Macroprudential Policy and Financial Stability

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1. **Unconventional Monetary Policy and Funding Liquidity Risk**
   by Quentin Vandeweyer, Adrien d'Avernas, and Matthieu Darracq Paries

2. **Does Liquidity Disclosure Regulation Negatively Affect Liquidity Holdings in the Banking System**
   by Yao Lu

3. **Unintended Consequences of Post-Crisis Liquidity Regulation**
   by Suresh Sundaresan and Kairong Xiao

4. **Overarching Comments**

Summary

- Theory paper: examines effect of various monetary policy stabilization initiatives (to stabilize asset prices) in a financial crisis with a liquidity crunch.
  - Considers both traditional and shadow banks.

- Main findings:
  - When banks are well capitalized, markets function efficiently to absorb funding shocks.
  - When aggregate bank capital is low:
    - Relieve funding stress first via the discount window and liquidity injections.
    - If the shadow banking sector is large: purchase long-term assets to further stabilize asset prices.

Assessment

- Interesting and important topic.

- Provides a lot of food for thought.

Assessment

- Main finding that when banks are well capitalized, markets function efficiently to absorb funding shocks is consistent with:
  - Recent theory. Thakor (2019 working paper) shows: when banks have different levels of capital, the high-capital banks purchase (illiquid) assets from low-capital banks, preventing fire sales and thus stabilizing prices.
    - The analysis is of shadow banks (with no LOLR or deposit insurance) but can easily be extended to a model in which the high capital banks also have access to LOLR, which will strengthen results.
  - Recent empirical evidence. Perignon, Thesmar, and Vuillemey (2018 JF) show: while aggregate short-term uninsured funding experienced stresses during the crisis, there was NO market-wide liquidity crunch – high-capital banks increased their reliance on wholesale funding.
- Paper should connect with these papers and explain the relationship to these papers.

Assessment

- Paper points out: when aggregate bank capital is low, funding risks can create downward price pressures. Proposed ex-post solution: direct asset purchases of illiquid securities by the LOLR.
  - This works, but raises huge ex ante moral hazard issues.
  - Infusing capital into banks like the US government did with TARP in the crisis may be better as a resolution mechanism from:
    - Ex ante incentives perspective and
    - Ex post adverse selection perspective. (The government always ends up providing ex post subsidies due to adverse selection in asset purchases, as in Tirole (AER 2012)).
  - Need a better discussion of the desirability of higher capital requirements ex ante.

Assessment

- Bagehot Rule says: LOLR should intervene in liquidity crises but not bail out insolvent banks.
  - Paper's findings are consistent with the view that one way for the LOLR to minimize confusion about whether it is an illiquidity or insolvency crisis is to have sufficiently high capital ex ante.
    - Acharya and Thakor (JFI 2016) on the role of the LOLR provides a formal analysis and also pros and cons of various forms of LOLR intervention during a crisis.
    - Paper should discuss its relationship to that paper.

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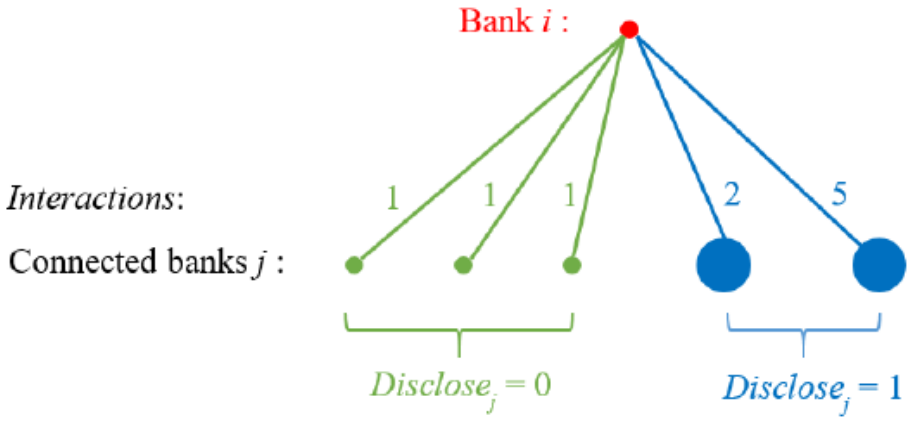
- This paper empirically examines how mandatory liquidity disclosure affects non-disclosing banks' liquidity holdings.
  - Channel: liquidity disclosure ➔ non-disclosing banks have better info about aggregate liquidity ➔ reduce their liquidity holdings.

- Focus: liquidity coverage ratio (LCR) disclosure.
  - Sample period: 2010Q1 – 2018Q2.
    - 7 largest banks first mandated to disclose LCR details in 2017Q2.
    - 203 banks did not have to disclose over sample period.

Summary

- To measure the degree of liquidity info improvement due to disclosure, it uses banks' loan co-syndication.
  - *LiqInfoImprove* = 1 if a bank is not connected in the syndication market with disclosing banks over the sample period.



$$LiqInfoImprove_{i,t=3Q17} = 1 - \frac{\sum_j Interactions_{i,j} * Disclose_j}{\sum_j Interaction_{i,j}}$$

$$= 1 - \frac{1*0+1*0+1*0+2*1+5*1}{1+1+1+2+5}$$

$$= 0.3$$

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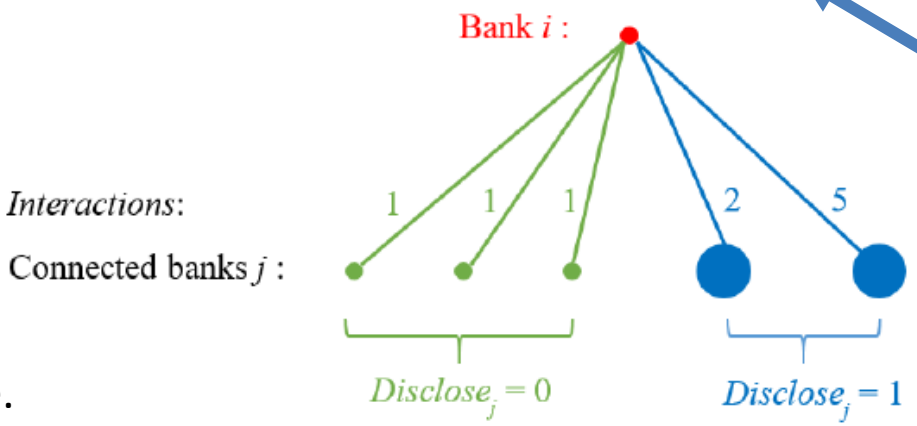
Does this somehow proxy for bank size? Regressions control for size, but size differences are huge. (Smallest bank: assets $7 million. Largest bank: assets $2.6 trillion.)



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Should this be measured through 2017Q2? If a bank starts a syndication relationship after 2017Q2, it would have obtained the info anyway through syndication.

Summary

- Main finding:
  Disclosure reduced non-disclosing banks' liquidity holdings, especially at those that learned more from the disclosure.
  - Argues: economically meaningful. Average reduction in liquid assets / assets 1.2 percentage points.

- Suggests potential unintended consequence of liquidity disclosure regulation.

Assessment

- Very interesting paper.

- The paper is correct to point out that more research is needed (theoretically and empirically!) on liquidity requirements.
  - Echoes Allen and Gale (working paper, 2017): “Much more research is required in this area. With capital regulation there is a huge literature but little agreement on the optimal level of requirements. With liquidity regulation, we do not even know what to argue about.”
    - Side note: More work is also needed on the interaction between capital and liquidity regulation (Bouwman, Oxford Handbook of Banking 2014, 2020).

Assessment

- Staggered introduction of LCR disclosure requirements for banks of different sizes.

Assets	First disclosure:
> $750B	2017Q2
$250B – $750B	2018Q2
$50B – $250B	2018Q3

← *Focus of the paper*

  - Sample period: 2010Q1 – 2018Q2.
    - "Non-disclosing banks" is a mix of banks that never have to disclose and those that will have to disclose shortly.
      - Examine whether the effects are different for the two groups.

Assessment

- Proposed channel: liquidity disclosure ➔ non-disclosing banks face less uncertainty about aggregate liquidity ➔ reduce their liquidity holdings.
  - Doesn't every bank have better info?
    - If so: how do disclosures affect liquidity holdings of other disclosing banks and the bank itself?
  - Implicit assumption seems to be: less uncertainty means that aggregate liquidity is higher than expected.
    - If aggregate liquidity is lower, why would non-disclosing banks reduce their liquidity holdings?

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4. **Overarching Comments**

Summary

- This paper examines how liquidity regulation affects banks' borrowing from Federal Home Loan Banks (FHLBs) and financial stability.
  - Theory model and empirics.

- Empirical approach: difference-in-differences specification.
  - Parallel trends assumption satisfied.

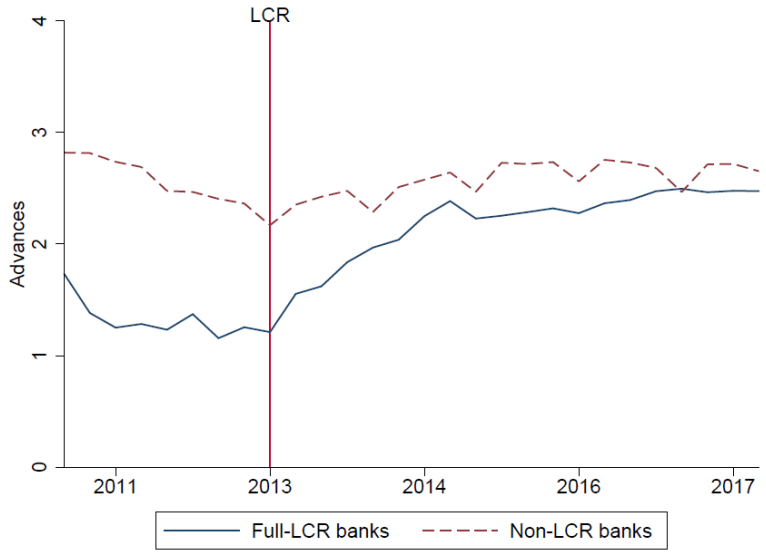

Figure 4: FHLB Advances of Full-LCR Banks vs. Non-LCR Banks

Summary

- Main findings:
  - From 2013 – 2017, banks exposed to the LCR increased their borrowing from FHLBs by over $100B.
    - Allowed banks to relax liquidity constraints (and thus lend more) since banks have to hold $1 of high-quality liquid assets (HQLA) for $1 of borrowing that expires in 30 days versus $0.25 of HQLA for $1 of borrowing from FHLBs.
  - Makes the system less stable! *(unintended consequence)*
    - 85% of borrowing collateralized. In case of problems: fewer funds available for the FDIC ➔ more costly for tax payers.
    - FHLBs fund themselves with ultra-short funding from money market mutual funds.

Assessment

- Very nice paper.
- The results are intuitive and robust.
  - Also examines alternative explanations: e.g., Basel III introduced not just liquidity requirements but also tightened capital requirements.
- I like the mix of theory and empirics.
- Important policy implications:
  - Liquidity regulation paradoxically increases banks' reliance on public liquidity through FHLBs.
  - Paper mentions: in part driven by regulatory fragmentation.
    - FHLBs are regulated by the Federal Housing Finance Agency.

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4. **Overarching Comments**

Overarching comments

- These papers collectively suggest:
  - Higher liquidity requirements are harmful:
    - Evidence suggests: banks increase borrowings from the FHLB, which finances itself with ultra-short funding from money market mutual funds.
  - Liquidity requirement disclose may be harmful:
    - Non-disclosing banks may lower their liquidity balances.
  - Higher capital requirements are beneficial:
    - Mitigates funding shocks.
      - When capital is low: vicious cycle between declining asset prices and funding risk. Central bank may have to stabilize asset prices via costly asset purchases.

Overarching comments

- Basel III imposes novel liquidity requirements.
  - Liquidity Coverage Ratio (LCR).
  - Net Stable Funding Ratio (NSFR).

- Empirical evidence suggests that the crisis was an insolvency crisis, not a liquidity crisis (Thakor, JFS 2018):
    - Most banks did not experience reduced funding during the crisis.
    - Huge liquidity injections by the Federal Reserve in 2008 did not lower the LIBOR-OIS (Overnight Index Swap) spread.
    - Banks with higher capital ratios were less affected by the crisis.
  - Recommends: deemphasize/drop liquidity requirements, increase capital requirements substantially.

Overarching comments

- Large theoretical literature points at benefits of capital:
  - Greater monitoring (Holmstrom and Tirole QJE 1997; Allen, Carletti, and Marquez RFS 2011; Mehran and Thakor RFS 2011).
  - Improved screening (Coval and Thakor JFE 2005).
  - Reduced asset-substitution-moral-hazard induced by limited liability and government guarantees (Freixas and Rochet Elsevier 2008; Acharya, Mehran, and Thakor RCFS 2016).
- Higher capital is especially beneficial during crises / bad times:
  - Are more likely to survive crises and are able to gain market share during crises (Berger and Bouwman, JFE 2013).
  - Earn higher risk-adjusted returns during bad times (Bouwman, Kim, and Shin, working paper 2018).
  - Took less risk prior to the recent financial crisis (Beltratti and Stulz, JFE 2012).
  - Had smaller contractions in lending during the recent crisis (Carlson, Shan, Warusawitharana, JFI 2013).
  - Were able to increase their reliance on short-term uninsured funding during the recent crisis (Boyson, Helwege, and Jindra, FM 2014; Perignon, Thesmar, and Vuillemey, JF 2018).

Overarching comments

- Bank capital may not yet be sufficiently high despite higher capital requirements.
  - Engle (ARFE 2018): to eliminate systemic risk (SRISK) early 2007, US banks needed $200B in extra capital.
    - SRISK currently over $300B.
  - Basel's capital surcharges for globally systemically important banks (G-SIBs) are too small.
    - Passmore and Von Haften (working paper 2018) estimate:
      - Surcharges for G-SIBs should be 375-525 basis points higher;
      - Some very large and systemically important banks that are currently not subject to these surcharges should be subjected to a 225 basis point surcharge.

Overarching comments

- We need to have a serious policy discussion about:
  - How banking can become better capitalized.
    - Increase capital requirements.
    - Use countercyclical capital buffers.
      - Banks should be asked to increase their buffers!
    - Build up capital through dividend reductions and earnings retention.
  - How we can phase out or de-emphasize liquidity requirements.
    - It is more efficient for the Central Bank in its role of Lender of Last Resort (LOLR) to provide liquidity to banks in need than for individual banks to keep sufficient liquidity on their balance sheets.