

# RESEARCH SPOTLIGHT

BY NATHAN ROBINO

## Bank Runs and Reactions

**Marco Cipriani, Thomas M. Eisenbach, and Anna Kovner.** “Tracing Bank Runs in Real Time.” Federal Reserve Bank of Richmond Working Paper No. 24-10, Revised September 2024.

**S**ilicon Valley Bank (SVB) and Signature Bank failed in March 2023, two of the largest bank failures since the Great Recession. Using intraday Fed payments data, Richmond Fed Research Director Anna Kovner and her co-authors Marco Cipriani and Thomas Eisenbach of the New York Fed identified 22 banks that experienced a run around the same period, over 10 times the number of banks that failed. Furthermore, the researchers also studied the balance sheet characteristics of banks that experienced runs, tracked the dispersion of deposits flowing out of the run banks, and examined actions of run banks to avoid failure.

The authors defined run banks as “banks with unusually large net payment outflows” in interbank wholesale payments, which transact over the Fed’s payment system known as Fedwire. In the fourth quarter of 2022, Fedwire transfers accounted for an average of over \$4 trillion per day via more than 750,000 transactions. Even in the absence of a bank run, there is substantial volatility in the number and value of payments made by a bank on a given day. The authors found that after accounting for this variation, 22 banks experienced a significant increase in net outflows on either Friday, March 10 (the day of SVB’s failure) or the following Monday, March 13 (the day of Signature Bank’s failure).

On the day of SVB’s failure, the median run bank sent out payments worth over 4 percent of its assets on Fedwire, compared to the daily average of 1 percent. Yet the number

of payments made stayed relatively constant, implying that the runs were driven by a small number of large depositors. The researchers also analyzed the outflows based on the size of the receiving bank, finding that on Friday, March 10, payments by run banks went predominantly to the very largest banks, with payments sent to those banks increasing more than sixfold, whereas the increase in payments on the following Monday was more evenly spread across the sizes of receiving banks.

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As run banks face withdrawals, how do they avoid failure? In general, banks either allow their cash balance to drop or regain liquidity during a run in two ways: by selling securities or loans in exchange for cash or by borrowing from the Fed or the Federal Home Loan Banks (FHLBs). By using weekly balance sheet data, the researchers found that over the weekend of March 10-13, run banks increased their borrowing from FHLBs and the Fed rather than selling assets. Banks seemed to prefer borrowing from FHLBs: Nearly all the run banks borrowed from FHLBs, whereas the median run bank did not use the Fed’s discount window at all. Those that used the discount window borrowed much more heavily, however. At the 90th percentile of total borrowing, run banks borrowed 33.6 percent of assets from the discount window, compared to only 10.5 percent from FHLBs. Thus, FHLBs acted as a “lender of next-to-last resort,” and the Fed as a

true last resort. (See “Central Bank Lending Lessons from the 2023 Bank Crisis,” *Econ Focus*, Third Quarter 2024.)

By looking at the observable characteristics of banks that were run, Kovner and her co-authors estimated that banks that were run had “worse fundamentals” on average — that is, their portfolios exposed depositors to more risk. They found that an increase in the share of deposits not insured by the Federal Deposit Insurance Corporation, and a higher concentration of these deposits among a few large depositors, significantly increases the probability of experiencing a run. Further, banks whose assets totaled less than \$250 billion were much more likely to be run, consistent with government regulations for banks that are “too big to fail,” and the banks that were run were also disproportionately publicly traded on the stock market.

To further understand the relationship between stock prices and depositor behavior, the authors explored how stock prices influence runs. They found that there was a significant relationship between banks with a negative stock return and suffering net outflows during this time, particularly on Friday, March 10.

Using rich intraday financial data, Kovner, Cipriani, and Eisenbach provided detailed evidence of the scope and dynamics of the March 2023 bank run. They suggested that while there remains unexplained variation, the main predictors of a run were balance sheet size, the share of deposits that were uninsured, and whether a bank was publicly traded. Moreover, banks that were run avoided failure via borrowing more assets to offset their losses in cash deposits. Additionally, the signals present in the stock prices of publicly traded banks create additional risk of a bank run. **EF**