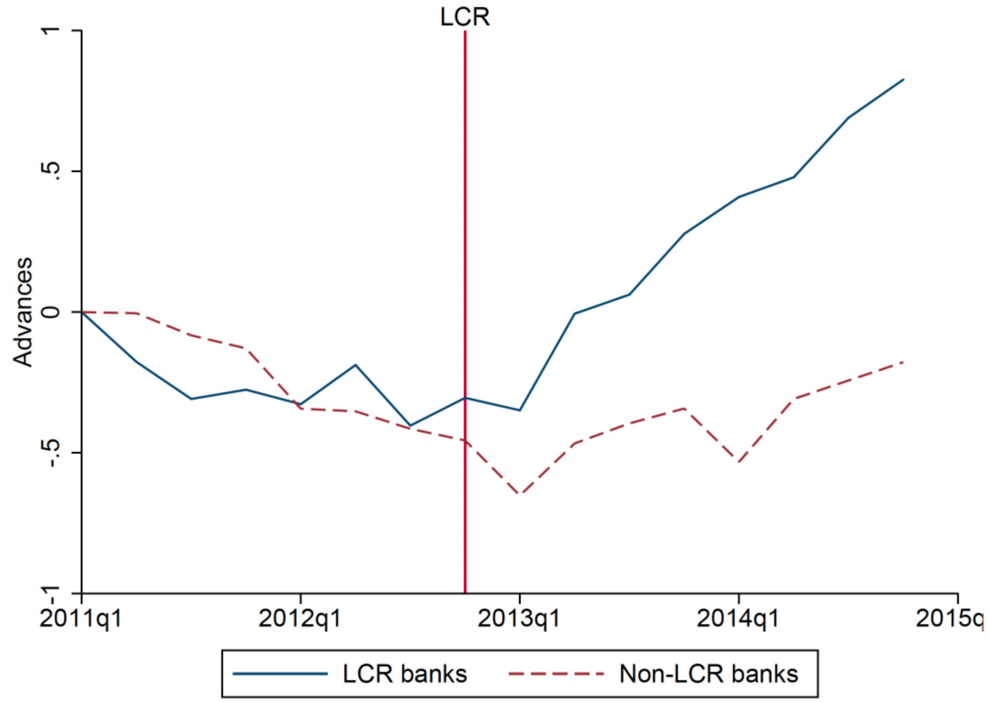
# Results

## High-Quality Liquid Assets of LCR vs. Non-LCR Banks



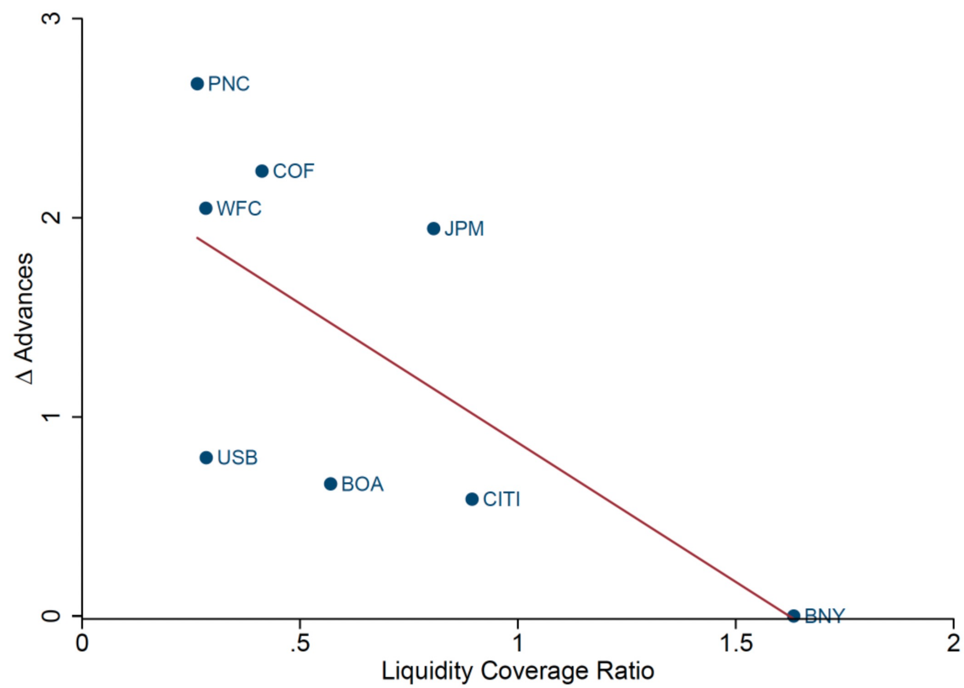

- LCR banks increase holding of HQLAs compared to non-LCR banks.

## FHLB Advances of LCR vs. Non-LCR Banks



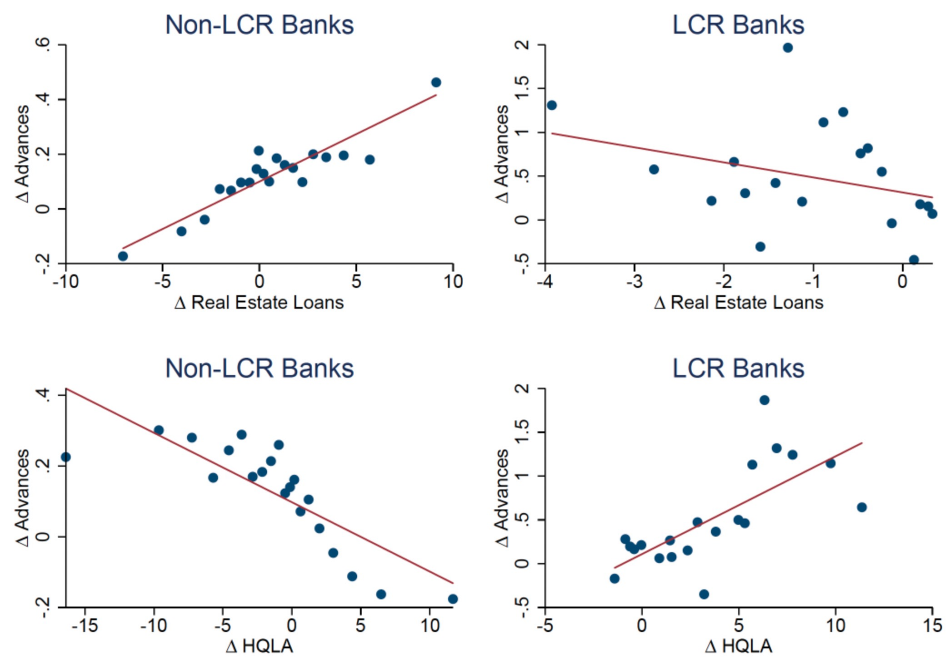

- LCR banks increase borrowing from the FHLBs compared to non-LCR banks.

# Changes in FHLB Advances among LCR Banks



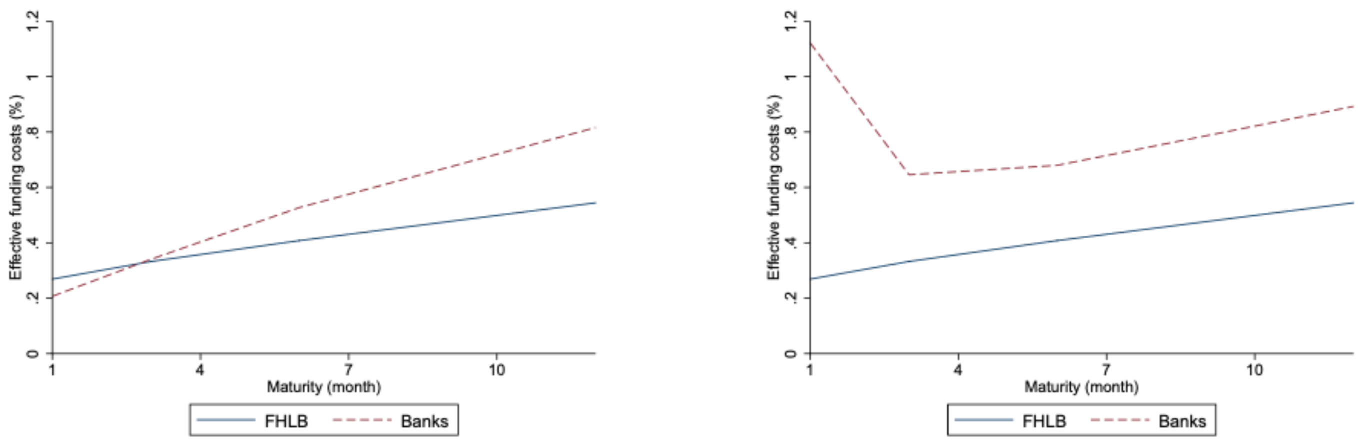

- Banks with lower liquidity coverage ratio borrow more from the FHLBs

# Usage of FHLB Advances: LCR vs. Non-LCR Banks




- Non-LCR banks use advances for real estate lending, LCR banks use advances to acquire HQLA

# Relative Funding Costs

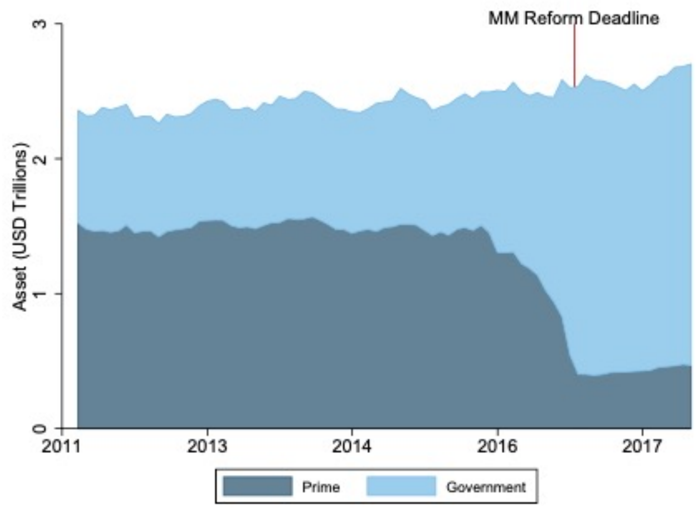



(a) Before LCR

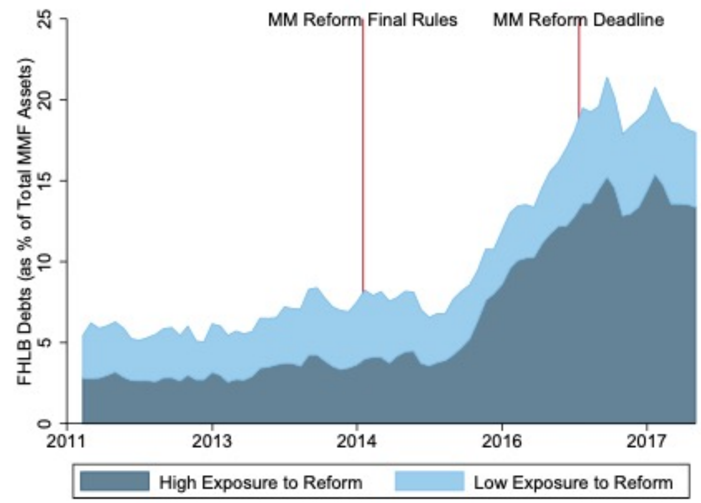
(b) After LCR

- Effective funding costs (= funding cost + cost of holding regulatory liquidity buffer) of FHLBs become much lower after the LCR
- This creates incentive for banks to borrow from FHLBs

# MMMF emerge as big funders of FHLBs



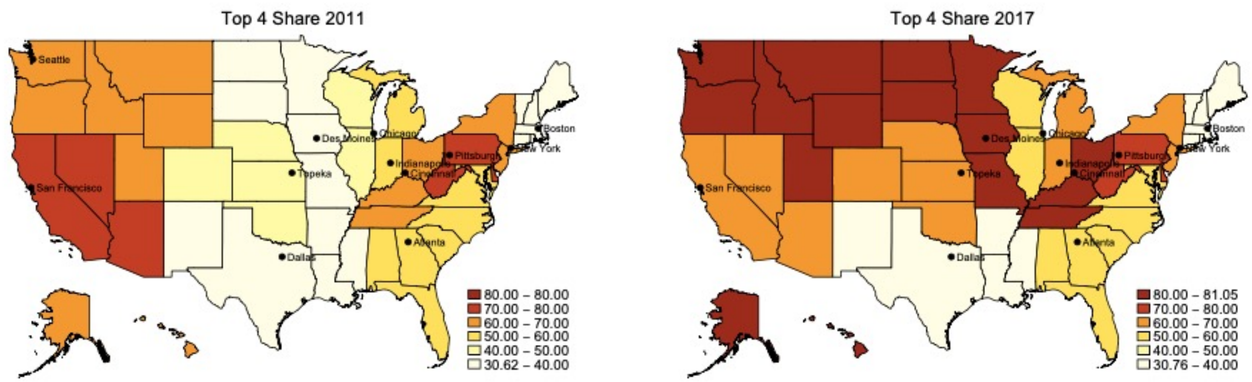

(a) **U.S. MMF Assets**




(b) **FHLB Debt Held by U.S. MMFs**

- Money Market Reform increases flows into government funds, which leads to more short-term funding from MMFs to FHLBs.

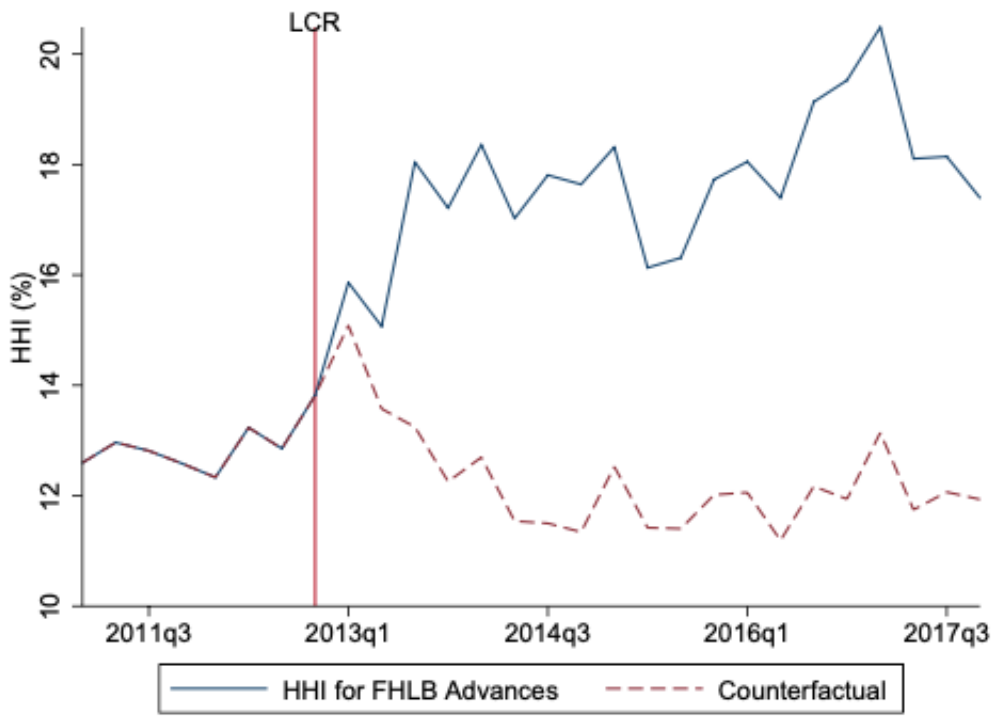
# Fragility: more concentrated lending




(a) **2011** (b) **2017**

- FHLB lending has become much more concentrated.

# Fragility: more concentrated lending




- Lending has become much more concentrated compared to the counterfactual where the big banks' advance-to-asset ratio stays constant after 2012Q4.

# Fragmented Regulation

- Different regulatory agencies oversee different financial institutions with narrowly defined missions.
  - FDIC, Federal Reserve Board, OCC regulate commercial banks.
  - SEC regulates MMFs.
  - FHFA regulates FHLBs.
- This fragmentation allows financial institutions to transfer liquidity risks across jurisdictions.

## Fragmented Regulation

- The benefits of the surge in advances to the four largest members include an increase in interest income that FHLBanks earn from making advances.
- FHFA officials emphasized that FHLBank advances for the purpose of meeting recent liquidity requirements are legal and not inconsistent with the System's mission.

—Federal Housing Finance Agency Office of Inspector General (2014)

## Policy Implications

- We argue for a more coordinated regulatory approach.

- In its 2024 report, FHFA has stressed the need for better coordination in the context of the failures of SVB, Signature and other banks:

"The FHLBank System did not incur losses on its advances to these failed members. One of the failed banks paid off its advances before dissolution. The Federal Deposit Insurance Corporation (FDIC) paid off the advances and any associated prepayment fees for two of the failed entities, and the purchasing bank for First Republic Bank remains liable for its outstanding advances. The broader financial system, however, incurred losses because of these failures, **highlighting the need for greater focus by the FHLBanks on evaluating member creditworthiness and better coordination with their members' primary regulators when a member's financial condition is deteriorating."**

# Policy Implications

- Potential policy responses in the context of LCR:
    - Leverage constraints on FHLBs.
    - Tightening collateral requirements for banks borrowing from FHLBs.
    - Adjusting run-off rates for FHLB advances.

# Conclusions

- Post-crisis liquidity regulation has led to unintended consequences.
- These include increased systemic risks due to new intermediation chains.
- We stress the importance of moving towards a more coordinated regulatory landscape.