Discussion of

The Evolution of Banking in the 21st Century: Evidence and Regulatory Implications

Arvind Krishnamurthy, Stanford University GSB

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The SVB crisis mix

- High level of uninsured deposits
  - Uninsured deposits are more flighty (technology?)

SVB had risk management failures

- Large holdings of long-duration liquid securities, on which there were losses

This paper: the situation is broader and reflects a shift of activities in and outside the banking system
  - Non-bank lending has grown
  - Large banks have shifted away from lending and towards liquidity-provision activities
  - Medium sized bank business model is at risk

Jiang et al. (2023): many banks look like SVB
Policy recommendations

• Alter the liquidity coverage ratio (LCR) to require >$100bn banks to pre-position collateral at the discount window
  • And increase runoff rate assumptions on uninsured deposits
  • Currently LCR does not apply to banks under 250bn, and runoff rates for uninsured deposits are 40%

• Redo regulation of interest-rate risk:
  • Capital charges on long-duration securities
  • Require banks to mark-to-market securities portfolio, so that ex-post capital levels reflect losses

• Encourage bank mergers in the mid-sized regional banks
Model

- Deposit rate spread $= r^* - r^D$

- Loan rate spread $= r^L - r^*$

- $R = D(r^* - r^D) + L(r^L - r^*)$

- Cost $C$-per-period of running the bank

- Franchise Value $= PV(R - C)$
Thresholds:

**Solvency:**

\[
\text{Market Equity} = (L + S - D) + MV_{L,S} + PV(R - C) > 0
\]

**Liquidity:** $h$ is “haircut” on loans and assume zero on securities

\[
[L - hL] + S - D + MTM_{L,S} > 0
\]

<table>
<thead>
<tr>
<th>ASSETS</th>
<th>LIABILITIES</th>
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<tbody>
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<td>Loans (L)</td>
<td>Deposits (D)</td>
</tr>
<tr>
<td>Tradeable Securities (S)</td>
<td>(Book) Equity</td>
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Liquidity Coverage (LCR)

**Solvency:**

\[ Market \ Equity = (L + S - D) + MTM_{L,S} + PV(R - C) > 0 \]

**Liquidity:** \( \theta \) is “haircut” on loans and assume zero on securities

\[ [L - hL] + S - D + MTM_{L,S} > 0 \]

- LCR imposes \((S + MTM_S) - \lambda D > 0\) with \(\lambda \leq 1\)

- Higher \(\lambda\) if social fire sale costs exceed private \(h\); and bank lending \(L\) is not as socially valuable
Liquidity Coverage (LCR) and Discount Window

Solvency:

\[ Market\ Equity = (L + S - D) + MTM_{L,T} + PV(R - C) > 0 \]

Liquidity: \( \theta \) is “haircut” on loans and assume zero on securities

\[ [L - \theta L] + S - D + MTM_{L,T} > 0 \]

- LCR imposes \( (S + MTM_S) - \lambda D > 0 \) with \( \lambda \leq 1 \)
- Pre-position collateral at discount window, and count towards LCR
  - Helps to enforce the requirement
  - Operational benefits allowing banks to act quickly
  - Avoid stigma?
  - Fed is acting as market-maker for Treasuries and MBS in a crisis already

- Similar proposal made in G30 2024 report, OCC Chair Hsu (2024), Duffie (2023)
Should long-duration securities be used as S?

*Liquidity: θ is “haircut” on loans and assume zero on securities*

\[ [L - hL] + S - D + MTM_{L,S} > 0 \]

• Take LCR \((S + MTM_S) - \lambda D > 0\)

• Is S only T-bills and reserves or also long-duration Treasuries?

• *Equilibrium issues:* “assumed runoff rate of 75% for uninsured deposits would require using more than half of all reserves and outstanding short-term Treasuries as backing, while an assumed runoff rate of 100% would consume around two-thirds of those two asset classes.”

• Also: further depresses T-bill yields and incentivize Treasury to shorten issuance maturity?

• Long-S + MTM_S + Interest Rate Swap = “short-duration” Treasury
Liquidity and Capital Requirements

**Solvency:**

\[ \text{Market Equity} = (L + S - D) + MTM_{L,S} + PV(R - C) > 0 \]

**Liquidity:** \( h \) is “haircut” on loans and assume zero on securities

\[ [L - hL] + S - D + MTM_{L,S} > 0 \]

• Take LCR \((S + MTM_S) - \lambda D > 0\)

• As bank turns to discount window to replace running depositors, \( PV(R - C) \) falls
  • Losing business (depositors) erodes franchise value
  • Liquidity problem becomes a solvency problem

• Implication: **liquidity-based** capital requirements, not just current **risk-based** capital
Conclusion

• Regional bank model is under stress
• Uninsured deposits are high in aggregate and in particular pockets

• Paper proposes tighter LCR in the face of flighty uninsured deposits + capital charges on interest rate risk + pre-positioning collateral at discount window

• I agree.
  • I would also be in favor of tighter capital requirements, linked to liquidity risk