

Three Papers on the Characteristics of Banking Crises

Discussion

by

George Pennacchi

Department of Finance
University of Illinois

22th Annual FDIC
Bank Research Conference
28 September 2023

Comments on “Risk Mitigating versus Risk Shifting: Evidence from Banks Security Trading in Crises” by J-L. Peydró, A. Polo, E. Sette, and V. Vanasco

- ▶ Tests using monthly data on 115 Italian banks' holdings of 1,684 different securities show that better capitalized banks purchase relatively more higher-yield securities during crises.
- ▶ These results
 - ▶ hold only for banks with high charter (Lerner Index) value.
 - ▶ hold if Bank of Italy inspection dates are excluded.
 - ▶ do not hold for securities classified as held-to-maturity.
- ▶ The results are consistent with models that predict banks trade off protecting charter value (risk mitigating) versus exploiting deposit insurance subsidies (risk shifting).¹

¹Marcus, A. (1984) “Deregulation and Bank Financial Policy,” *Journal of Banking and Finance*.

Risk Mitigating vs Risk Shifting (continued)

- ▶ The paper's interpretation of its results are credible.
- ▶ Yet a complementary alternative interpretation might be:²
 1. During crises, there is a flight to quality whereby deposits flow to better-capitalized banks.
 2. These banks purchase (high yield) securities selling at "firesale" prices.
- ▶ This liquidity-based explanation is consistent with the paper's findings that its empirical results are strong for a:
 - ▶ subsample of banks with above-median capitalization
 - ▶ subsample of trading and available-for-sale securities
- ▶ The paper might use data on net deposit flows into banks to distinguish these different explanations.

²C.f., V. Acharya, H.S. Shin, and T. Yorulmazer (2011) "Crisis Resolution and Bank Liquidity," *Review of Financial Studies*.

Risk Mitigating vs Risk Shifting (continued)

Other comments and questions:

1. Yield spreads are calculated as bond yields - an overnight rate. Why not calculate each fixed coupon bond's spread as its yield relative to the par rate for an equivalent maturity German Bund to avoid bias due to term structure slope shifts during crises?
2. What explains the different yields across different Italian Government bonds?
3. The paper's results are robust to using alternative book value capital ratios, but are they robust to using a proxy for the market value of capital ratio (stock market capitalization/assets) for a subsample of publicly-traded banks?

Comments on “Survival of the Biggest: Large Banks and Financial Crises” by M. Baron, M. Schularick, and K. Zimmerman

- ▶ Using hand-collected 1870 - 2016 annual data on individual banks in 17 countries, the paper finds:
 1. Banking market shares of each country's large (top 5) banks increased over time due to M&As, and the identities of these large banks are persistent.
 2. Relative to smaller banks, large banks take more risk prior to crises and perform worse after crises.
 3. Yet large banks have higher survival probabilities around crises and have less deposit outflows, consistent with TBTF.
 4. Countries where large banks have greater market share experience more severe crises.
- ▶ The authors should be congratulated for their great efforts in collecting this data!

Survival of the Biggest (continued)

- ▶ The *definition of a country's banking crises* is when its banks' aggregate loan growth falls > 1 std dev.
- ▶ Now consider a thought experiment where its banks are divided into 2 groups, e.g., based on size.
- ▶ Define C_i , $i = l, s$ as the dates when total loan growth of banks in group i falls > 1 std. dev.
- ▶ Shouldn't one expect that l (s) banks to have taken relatively more risk before C_l (C_s) dates and performed worse after?
- ▶ Since large banks had growing influence on aggregate loan growth (Result 1), shouldn't we expect the paper's aggregate loan growth crisis dates to be more similar to C_l rather than C_s , which could mechanically explain Result 2?
- ▶ This logic is consistent with large banks' pre-crisis risk-taking and post-crisis loan contraction rising after 1945.

Survival of the Biggest (continued)

Other comments:

1. The paper provides strong evidence of TBTF, but use of a 3-year post-crisis stock return may be an incomplete benchmark of survivability and deposit flows.
 - ▶ Banks (especially large ones) may have recapitalized during and after crises, increasing survival and reducing deposit outflows.
 - ▶ A better indicator might be the (average or minimum) ratio of market capitalization to assets.
2. The likelihood that a country's banking system becomes large bank-dominated may be endogenous to the volatility of its economic fundamentals.
 - ▶ Volatile fundamentals imply more small bank failures (exits).
 - ▶ As a result, countries with more severe crises evolve to have larger banks.

Comments on “Social Media as a Bank Run Catalyst,” by J.A. Cookson, C. Fox, J. Gil-Bazo, J. Imbet, and C. Schiller

- ▶ This paper obtains Tweets (Ts) and constructs a measure of balance sheet risks (BSRs) on banks to show that following the March 9, 2023 run on SVB bank:
 1. Banks with more BSR had lower stock returns, especially banks with more prior Ts.
 2. Banks with more BSR had lower hourly stock returns if they had more Ts hours earlier.
 3. Negative sentiment Ts of a bank, especially from the ‘startup community,’ preceded its stock price decline by minutes.
 4. Banks with more MTM losses had greater 2023Q1 uninsured deposit outflows, especially if they had more prior Ts.
- ▶ These results are consistent with the quick transmission of information about banks that were followed by social media.

Social Media as a Bank Run Catalyst (continued)

- ▶ The paper's measure of BSR might be improved by using better available data and construction.
- ▶ The paper follows Jiang et al. (2023) by estimating

$$\text{BSR} = \% \text{ Assets Loss MTM} \times \% \text{ Uninsured}$$

- ▶ % Assets Loss MTM uses 2022Q1 Call Report data and Treasury returns to impute 2023Q1 asset values.
 - ▶ It ignores portfolio adjustments and growth since 2022Q1.
 - ▶ Jiang et al. (2023) may have used it since it could be calculated for all 4,800 US banks in their sample.
- ▶ Yet 10K, 10Q, and 8K data on security and loan fair values for the current paper's publicly-traded banks
 - ▶ permit more accurate MTM asset values for 2022 Q3 or Q4.
 - ▶ was public before the SVB run and cited by Raging Capital Ventures' 1/18/23 Ts showing SVB's MTM losses > equity.

Social Media as a Bank Run Catalyst (continued)

- ▶ The paper's construction of BSR does not account for
 - ▶ the level of a bank's equity capital.
 - ▶ senior, subordinated, or short-term non-deposit liabilities.
- ▶ An alternative derived from run incentives might be

$$\text{BSR} = \underbrace{\frac{\text{Unrealized Losses}}{\text{Book Equity Capital}}}_{\text{Likelihood of Insolvency}} \times \underbrace{\frac{\text{UD+STB}}{\text{TD+STB+LTD+PS-FHLB}}}_{\text{UD Loss Given Insolvency}}$$

where UD = uninsured deposits, STB = short-term borrowing, TD = total deposits, LTD = long-term debt, PS = preferred stock, and FHLB = Federal Home Loan Bank advances.

Conclusions

- ▶ These are three interesting and important papers that I encourage all in the audience to read.

- ▶ They introduce data and provide insights that can lead to additional fruitful research.