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

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The SVB crisis mix

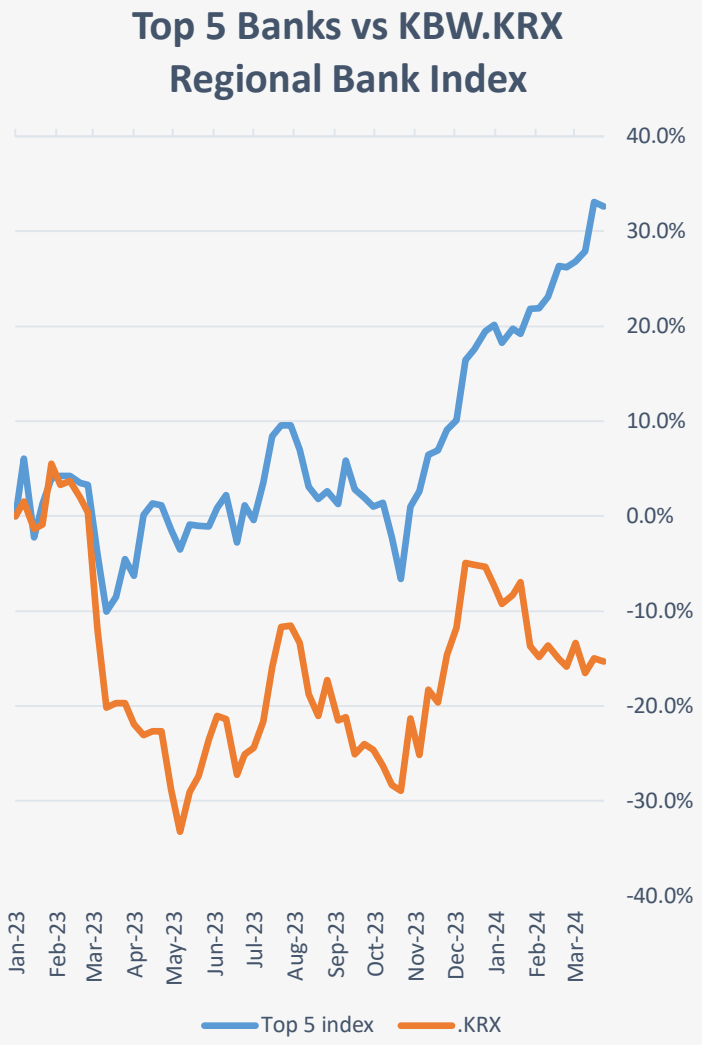
- High level of uninsured deposits
  - Uninsured deposits are more flighty (technology?)

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
- $Franchise\ Value = PV(R - C)$

ASSETS	LIABILITIES
Loans (L)	Deposits (D)
Tradeable Securities (S)	(Book) Equity

Thresholds:

Solvency:

$$Market\ Equity = \overbrace{(L + S - D)}^{Book\ Equity} + MTM_{L,S} + PV(R - C) > 0$$

Liquidity: h is "haircut" on loans and assume zero on securities

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

ASSETS	LIABILITIES
Loans (L)	Deposits (D)
Tradeable Securities (S)	(Book) Equity

Liquidity Coverage (LCR)

Solvency:

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

Liquidity: θ 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 λ 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: θ 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:

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

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