Flight to Safety in the Regional Bank Stress of 2023*

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December 19, 2024

Abstract

Using confidential data on deposits at U.S. banks, we document a flight to safety by depositors to large banks in early 2023. In weeks of heightened stress, large banks experienced faster deposit growth than small and regional banks without raising deposit rates. Large banks' deposit growth rates exceeded other banks' even after accounting for characteristics associated with failures, including uninsured deposit funding and unrealized mark-to-market losses. Monthly data show that uninsured deposits rose faster at GSIBs relative to large non-GSIBs, but insured deposits grew slower. While retail and small business depositors also flew to safety, nonfinancial corporations reacted more strongly.

JEL Codes: G21, G28

Keywords: Bank deposits, bank runs, bank failures, interest rates, flight to safety.

* The views expressed in this paper are those of the authors and do not necessarily represent those of the Federal Reserve Board or the Federal Reserve System. The authors thank their conference discussants Tobias Berg, Christoph Bertsch, Kristle Cortés, Dalida Kadyrzhanova, and Matthew Naylor, as well as Viral Acharya, Mark Carlson, Nicola Cetorelli, Itay Goldstein, Jake Gramlich, Stephen Karolyi, Scott Konzem, Isaac Pan, Philipp Schnabl, Mandeep Singh, Olivier Wang, and seminar participants at the Bank of Italy, Beachside Banking Chats, Federal Reserve Board, Insper, International Monetary Fund, New York University, Office of the Comptroller of the Currency, 2023 Wharton-Harvard Insolvency Research Conference, 2023 Stress Testing Research Conference, 2023 Biennial Conference on Financial Stability of the Banco de México, 2023 Annual Autumn Conference of the Deutsche Bundesbank, 2023 Elsevier Finance Conference, 2024 Annual Conference of the Banco Central to Brasil, 2024 Lubrafin, 2024 Annual Meeting of the Central Bank Research Association, 2024 ANU/FIRN Banking and Financial Stability Meeting, and 2024 WISER Conference for helpful comments. Aaron Garner, Nick Hansen, Stefan Kassem, and Marco Taylhardat provided excellent research assistance.

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Introduction

In March 2023, the banking sector came under stress. Banks had accumulated large unrealized losses on their loan and security portfolios as a result of the rapid U.S. monetary tightening that began about a year earlier. While unrealized losses need not present a risk to bank solvency—as long as assets perform and banks hold them to maturity—the failure of SVB demonstrated that deposit withdrawals that force a bank to sell assets and realize losses could indeed trigger failure. By June 2023, four regional banks experienced depositor runs at record speed and failed (Federal Reserve, 2023). Three of the resulting bank failures—Silicon Valley Bank (SVB), Signature Bank, and First Republic Bank—were among the four largest in U.S. history. These runs lowered confidence on other banks: the KBW Bank Index fell by a quarter for the month, even as the S&P 500 rose.

Because of their advantage in hedging liquidity risk, banks typically serve as liquidity providers during periods of stress, receiving deposit inflows and providing funds to borrowers (Gatev and Strahan, 2006; Li, Strahan, and Zhang, 2020). This pattern can break down, however, in severe crises or when the banking sector itself is the source of stress (Acharya and Mora, 2015). These episodes can also trigger reallocations of deposits from banks perceived as riskier to those perceived as safer. While the banking literature documents numerous instances of flights to safety during panics or runs, which banks are considered safer depends on the economic context because perceptions of safety depend on bank condition and expectations of government support. (Mitchener and Richardson, 2019; Richardson and Van Horn, 2018; Baubeau *et al.*, 2021; Acharya *et al.*, 2022). The banking stress of 2023 is the first since the post-Global Financial Crisis (GFC) banking reforms, which strengthened capital and liquidity requirements, and may have changed depositors' views of bank resilience. Therefore, it is important to understand which banks were considered safer during the recent stress and why.

Understanding shifts in deposits during runs or panics is challenging for several reasons. First, bank runs are rare events. Second, data frequency must be high enough to separate the impact of a run from the impact of confounding events, such as interventions to stop the run and banks' efforts to replace lost deposit funding (Martin *et al.*, 2024). Third, it requires a sample of banks comprehensive and heterogeneous enough to account for variation in deposits across bank types.

Fourth, data on deposit amounts must distinguish between types of deposits and depositors that behave differently during runs.

In this paper, we use confidential weekly and monthly data on the balance sheets of U.S. banks to study movements in deposits across banks after the onset of stress in March 2023. Our weekly data—the FR 2644 data—cover a large and representative sample of banks, which comprises 80 percent of the total assets of U.S. banks, and includes banks of all size categories (small, with up to $100 billion of total assets; regional, between $100 billion and $250 billion; and large, with $250 billion or more). Observing bank-level deposits at a high frequency allows us to associate key market events to changes in deposits. Our monthly supervisory data—the FR 2052a data—include all banks with $100 billion or more of total assets and distinguishes deposit amounts by depositor type (for example, retail, small business, and nonfinancial corporations) and deposit status (insured and uninsured). Finally, we supplement these data with deposit rate data from RateWatch.

Figure 1 shows that in March 2023 differences in deposit growth rates across bank types reached unprecedented highs since at least mid-2009. The vertical axis measures the difference between weekly growth rates of deposits of large banks and regional banks over time normalized by the value of this difference in the week ended on July 8, 2009, when the series starts.[3] In the week ending on March 15, 2023, the growth rate of deposits at large banks exceeded the growth rate at regional banks by the widest margin on record.

While Figure 1 shows there was a sizeable shift in deposits towards large banks, it does not establish why. The flight to safety hypothesis has three testable implications. First, large banks' deposit growth rates should jump relative to other banks' during periods of heightened stress and return to pre-crisis levels once the stress recedes. Second, deposit interest rates at large banks should not rise relative to other banks during periods of heightened stress. Third, uninsured deposits should move to banks perceived as safer, whereas insured deposits should not respond to stress. We test the first two hypotheses with weekly data, and we test the third hypothesis with monthly data, which separate deposits by whether they are insured.

[3] Data on weekly deposits begin July 1, 2009, so the first observation of a weekly growth rate is the following week.

In weeks when banks failed in March and May 2023, deposits at large banks grew at a rate roughly 3 and 2 percentage points higher than at small banks (compared to mean weekly deposit growth of -0.07 percent), respectively. Using data on deposit interest rates from RateWatch, we find no evidence that large banks offered higher deposit rates in weeks of heightened stress. We examine both changes in rates and levels of rates, at the bank level and the branch level, the latter of which allows us to include county fixed effects to control for local market competition. These results about deposit growth rates and deposit rates support the hypothesis of a flight to safety in early 2023 and differ sharply from the findings in Acharya and Mora (2015), who note that even the largest banks suffered deposit funding pressures during the GFC.

We use our monthly data to test the third hypothesis, which involves comparing the behavior of uninsured deposits and insured deposits. The monthly data are only available for banks with at least $100 billion of total assets. Therefore, we compare GSIBs to non-GSIBs in these data because GSIBs might be perceived as safer. In March 2023, the growth rate of total deposits was about the same for GSIBs and non-GSIBs. However, consistent with the flight to safety hypothesis, uninsured deposits rose at GSIBs compared with non-GSIBs, while insured deposits decreased at GSIBs relative to non-GSIBs. The rise in uninsured deposits at GSIBs relative to non-GSIBs persisted at least until June, despite immediate and wide-ranging regulatory interventions. These changes in deposits were mainly driven by nonfinancial corporations.

Were large banks perceived as safer by depositors during the banking stress of 2023 because their fundamentals are stronger, because large banks are subject to stricter supervision and regulation, or because they are too-big-to-fail? We test whether bank characteristics associated with failures during this period—reliance on uninsured deposit funding (the ratio of uninsured deposits to total deposits) and unrealized losses on balance sheets (tangible common equity ratio adjusted for unrealized security losses)—can fully account for faster deposit growth at large banks during weeks of heightened stress. We find that estimates of deposit growth rates at large banks remain higher even if we control for these characteristics, implying that fundamentals alone do not justify a perception that these banks are safer, and indicating that stricter supervision and regulation and too-big-to-fail beliefs contributed to that perception.

Our paper contributes to the literature on bank runs and panics, and it is most closely related to papers about flights to safety by depositors during these events.[4] Acharya and Mora (2015) document that the flight to safety to bank deposits typically seen in past crises was absent early in the GFC, and that banks only recovered their central role as liquidity intermediaries after the government introduced support measures to the banking system. Oliveira *et al.* (2015) provide evidence that perceptions of too-big-to-fail policies, rather than bank fundamentals, explain why systemically important Brazilian banks received an inflow of deposits relative to other banks amid the GFC. Baubeau *et al.* (2021) show that deposits moved from banks to savings institutions and the central bank during the Great Depression in France. Acharya *et al.* (2022) study a bank run in India in which deposits moved from private banks towards public sector state-owned banks. We contribute to this literature with evidence of a flight to safety from small and regional banks to large banks.

Our work builds on research on bank runs that exploits data collected at a frequency high enough to separate different stages of a bank run. Iyer and Puri (2012) and Iyer, Puri and Ryan (2016) use daily depositor-level data to study heterogeneity in depositor behavior in banks runs in India. They show that uninsured depositors are more likely to run than insured depositors, which is consistent with our evidence that banks with higher shares of uninsured deposits experienced stronger outflows during stress than other banks.

Our paper also contributes in several ways to the literature on the regional bank stress of 2023. First, we are the first to analyze the scale and scope of the events with weekly bank-level data on deposits from a large, representative sample of banks. We show that the deposit reallocation from regional banks to large banks in March 2023 was unprecedented since at least mid-2009. Second, the recent literature has mostly focused on the drivers of the 2023 deposit runs including shares of uninsured deposits and drops in the market value of assets driven by rising interest rates (Drechsler *et al.*, 2023; Flannery and Sorescu, 2023; Jiang *et al.*, 2023), communication via social media

[4] The theoretical literature distinguishes between two types of runs. Fundamentals-based runs occur when depositors withdraw because of bad news about a bank's fundamentals (Chari and Jagannathan,1988; Jacklin and Bhattacharya,1988; Allen and Gale, 1998). Panic-based runs occur when depositors withdraw because they believe others will withdraw. Beliefs can be self-fulfilling because banks' liquidity transformation creates strategic complementarity among depositors (Diamond and Dybvig,1983). An association between run occurrence and fundamentals does not rule out panic-based behavior (Goldstein and Pauzner, 1999; Morris and Shin, 2000; Chen *et al.*, 2024).

(Cookson *et al.*, 2023), mobile banking availability (Koont *et al.*, 2023), branch density (Benmelech *et al.*, 2023), synergies between uninsured deposit taking and business lending (Chang *et al.*, 2023), and depositor types and coordination (Cipriani *et al.*, 2024). We contribute to this literature by documenting that large banks were beneficiaries of the deposit reallocation that occurred after the onset of stress in early 2023. Furthermore, we provide evidence consistent with deposit reallocations to large banks being driven by perceptions of safety. We show that large banks' faster deposit growth cannot be explained by offered deposit rates or key fundamentals, and the divergence that we document between uninsured and insured deposit flows strongly suggests that perceptions of bank safety were relevant. Third, our paper presents new findings on the roles of different types of depositors during this episode. Our results are consistent with other papers that find larger depositors played an important role, but we also document a sizeable response by retail and small business depositors.[5]

Our paper is organized as follows. Section 1 summarizes the main events of the regional bank stress of 2023, Section 2 describes the data, and Section 3 presents our empirical strategy. Section 4 shows our results on deposit growth rates and on deposit rates. Section 5 concludes.

1. The Regional Bank Stress of 2023

In March 2023, three banks closed, and federal regulators took important actions that likely affected bank deposits over a short period of time. Figure 2 summarizes these events. March 8 is generally considered the start of the regional bank stress of 2023 (Federal Reserve Board (FRB), 2023). After markets closed on that day, Silvergate Bank announced that it would close its operations and liquidate (Silvergate Bank, 2023). Also, SVB disclosed it had sold $21 billion from its available-for-sale (AFS) securities portfolio at an after-tax loss of $1.8 billion and proposed a plan to raise $2.25 billion in capital amid increasing withdrawal requests (SVB, 2023). On March 10, SVB failed after a bank run by its uninsured depositors, becoming the second-largest bank failure in United States history and the largest since the 2007–2008 financial crisis. On March 12,

[5] Papers show that banks more exposed to social media from the startup community suffered larger drops in stock prices during the March 2023 runs (Cookson *et al.*, 2023), that corporations and other sophisticated businesses, such as tech firms and startups, had likely withdrawn deposits from troubled banks at a faster pace than other depositors (Benmelech *et al.*, 2023; Chang *et al.*, 2023; Cipriani et al., 2024). See also Carletti *et al.* (2024) and Cooperman *et al.* (2024) for evidence from other episodes of financial stress in which corporate depositors behaved differently from other types of depositors.

Signature Bank was closed by the New York State Department of Financial Services. On the same day, Federal regulators announced they would use a systemic risk exception for SVB and Signature Bank, which allowed them to take emergency measures, including guaranteeing all the deposits at SVB beyond the Federal Deposit Insurance Corporation (FDIC) insurance limit (FDIC, FRB, and U.S. Department of the Treasury; 2023). The Federal Reserve also announced a new lending facility for banks, the Bank Term Funding Program (FRB, 2023).

On March 16, the biggest banks in the U.S. joined an effort to rescue First Republic Bank, which had suffered a large drop in its stocks price and a credit rating downgrade from S&P over the past couple of days, by depositing a total of $30 billion.[6] On March 22, the Federal Open Market Committee announced it would raise the target range for the federal funds rate by 25 basis points. Deposit outflows continued in April and May. On May 1st, regulators seized First Republic Bank and immediately sold all its deposits and most of its assets to JPMorgan Chase Bank.

Public accounts of the crisis indicate that massive deposit losses largely contributed to the failure of those regional banks (Barr, 2023; Gruenberg, 2023; Liang, 2023). On March 9, the day before it failed, SVB had lost $42 billion in deposits. Signature Bank lost 20 percent of its deposits on March 10, two days before it failed. First Republic's final quarterly report in the first quarter of 2023 indicates that it lost about $100 billion in deposits during the March stress (First Republic Bank, 2023).

2. Data

Our empirical analysis mainly relies on two confidential data on deposits collected by the Federal Reserve: the weekly data from reporting form FR 2644, "Weekly Report of Selected Assets and Liabilities of Domestically Chartered Commercial Banks and U.S. Branches and Agencies of Foreign Banks," and the monthly data from reporting form FR 2052a, "Complex Institution Liquidity Monitoring Report."

2.1 Weekly Data

[6] Bank of America, Citigroup, JPMorgan Chase, and Wells Fargo deposited $5 billion each into First Republic, Goldman Sachs and Morgan Stanley deposited $2.5 billion each, and Bank of New York Mellon, PNC, State Street, Truist, and U.S. Bancorp deposited $1 billion each (Wall Street Journal, 2023).

The FR 2644 data are collected through a confidential survey from a stratified random sample of depository institutions. The collection imposes confidential treatment of any information that identifies individual institutions. Data are reported weekly, as of the close of business each Wednesday, contain selected assets and liabilities from commercial banks, and are balanced across ownership types and bank sizes. As noted earlier, reporters comprise 80 percent of aggregate U.S. bank assets. The data begin July 1, 2009, when the FRB combined three weekly reports into a single reporting form and continues through the present. (Konzem *et al.*, 2021). While the microdata are confidential, aggregate data are published in the weekly "Assets and Liabilities of Commercial Banks in the United States" (H.8) statistical release from the FRB.[7]

We restrict our sample of banks based on their characteristics. We limit it to U.S. banks because branches and agencies of foreign banks are subject to a different regulatory framework. We also restrict the sample to commercial banks because other regulatory data we use are available only for these institutions. The unit of observation in our panel data is a banking organization (banks, henceforth). Commercial banks that are not affiliated to bank holding companies (BHCs) that file the FR Y-9C enter the data as independent observations.[8] For commercial banks under a BHC that files a FR Y-9C form, we aggregate the FR 2644 data to the BHC level. We drop from the sample BHCs in which the total assets of the commercial banks that file the FR 2644 data amount to less than 5 percent of the BHC's total assets. We remove these observations because commercial banks that are small relative to their BHCs may report changes in their deposit amounts that do not represent adequately the changes experienced at the BHC level. We also adjust for the effects of mergers by dropping observations in any weeks in which a bank acquired another institution based on the Federal Financial Institutions Examination Council (FFIEC)'s National Information Center (NIC) data.

Figure 3 shows the distribution of deposit growth rates for the week from March 8 to March 15, relative to its distribution for the preceding weeks of the calendar year. Compared to weeks earlier in the year, the distribution of deposit growth for the week ending March 15th shifted to the left

[7] https://www.federalreserve.gov/releases/h8/current/default.htm.
[8] BHCs with total consolidated assets of $3 billion or more must file the FR Y-9C. In addition, BHCs meeting certain criteria may be required to file this report, regardless of size.

and exhibited increased mass in the tails. Deposit growth rates are winsorized at the 1st and 99th percentiles.

In addition to the microdata on deposits, we use data from RateWatch to construct series of deposit rates. RateWatch collects deposit rates of new deposit accounts for a range of standardized products at the branch-level. For our analysis, we use the rates on the 12-month certificates of deposit with an account size of $10,000 and the rates on money market deposit accounts with an account size of $10,000. The raw data are indexed by survey date. We use these dates to collapse the data to a weekly Wednesday branch panel that matches the frequency and reporting dates of the FR 2644 data. If a branch reports rates more than once in a weekly period, we take the average of those rates. For the bank level analysis, we compute the bank rate in each week as the median rate across a banks' branches. In our bank level analysis, we limit the sample to banks with at least 50 percent of deposits reporting to ensure representativeness of the median rate.

We use quarterly regulatory data from Call Reports (commercial banks) and FR Y-9C forms (BHCs, when applicable) to measure bank financial condition. We also employ this data to examine post run outcomes as it offers more detailed data on deposit composition and lending. Our analysis of run period deposit growth focuses on two metrics that reportedly played a role in the 2023 bank failures: uninsured deposit funding and unrealized losses on security holdings. The uninsured deposit ratio is calculated as the ratio of uninsured deposits to total deposits. The adjusted tangible common equity (TCE) ratio is the ratio of TCE to tangible assets adjusted for unrealized gains and losses on securities. Unrealized gains and losses are calculated as difference between fair values and book values of AFS and held-to-maturity (HTM) securities from the 2022Q4 regulatory reports. The adjusted TCE ratio assumes unrealized AFS and HTM securities losses are realized and flow-through to TCE capital after being taxed at a 21 percent rate while tangible assets are held flat.[9]

We use the FDIC Summary of Deposits to calculate deposit market concentration (Herfindahl-Hirschmann Index (HHI) of deposits) at the branch (county) level and bank level. The bank level

[9] For banks that have opted-out of including unrealized AFS losses within capital, their capital is hit by realization of unrealized losses on both AFS and HTM securities. For banks that already include unrealized AFS losses within capital either due to regulatory requirements or an election to opt in, their capital is hit by realization of unrealized losses on just HTM securities since the AFS is already reflected.

HHI is calculated as the weighted average of county HHI across a bank's branch locations, using branch deposits as the weights. HHI by week controls for variation in deposit growth that could be driven by differential exercise of market power around changes in the federal funds rate (Drechsler, Savov, and Schnabl, 2017).

We separate banks into three size categories: small (banks with total assets below $100 billion), regional (banks with total assets between $100 billion and $250 billion), and large (banks with $250 billion or more of total assets). The number of banks in our sample per week during this period varies between 669 and 679. Table 1 summarizes these data.

The mean of the weekly deposit growth rate is negative, equal to -0.068 percent, which is expected given that bank deposits tend to decline during monetary tightening cycles. The mean interest rates on certificates of deposits and money market accounts are equal to 1.37 percent and 0.38 percent, respectively. These rates are near their highest levels of the past 15 years, consistent with the fact that in May 2023 the target range of the federal funds rate reached its maximum for the same period.

2.2 Monthly Data

The other supervisory dataset we use for our analysis comes from the Complex Institution Liquidity Monitoring Report (FR 2052a), which is collected at the BHC level. The report was introduced in December 2015 to allow U.S. regulators to assess the liquidity position of financial institutions and monitor their compliance with liquidity requirements. In particular, regulators use these data to calculate banks' liquidity coverage ratios. To our best knowledge, this is the first paper to use FR 2052a deposits data.

Banks with $100 billion or more of total consolidated assets, including the eight U.S. GSIBs, must report these data monthly as of the last business day of the month. We restrict our sample to U.S. banks because foreign banks are subject to a different regulatory framework. We use data from October 2022 to June 2023. Table A2 lists the banks in this sample. Based on the asset thresholds we use to separate banks in the weekly data into small, regional, and large banks, all banks in this monthly panel would be classified either as regional or large banks.

We use data on the dollar amounts of insured and uninsured deposits of the reporting entities.[10] The data are also separated by depositor (or counterparty) type, and we aggregate depositor types into three categories: retail (or individuals) and small businesses, nonfinancial corporations, and other, which includes financial institutions and government. We calculate growth rates with the dollar amounts data, and we winsorize growth rates at the 1st and 99th percentiles. Table 2 summarizes these data.

3. Empirical Strategy

Using the weekly data to test the flight to safety hypothesis, we estimate regressions of the following general form:

$$Y_{it} = \beta_t(X_i \times D_t) + \varphi_i + \psi_t + \epsilon_{it}, \quad (1)$$

where i and t index bank and week. Y_{it} denotes either the weekly growth rate of deposits (estimated as the log change in deposits) or deposit rates (in levels or changes). D_t is an indicator variable for each week t. β_t,…, and β_T are vectors of coefficients to be estimated. φ_i and ψ_t are bank and week fixed effects, and ϵ_{it} is an idiosyncratic error. X_i is a vector of bank characteristics from the latest quarter-end regulatory reports (Call Reports or FR Y-9C) available at the time the turmoil began in March 2023, that is, from the fourth quarter of 2022. X_i contains bank characteristics that may explain differences in deposit growth rates across banks and over the weeks around the bank run, and for this reason we allow their effect to vary by week by interacting them with week dummy variables. These characteristics include dummy variable indicators for bank size categories (large banks and regional banks, leaving small banks as the excluded category) as well as the uninsured deposit ratio, the adjusted TCE ratio, and deposit market concentration. Bank fixed effects remove bank-level heterogeneity and absorb the coefficients of X_i, which varies only by bank (not by time). Week fixed effects remove unobserved heterogeneity related to time including, for example, seasonality and changes in the federal funds rate. We cluster standard errors by bank throughout the paper.

[10] Dollar amounts of deposits are separated by insurance type (uninsured, FDIC insured, and insured by other agencies). We restrict the data to uninsured and FDIC insured deposits (insured deposits henceforth).

Because deposit rates are available at a more disaggregated level (branch level) than the FR 2644 data (bank level), we analyze rates at both the bank and branch levels. Branch level specifications allow us to include county fixed effects, which remove heterogeneity related to local deposit market conditions. We also replace the bank-level HHI with a county-level measure in these specifications.

The first testable implication of the flight to safety hypothesis is that large banks' deposit growth rates should jump relative to other banks' during periods of heightened stress, and these rates should return to pre-crisis levels once the stress recedes. In estimates of equation (1) using deposit growth as the dependent variable, where $\beta_{Large,t}$ is the coefficient of the Large indicator in X_i in week t, the prediction is that $\beta_{Large,t} > 0$ if t is a week of heightened stress.

The second testable implication of the flight to safety hypothesis is that, if shifts in deposit amounts are driven by a flight to safety, then deposit rates should not cause any spikes in large banks' deposit growth rates relative to other banks' during weeks of heightened stress. Therefore, we test whether large banks raised deposit rates relative to other banks during these weeks. Evidence that large banks increased rates in these weeks would indicate that rising rates drove the shift in deposits towards large banks, whereas lack of such evidence would suggest that such shift was a flight to safety. In estimates of equation (1) using deposit interest rates as the dependent variable, the prediction is that $\beta_{\mathrm{Large,t}} \leq 0$ if t is a week of heightened stress.

We consider the weeks ending in March 15 and May 3 weeks of heightened stress in our sample period. During these two weeks, the three largest bank failures of 2023 regional bank stress occurred (see Figure 2). Also, as Figure 4 shows, regional bank stock prices, measured by the KBW Nasdaq Regional Bank Index, suffered their largest Wednesday-to-Wednesday declines in our sample period during these two weeks, with the 15.21 percent decline for the week ending March 15 being notably larger than the 5.82 percent decline for the week ending May 3.

We use the monthly data, which separate deposit amounts by insurance status and depositor type, and estimate the regression equations of the form:

$$Y_{ist} = \beta_t(GSIB_i \times U_s \times D_t) + \omega_{it} + \xi_{is} + \chi_{st} + \epsilon_{ist}, \quad (2)$$

where Y_{ist} is the monthly log change in deposits with insurance status s for bank i in week t. Insurance status s is either insured or uninsured. $GSIB_i$ is an indicator equal to 1 if the bank is a GSIB, and 0 otherwise. U_s is an indicator equal to 1 for uninsured deposits, and 0 for insured. D_t is an indicator that takes the value of 1 in month t, and 0 otherwise. The coefficient is omitted for February 2023, which serves as the reference month, and for insured deposits and non-GSIBs, the reference deposit insurance status and bank type. ω_{it} is a bank-month fixed effect, ξ_{is} a bank-insurance status fixed effect, χ_{st} an insurance status-month fixed effect, and ϵ_{ist} an idiosyncratic error. We estimate this equation for all depositor types together and separately.

We modify our first hypothesis to test it with the monthly data. With the monthly data, we now test whether β_t from equation (2) was higher in a month of heightened stress. More specifically, β_t measures the difference deposit growth rates between GSIBs, all of which have assets above $250 billion, and other banks with assets above $100 billion. We view the distinction between GSIBs and non-GSIBs as a more precise indicator of which banks could be viewed as safer by depositors in an episode of stress.[11] In addition, this coefficient can now account for differences in growth rates between insured and uninsured deposits because the monthly data separates deposits based on their insurance status, whereas the weekly data do not.

4. Results

4.1 Weekly Deposit Growth Rates

The analysis in this subsection uses weekly data for the weeks ending January 4, 2023, through May 3, 2023. Table 3 presents estimates of equation (1) with deposit growth as the dependent variable. We add controls gradually in columns 1 to 4. Column 1 is a parsimonious specification with only bank size class by week dummies plus bank fixed effects and time fixed effects. Column 2 adds controls for HHI plus its interaction term with a week indicator (HHI by week), column 3 adds controls for uninsured deposit ratio plus its interaction with week, and column 4 adds controls for adjusted TCE ratio plus its interaction with week.

[11] We do not separate banks into GSIBs and non-GSIBs in the weekly data to preserve anonymity of participants of the FR 2644 panel.

Consistent with the first testable prediction for flight to safety, the results show that large banks experienced large deposit inflows relative to small banks (the omitted category) during weeks of heightened stress. The estimates in Table 3 indicate that deposits rose faster at large banks by about 3 percentage points and 2 percentage points in the weeks ending March 15 and May 3, respectively. These rates are economically meaningful compared to the average deposit growth rate of -0.068 percent for the period. Figure 5 (left panel) plots the *Large* x week coefficient estimates over time. The March 15 and May 3 weeks have large point estimates compared to other weeks, and the March 15 estimate is about 50 percent larger than any other week.

While we cannot observe interbank flows of deposits, the estimates of differences in deposit growth rates across bank types are consistent with deposits flowing from small and regional banks towards large banks. Deposits rose at large banks and declined at small and regional banks, indicating that deposits shifted towards large banks. Overall, these results support the first prediction.

Depositors may believe that large banks are safer for three reasons, namely (i) because their fundamentals are stronger, (ii) because stricter supervision and regulation, such as resolution panning requirements, increase the likelihood that large banks repay their deposits relative to smaller banks with the same fundamentals, or (iii) because they are too-big-to-fail, implying that deposits on these banks will be made whole if they require government support.

In columns 3 and 4 of Table 3, we evaluate the first reason. We examine the role of fundamentals by introducing controls for bank characteristics associated with bank failures over the period, specifically the uninsured deposit ratio and the adjusted TCE ratio. The coefficients on *15mar2023 × Large* and *03may2023 × Large* remain positive and statistically significant and remain similar in magnitude to those in columns 1 and 2. This comparison rules out the possibility that large banks had stronger fundamentals than other banks, and that these superior fundamentals would induce faster deposit growth at large banks.

The results in columns 3 and 4 also reveal the extent to which banks' reliance on uninsured deposits and exposure to unrealized losses on securities explain deposit growth during this period. As shown by the coefficients on *Uninsured ratio* x week, greater reliance on uninsured deposits was a determinant of deposit growth in the March episode, but not the May episode. A one-standard deviation (0.171) increase in the uninsured ratio was associated with deposit growth that was

slower by 0.36 percentage points (0.171*2.115) in the week of March 15 and 0.48 percentage points (0.171*2.787) in the week of March 22, compared to reference week March 8.

Figure 6 plots the time series of the coefficients on *Uninsured ratio* x week, showing that, even though the coefficients of *Uninsured ratio* x week are negative and statistically significant in a couple weeks prior to the onset of the stress, the magnitudes in mid-March are about 30 percent larger than in any pre-crisis week. In Appendix Table A3, we drop from the sample banks that stopped reporting the FR 2644 during the period. Banks stop reporting for various reasons including acquisition, closure, and failure. The results in column 1 of Table A3 show that, even among banks that survived the period, uninsured deposit funding still had a negative effect on deposit growth in mid-March, on average.

Column 4 of Table 3 adds interaction terms *Adj. TCE ratio* x week to the specification in column 3. We would expect the coefficient of *Adj. TCE ratio* x week to be positive and statistically significant in stress weeks if depositors began to pay more attention to liquidation values because the adjusted TCE ratio reflects unrealized security losses. However, the estimates in column 4 show that greater exposure to unrealized security losses does not have much predictive power for deposit growth in weeks of heightened stress.

4.2 Deposit Rates

The results in the previous subsection show that, during weeks of heightened stress, deposits flew to large banks. The evidence from Table 3 also eliminates the possibility that large banks received more deposits because they had stronger fundamentals than small banks. We next examine whether differences in deposit interest rates, as opposed to perceptions about bank risk, can explain the faster growth of deposits at large banks. Finding that large banks raised deposit rates relative to other banks in the weeks when they experienced faster growth would be consistent with increased (relative) competition for deposits by large banks rather than a flight to safety.

Table 4 reports our results using weekly deposit rates as the dependent variable in equation (1), whereas Table 5 uses changes in weekly deposit rates. In each table, in the first two columns the analysis is at the bank level, whereas in the last two columns the analysis is at the branch level. Odd columns use the time deposit rate (CD), whereas even columns use the savings deposit rate (MM). The branch level regressions allow us to include county fixed effects, which control for

heterogeneity related to local conditions. In the branch level regressions, we also substitute county HHI for bank HHI.[12]

There is little evidence that large banks competed more aggressively for deposits after the onset of stress. The coefficients on *Large* x week in Table 4 shows that, relative to small banks as of March 8 (the omitted period), large banks paid higher rates earlier in 2023 and lower rates beginning around mid-April and thereafter. Results are consistent across bank and the branch level panels. Figure 7 (left panels) plots the *Large* x week coefficients for the branch level regression. Starting in April, the coefficients are negative and significant, both for CD and MM accounts.

Table 5 examines weekly changes in deposit rates. There is only weak evidence that large banks raised deposit rates more than other banks in key crisis weeks. In the bank level analysis, the coefficient on *Large* x week is not statistically significant in those weeks. In the branch level analysis, the coefficient on *Large* x week is positive for the week ending March 15, but statistically significant only at the 10 percent level. This coefficient estimate suggests that large banks increased 12-month CD rates by 0.8 bps more in that week, relative to small banks and a mean weekly change of about 2 bps. In summary, we do not find any robust evidence that large banks competed more aggressively on rates during weeks of heightened stress. These results support our second testable hypothesis and, together with our earlier findings, we conclude that faster deposit growth at large banks in weeks of heightened stress should be interpreted as a flight to safety.[13]

4.3 Monthly Deposit Growth Rates

Table 6 reports the estimates of β_t in equation (2) using growth rates of total, insured, and uninsured deposits in columns 1 to 3, respectively, as the dependent variable. The -0.069 estimate in column 1 is small and not statistically significant, indicating that the growth rates of total deposits of GSIBs and non-GSIBs did not differ materially in March 2023. This estimate, however, masks the large and opposing differences in growth rates of insured and uninsured deposits in columns 2 and 3, where both coefficient estimates are statistically significant. The -3.013 estimate in column 2 indicates that insured deposits at GSIBs rose about 3 percentage points slower than at

[12] The coefficient on HHI is absorbed by the county fixed effect but the HHI by week coefficients are estimated.
[13] See Acharya and Rajan (2024) for a discussion about the reasons why safe banks do not raise interest rates amid flights to safety. As they observe, Acharya and Mora (2015) and Drechsler, Savov, and Schnabl (2017) contain results related to ours.

non-GSIBs, whereas the 3.661 estimate in column 3 indicates that uninsured deposits increased about 4 percentage points faster at GSIBs compared to non-GSIBs. These estimates are the lowest and the highest across all months in columns 2 and 3, respectively. Also, the coefficient estimates of the interaction terms in May indicate that total deposits rose faster at GSIBs in that month, and that uninsured deposits contributed to this shift.

These estimates support our hypothesis of a flight to safety in early 2023. Moreover, they highlight the importance of data that separate deposits by insurance status to understand the changes in deposit amount across banks during this stress episode. The positive difference in growth rates of uninsured deposits between GSIBs and non-GSIBs indicates that depositors attempted to protect their uninsured deposits by moving them from non-GSIBs to GSIBs. Meanwhile, the negative difference in growth rates of insured deposits in March suggests that depositors considered that their insured deposits were safe independently of the bank that held them, and that other factors, such as higher interest rates offered by non-GSIBs, may have driven the higher growth rate of deposits at non-GSIBs.

We next examine how deposit growth rates vary across depositor types. The results in Table 6 show that insured and uninsured deposits may grow at markedly different rates, indicating that it is important to account for these differences when we test hypotheses. In Table 7, we estimate equation (2), which includes fixed effects for each month and insurance status pair and each bank and insurance status pair. In the panel we use to estimate this equation, each observation is a bank-month-insurance status triplet.

Column 1 shows estimates for all depositor types together. The 5.921 coefficient estimate of the March 2023 interaction term in column 1 supports our third hypothesis that uninsured deposits rose at a faster pace than insured deposits during stress. This estimate is statistically significant, the highest in this column, and implies that the difference between the growth rates of uninsured and insured deposits in March 2023 was about 6 percentage points higher at GSIBs than at non-GSIBs relative to the reference month of February 2023. We find no statistically significant effect in May 2023, which could be consistent with the May event being smaller in magnitude, as evidenced by the bank stock price declines around each period. Meanwhile, the coefficient on the triple interaction term in April 2023 is negative and statistically significant indicating that there

was some reversal of flight to safety flows in April such that uninsured deposits grew about 1.5 percentage points more slowly at G-SIBs. This finding is consistent with actions taken by regulators and banks being somewhat effective in stemming deposit outflows relatively quickly.

Columns 2 through 4 examine heterogeneity by depositor type, splitting total deposits into subcategories including retail and small business (broadly referred to as "retail"), nonfinancial corporations, and other depositor types, respectively. In columns 2 and 3, the coefficients on the triple interaction terms in March 2023 are positive and statistically significant, indicating that both retail depositors and nonfinancial corporations flew to safety during this month. The relative magnitudes of the coefficients indicates that nonfinancial corporations reacted more strongly. In March 2023, for nonfinancial corporations, the differential growth rate of uninsured deposits at GSIBs was 28.8 percentage points higher than in February, whereas for retail depositors it was only 5.6 percentage points higher. These findings are consistent with assumptions made in liquidity regulation that corporate deposits are less stable than retail deposits. The coefficient on the triple interaction term in March in column 1, for all depositors, is close to the estimate in column 2, for retail depositors, because retail deposits amount to a large share of total deposits.[14]

Our findings that nonfinancial corporations moved a larger fraction of their uninsured deposits between banks than other depositors matches the views from policymakers (Barr, 2023a) and academics (Benmelech *et al.*, 2023; Chang *et al.*, 2023; Cipriani *et al.*, 2024; Cookson *et al.*, 2023) that a concentrated depositor base composed of corporations, venture capitalists, tech firms and startups, had likely withdrawn deposits from troubled banks at a faster pace than other depositors, contributing to the failure of those banks in the 2023 bank runs. Thus, our evidence based on deposits data adds to the evidence based on other types of data. Cookson *et al.* (2023) uses data on bank stock prices to show that banks more exposed to social media from the startup community suffered larger drops in share prices, whereas Cipriani *et al.* (2024) use data on interbank transfers to show that the dollar amounts per payment from banks that suffered runs exceeded those from other banks, consistent with runs being driven by large as opposed to retail depositors.

4.4 Persistence of the Deposit Reallocation

[14] The amount of deposits from nonfinancial corporations is equal to about one-third of the amount of deposits from retail and small businesses.

The prior subsections provided evidence of a flight to safety by depositors from small and regional banks to large banks and from large non-GSIBs to GSIBs during the bank stress of 2023. Using the monthly deposits data, we showed that insured deposits rose faster at non-GSIBs than at GSIBs, whereas uninsured deposits increased at a higher pace at GSIBs than at non-GSIBs. In this subsection, we examine whether these changes were persistent.

For this purpose, we now estimate equation (2) using the natural logarithm of the amount of deposits of bank i in month t as the dependent variable. Also, we extend the sample period to November 2022 through October 2023. We continue to exclude the interaction term for February 2023, which serves as the reference month.

Table 8 shows the coefficient estimates. To help with the comparison with Table 6, columns 1 to 3 in Table 8 use the amounts of total, insured, and uninsured deposits, respectively. In column 1, the coefficient estimates of the interaction terms from March 2023 on are not statistically significant at the 5-percent level, implying that differences in amounts of total deposits between GSIBs and non-GSIBs were about the same as in February 2023 for the rest of the year. Consistent with the increase in insured deposits at non-GSIBs relative to GSIBs in March 2023 that we documented in Table 6, the coefficient estimates in column 2 of Table 8 are negative for every month from March on, but they are statistically significant only in March. In column 3, the coefficients are positive from March on, and are statistically significant until June, indicating that the shift of uninsured deposits towards GSIBs lasted at least four months. The 0.147 coefficient of the interaction term in May—the highest in this column—implies that the difference in the amounts of uninsured deposits between GSIBs and non-GSIBs peaked in that month at a level 14.7 percent higher than the difference in the reference month (February). In summary, the difference between total deposit amounts at GSIBs and non-GSIBs remained about unchanged, but the uninsured deposits rose at GSIBs relative to non-GSIBs.

What are the implications of these findings? First, because large shares of uninsured deposits raise run risk, these results suggest that the probability of runs at GSIBs might increase relative to non-GSIBs amid a bank stress event. However, this effect would also depend on the capacity to bear risk of those banks and on the implicit and explicit guarantees available to them. Second, these findings imply that GSIBs' liquidity coverage ratios, which impose a higher penalty on uninsured deposits than on insured deposits, might fall compared to non-GSIBs'. Third, these shifts could

also affect bank profitability, but determining the direction of this effect would require more information on the rates that banks paid on different types of deposits.

5. Conclusion

This paper uses two confidential datasets on bank deposits to study deposit reallocations among banks after the onset of bank stress in early 2023. We provide evidence consistent with a flight to safety by depositors towards large banks. In weeks of heightened stress, deposits grew faster at large banks without large banks competing more aggressively for deposits by raising deposit rates. Furthermore, in March 2023, uninsured deposits grew faster at GSIBs than non-GSIBs, even while insured deposits grew slower. Together, this evidence supports the hypothesis that deposits flew to large banks because they are considered safer.

Depositors may believe large banks are safer for three possibly complementary reasons. First, these banks may be truly safer in terms of fundamentals. Second, they may be perceived safer because they are subject to stricter regulation and supervision. Third, they may be too-big-to-fail because of higher systemic importance, implying that deposits on these banks would more likely be made whole than those at other banks in the event of distress. While it is challenging to completely disentangle the three channels empirically, we show that bank characteristics associated with bank failures during the period—specifically, uninsured deposit funding and unrealized mark-to-market losses—do not explain the faster deposit growth at large banks.

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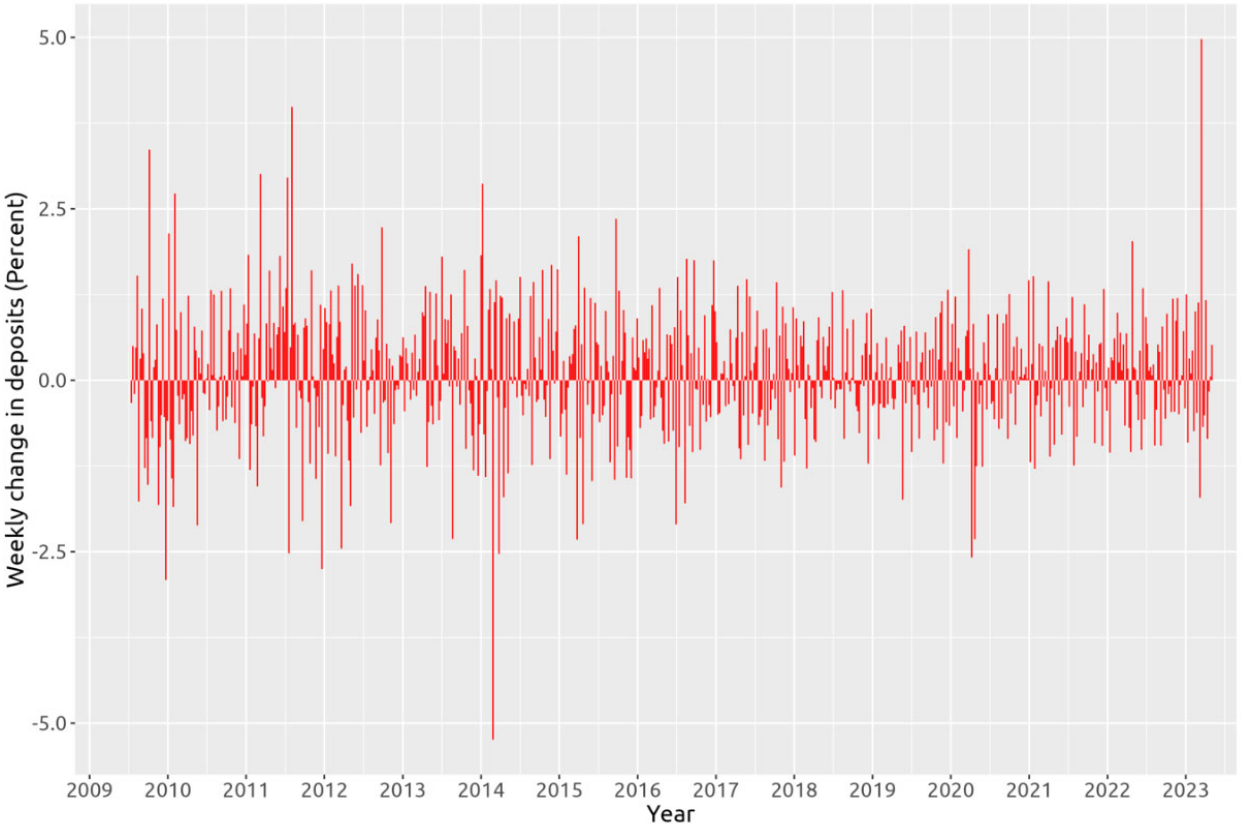
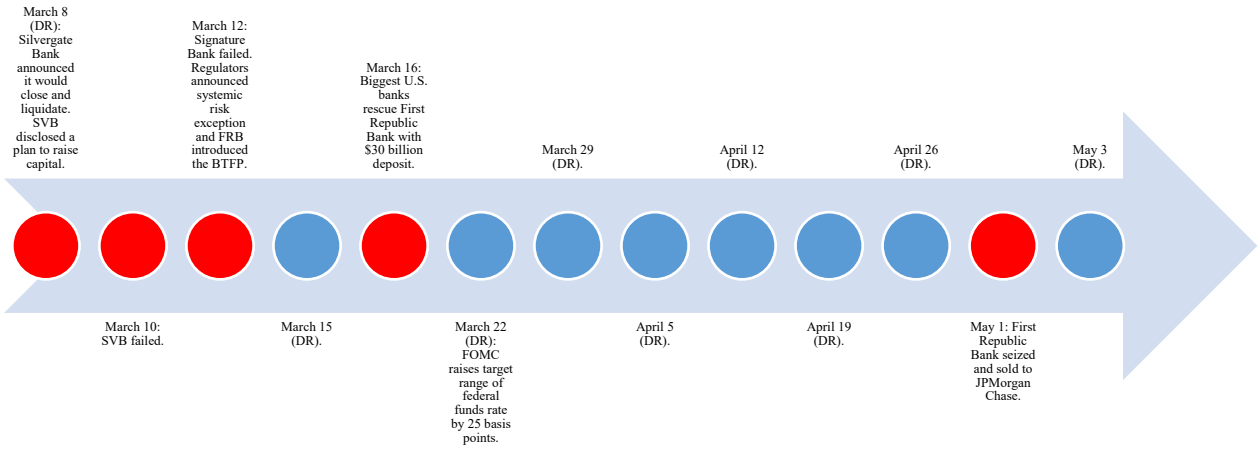
Figure 1. Difference in Weekly Deposit Growth Rates of Large and Regional Banks



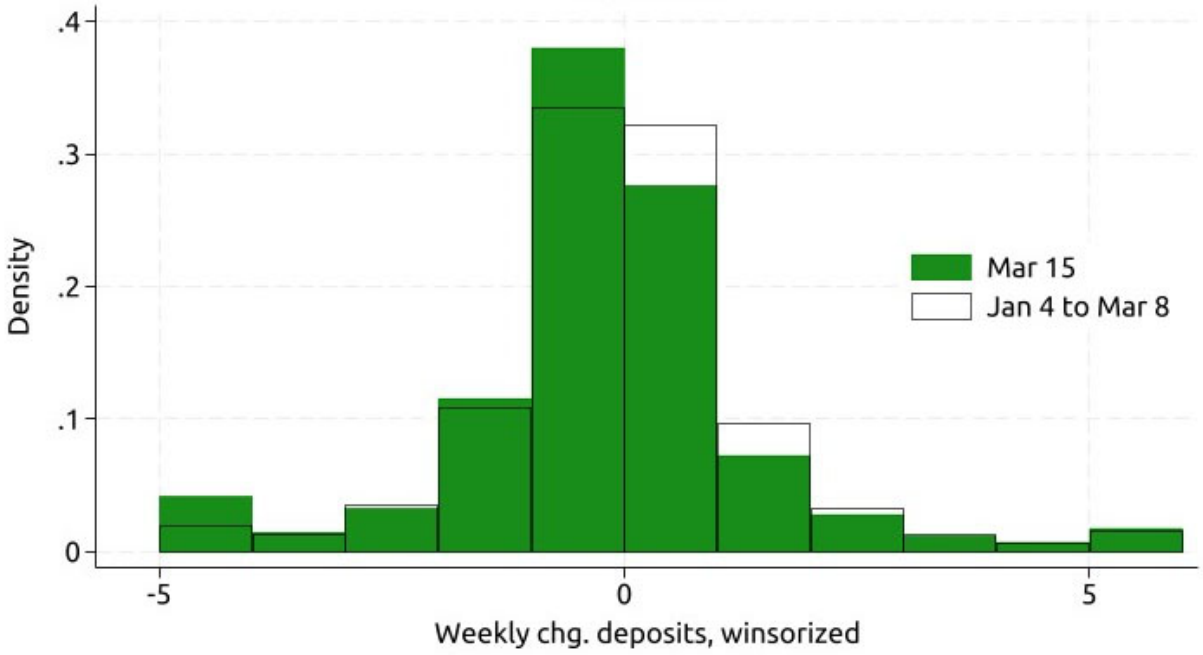
Note: The figure shows estimates of the difference $\beta_{large,t} - \beta_{regional,t}$ using the equation $\Delta Y_{it} = \sum_{t=1}^{T}(\beta_{st} \times 1_s \times 1_t) + \varphi_i + \psi_t + \epsilon_{it}$. ΔY_{it} is the weekly growth rate of deposits at bank i and week t. β_{st} are coefficients to be estimated. 1_s and 1_t are, respectively, indicators for bank size category s ($s \in \{large, regional\}$, leaving small banks as the excluded category) and week t. φ_i and ψ_t are bank and week fixed effects, and ϵ_{it} is an idiosyncratic error. Data range from July 8, 2009, to May 3, 2023.
Source: Authors' estimates based on FR 2644 data.

Figure 2. Timeline of the 2023 Regional Bank Stress and FR 2644 Data Reference Dates



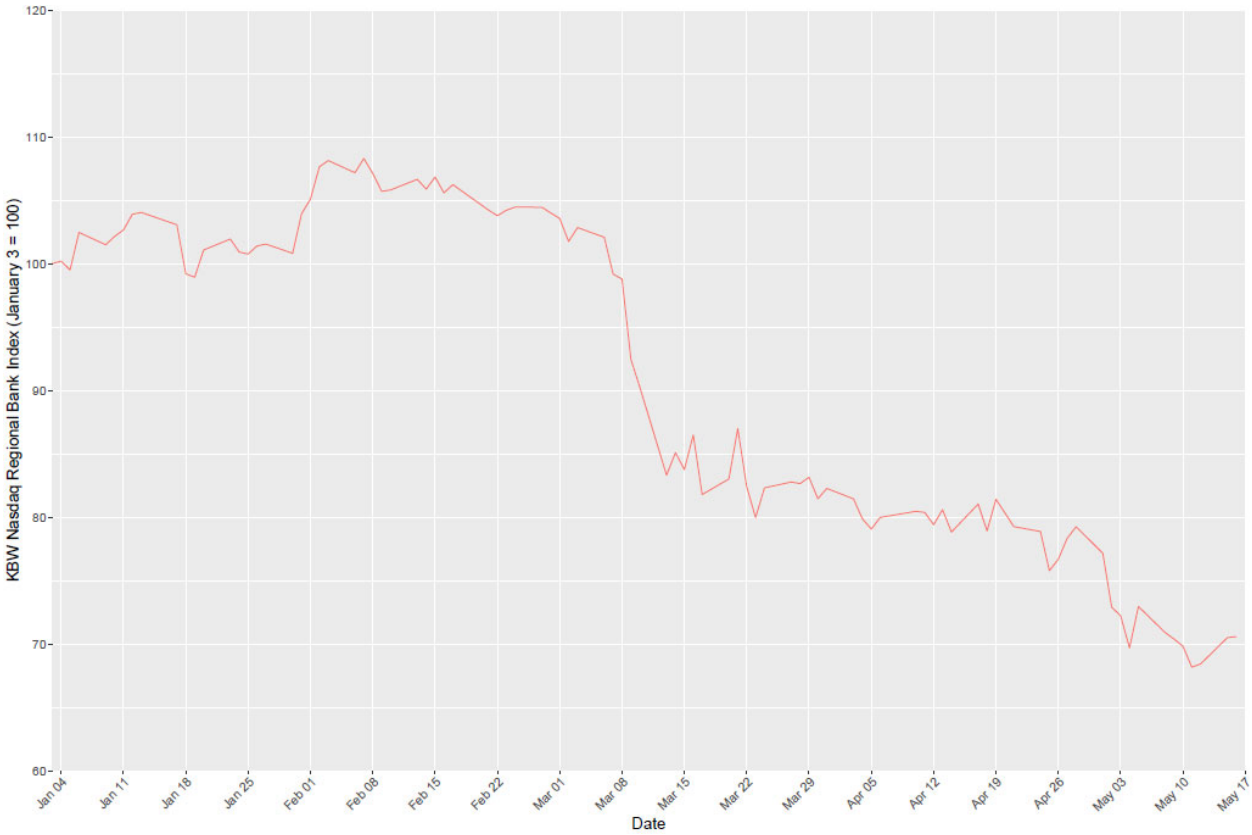
Note: DR (acronym for "data recorded") indicates Wednesdays, the day of the week that the FRB uses as the reference date for the weekly FR 2644 data collection. Red fills indicate dates with relevant bank events.
Source: FR 2644.

Figure 3. Distribution of Weekly Deposit Growth Rates



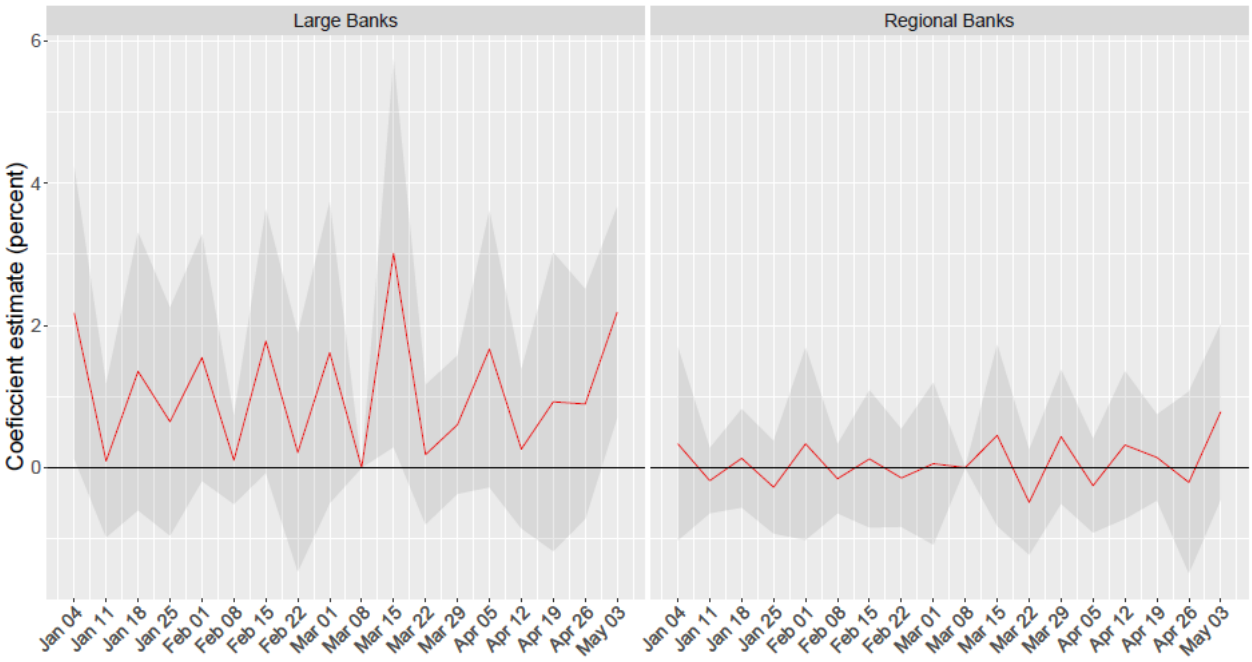
Note: This figure shows the share of banks that reported deposit growth rates within each 1-percentage point wide interval for the week ending March 15th (green bars) compared to the preceding weeks of the calendar year (unshaded bars). Deposit growth rates are winsorized at the 1st and 99th percentiles.
Source: FR 2644 data.

Figure 4. KBW Nasdaq Regional Bank Index



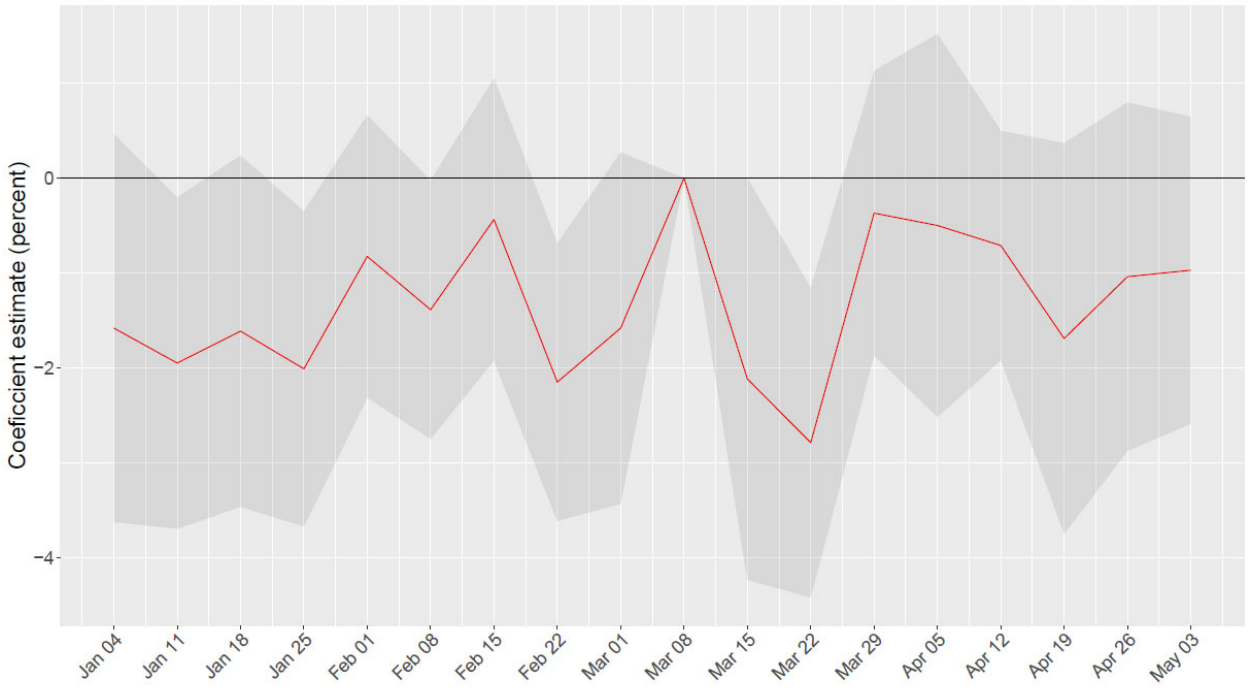
Note: This figure shows the daily closing value of the KBW Nasdaq Regional Bank Index from January 3, 2023, to May 16, 2023. The Index is normalized to 100 at is January 3 value.
Source: Yahoo Finance.

Figure 5. Estimates of Difference in Weekly Deposit Growth Rates of Large and Regional Banks Relative to Small Banks



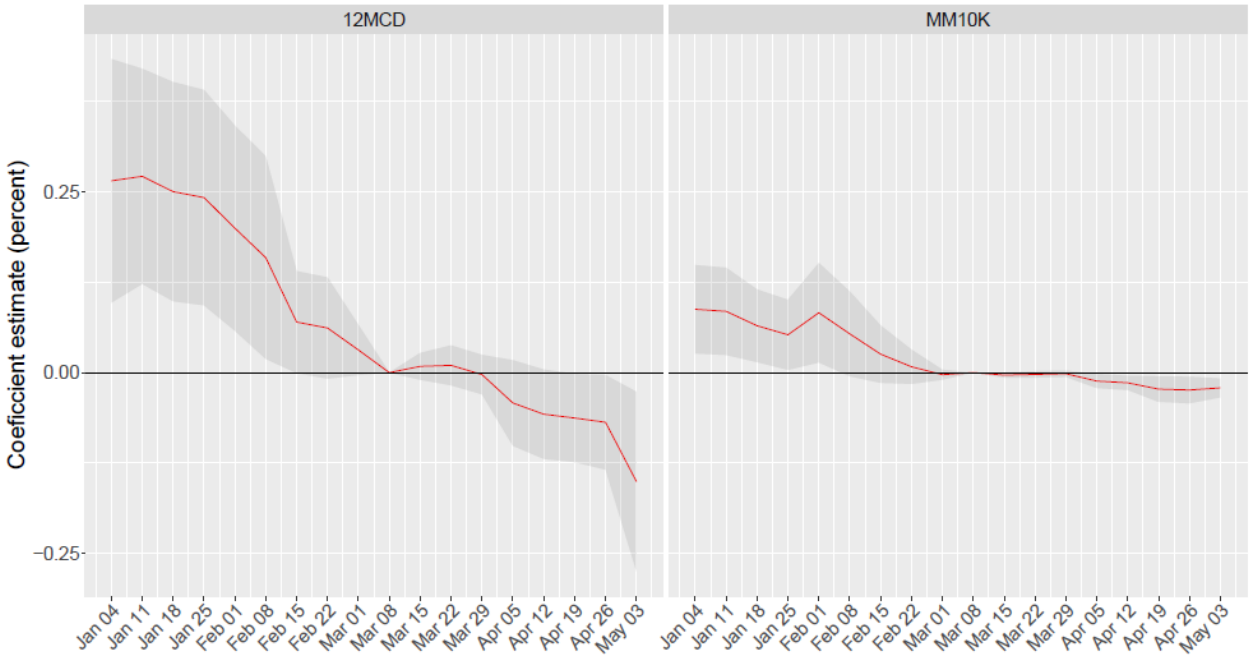
Note: This figure plots coefficient estimates of $\beta_{large,t}$, in the left panel, and $\beta_{regional,t}$, in the right panel, from the regression results shown in Table 2, Column (4).
Source: Authors' estimates based on FR 2644, Call Report, and FR Y-9C data.

Figure 6. Estimates of the Effects of the Uninsured Deposit Ratio on Weekly Deposit Growth Rates



Note: This figure plots coefficient estimates of $\beta_{uninsured,t}$ from the regression results shown in Table 2, Column (4).
Source: Authors' estimates based on FR 2644, Call Report, and FR Y-9C data.

Figure 7. Estimates of Difference in Deposit Interest Rates of Large Banks Relative to Small Banks Based on Branch Level Data



Note: This figure plots coefficient estimates of $\beta_{large,t}$ from the regression results shown in Table 3, Column (3) (left panel) and Table 3, Column (4) (right panel).
Source: Authors' estimates based on RateWatch, Call Report, and FR Y-9C data.

Table 1: Summary statistics of weekly data

This table reports summary statistics for the weekly data. Panel A provides summary statistics on the bank x week panel while Panel B provides summary statistics on the branch x week panel used in deposit rate analysis. Data cover the period from January 4, 2023, through May 5, 2023. All weekly data are weekly as of Wednesdays. Weekly balance sheet data for banks come from the Federal Reserve's FR 2644. Deposit rate data come from RateWatch. Bank characteristics come from the FR Y-9C or Call Reports as of 2022Q4. Market power measures (HHI bank and HHI county) come from the 2022 Summary of Deposits.

Panel A: Bank x week panel

	N	Mean	SD	p10	Median	p90
Deposit growth	6811	-0.068	1.553			
CD Rate	5580	1.366	1.282	0.080	1.000	3.760
MM Rate	5351	0.376	0.410	0.020	0.200	1.110
Chg. CD Rate	5563	0.023	0.233	0.000	0.000	0.000
Chg. MM Rate	5336	0.010	0.108	0.000	0.000	0.000
Ln(Assets)	6840	15.760	1.601	14.130	15.329	18.030
Uninsured ratio	6840	0.380	0.171	0.157	0.370	0.582
TCE ratio	6840	0.080	0.032	0.049	0.077	0.107
Adj. TCE ratio	6840	0.061	0.039	0.018	0.058	0.098
Tier 1 RBC ratio	6182	0.136	0.048	0.102	0.125	0.176
NPL ratio	6840	0.005	0.006	0.000	0.003	0.010
ROA (quarterly)	6840	0.003	0.002	0.001	0.003	0.005
HHI (bank)	6840	0.206	0.094	0.117	0.192	0.316
BHC dummy	6840	0.536	0.499	0.000	1.000	1.000

Panel B: Branch x week panel

	N	Mean	SD	p10	Median	p90
CD Rate	595752	0.593	1.042	0.010	0.050	1.750
MM Rate	461562	0.185	0.358	0.010	0.020	0.600
Chg. CD Rate	592206	0.004	0.030	0.000	0.000	0.000
Chg. MM Rate	460545	0.001	0.008	0.000	0.000	0.000
HHI (county)	608946	1.872	1.115	0.951	1.506	3.232

Table 2: Summary statistics of monthly data

This table reports summary statistics of monthly deposit data. The deposit growth rates data (Panels A and B) cover the period from November 2022 through June 2023, and the deposit amounts data (Panel C) range from November 2022 through October 2023. Growth rates are measured in percentage points, and amounts are measured in billions of dollars. Data in Panels A to C are used, respectively, in Tables 6 through 8. All data are as of the last business day of the month. Data come from the Federal Reserve's FR 2052a.

	N	Banks	Mean	SD
Panel A: Deposit growth rates (pct.)				
Total	190	25	0.031	2.492
Insured	190	25	0.930	2.958
Uninsured	190	25	-1.271	4.081
Panel B: Deposit growth rates (pct.)				
All depositors	380	25	-0.148	3.575
Retail and small business	364	24	-0.043	4.101
Nonfinancial corporations	332	22	0.581	14.676
Other depositor types	332	22	2.666	18.518
Panel C: Depost amounts ($ billion)				
Total	281	25	379.03	426.95
Insured	281	25	174.56	201.63
Uninsured	281	25	204.47	249.17

Table 3: Weekly deposit growth

This table examines weekly growth in deposits for banks from January 4 through May 5, 2023, by size class and bank financial condition. Weekly balance sheet data for banks comes from the Federal Reserve's FR 2644. The table reports the results from the following regression:

$$Y_{it} = \beta_t(X_i \times D_t) + \varphi_i + \psi_t + \epsilon_{it}$$

Where Y_{it} is the weekly log change in deposits for bank *i* in week *t*. Data is weekly Wednesday with weeks ending on the dates shown in the table. The week ending March 8th is omitted. D_t is an indicator that takes the value of 1 in week t, 0 otherwise. X_i is a vector of bank characteristics that includes size class dummies ($Large_i$ and $Regional_i$, while small banks are the omitted category), risk factors related to runs ($Uninsured\ ratio_i$ and $Adj.TCE\ ratio_i$), and deposit market power ($HHI(bank)_i$), fixed as of 2022Q4 except for deposit market power which comes from the 2022Q2 Summary of Deposits. $Large_i$ takes the value of 1 for banks with $250 billion or more in assets, 0 otherwise. $Regional_i$ takes the value of 1 for banks with assets between $100 and $250 billion. Small banks, with assets less than $100 billion, are the omitted category. Uninsured ratio is uninsured deposits to total deposits. Adj TCE ratio is TCE ratio adjusted for unrealized gains and losses on securities. HHI is the weighted average of county HHI across a bank's branches using branch deposits for the weights. Certain coefficients are not reported in the table for brevity. Fixed effects are denoted at the bottom of each panel. Standard errors (in parentheses) are clustered by bank. ***, **, * indicates statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

	Deposit growth	Deposit growth	Deposit growth	Deposit growth
04jan2023 * Large	2.063**	1.982*	2.263**	2.176**
	(1.006)	(1.022)	(1.068)	(1.041)
11jan2023 * Large	-0.185	-0.186	0.159	0.092
	(0.468)	(0.515)	(0.570)	(0.544)
18jan2023 * Large	1.070	1.090	1.375	1.353
	(0.940)	(0.965)	(1.001)	(0.992)
25jan2023 * Large	0.490	0.448	0.807	0.646
	(0.750)	(0.778)	(0.841)	(0.814)
01feb2023 * Large	1.587*	1.475*	1.623*	1.547*
	(0.868)	(0.882)	(0.888)	(0.881)
08feb2023 * Large	0.078	-0.046	0.201	0.104
	(0.289)	(0.293)	(0.325)	(0.313)
15feb2023 * Large	1.780*	1.715*	1.792*	1.779*
	(0.953)	(0.969)	(0.945)	(0.942)
22feb2023 * Large	0.054	-0.090	0.290	0.212
	(0.796)	(0.811)	(0.848)	(0.849)
01mar2023 * Large	1.782*	1.509	1.793	1.618
	(1.073)	(1.087)	(1.098)	(1.076)
15mar2023 * Large	2.852**	2.676**	3.048**	3.013**
	(1.318)	(1.337)	(1.393)	(1.385)
22mar2023 * Large	-0.125	-0.275	0.216	0.183
	(0.443)	(0.442)	(0.497)	(0.498)
29mar2023 * Large	0.750	0.495	0.557	0.604
	(0.493)	(0.482)	(0.489)	(0.494)
05apr2023 * Large	1.591	1.653*	1.742*	1.667*
	(0.982)	(1.002)	(1.013)	(0.988)

12apr2023 * Large	0.278	0.181	0.306	0.261
	(0.546)	(0.554)	(0.566)	(0.567)
19apr2023 * Large	0.687	0.660	0.958	0.925
	(1.011)	(1.035)	(1.080)	(1.067)
26apr2023 * Large	0.848	0.714	0.897	0.895
	(0.787)	(0.802)	(0.822)	(0.821)
03may2023 * Large	2.083***	2.089***	2.260***	2.186***
	(0.709)	(0.740)	(0.775)	(0.753)
04jan2023 * Regional	0.208	0.181	0.392	0.335
	(0.679)	(0.698)	(0.694)	(0.690)
11jan2023 * Regional	-0.398*	-0.398	-0.140	-0.183
	(0.230)	(0.244)	(0.249)	(0.232)
18jan2023 * Regional	-0.075	-0.068	0.145	0.131
	(0.338)	(0.343)	(0.358)	(0.352)
25jan2023 * Regional	-0.425	-0.439	-0.171	-0.276
	(0.319)	(0.326)	(0.340)	(0.331)
01feb2023 * Regional	0.311	0.273	0.385	0.335
	(0.677)	(0.693)	(0.689)	(0.687)
08feb2023 * Regional	-0.231	-0.276	-0.091	-0.156
	(0.215)	(0.223)	(0.256)	(0.246)
15feb2023 * Regional	0.094	0.073	0.131	0.123
	(0.482)	(0.493)	(0.491)	(0.490)
22feb2023 * Regional	-0.331	-0.379	-0.095	-0.146
	(0.369)	(0.379)	(0.346)	(0.349)
01mar2023 * Regional	0.048	-0.043	0.170	0.055
	(0.543)	(0.582)	(0.588)	(0.579)
15mar2023 * Regional	0.304	0.246	0.484	0.454
	(0.601)	(0.622)	(0.649)	(0.647)
22mar2023 * Regional	-0.674*	-0.723**	-0.458	-0.488
	(0.360)	(0.359)	(0.373)	(0.374)
29mar2023 * Regional	0.420	0.330	0.423	0.435
	(0.486)	(0.491)	(0.476)	(0.479)
05apr2023 * Regional	-0.335	-0.317	-0.204	-0.254
	(0.335)	(0.340)	(0.348)	(0.335)
12apr2023 * Regional	0.257	0.224	0.354	0.318
	(0.523)	(0.534)	(0.526)	(0.527)
19apr2023 * Regional	-0.023	-0.033	0.172	0.143
	(0.288)	(0.299)	(0.315)	(0.307)
26apr2023 * Regional	-0.303	-0.347	-0.192	-0.207
	(0.638)	(0.644)	(0.647)	(0.649)
03may2023 * Regional	0.683	0.681	0.836	0.787
	(0.625)	(0.634)	(0.628)	(0.626)
04jan2023	0.087	-0.112	0.567	0.781
	(0.113)	(0.444)	(0.676)	(0.824)
11jan2023	-0.329***	-0.333	0.502	0.667

	(0.105)	(0.396)	(0.560)	(0.704)
18jan2023	-0.244**	-0.196	0.492	0.546
	(0.115)	(0.384)	(0.568)	(0.680)
25jan2023	-0.530***	-0.634	0.235	0.629
	(0.115)	(0.418)	(0.558)	(0.642)
01feb2023	0.183*	-0.095	0.261	0.449
	(0.101)	(0.293)	(0.420)	(0.470)
08feb2023	0.049	-0.259	0.339	0.577
	(0.095)	(0.291)	(0.448)	(0.517)
15feb2023	-0.100	-0.260	-0.078	-0.043
	(0.097)	(0.289)	(0.390)	(0.459)
22feb2023	-0.070	-0.427	0.495	0.687*
	(0.113)	(0.289)	(0.381)	(0.384)
01mar2023	0.299**	-0.378	0.310	0.736
	(0.122)	(0.353)	(0.509)	(0.541)
15mar2023	-0.482***	-0.919**	-0.018	0.074
	(0.121)	(0.447)	(0.661)	(0.814)
22mar2023	-0.403***	-0.775**	0.411	0.501
	(0.117)	(0.326)	(0.454)	(0.491)
29mar2023	0.050	-0.582**	-0.433	-0.537
	(0.103)	(0.244)	(0.369)	(0.399)
05apr2023	0.459***	0.615	0.831	1.024
	(0.121)	(0.435)	(0.678)	(0.840)
12apr2023	-0.133	-0.373	-0.070	0.051
	(0.094)	(0.237)	(0.298)	(0.326)
19apr2023	-0.646***	-0.712*	0.007	0.094
	(0.115)	(0.415)	(0.639)	(0.784)
26apr2023	-0.482***	-0.813***	-0.373	-0.360
	(0.106)	(0.234)	(0.430)	(0.488)
03may2023	0.103	0.099	0.514	0.705
	(0.102)	(0.413)	(0.593)	(0.737)
04jan2023 * Uninsured ratio			-1.595	-1.582
			(1.053)	(1.041)
11jan2023 * Uninsured ratio			-1.959**	-1.951**
			(0.902)	(0.889)
18jan2023 * Uninsured ratio			-1.615*	-1.614*
			(0.942)	(0.942)
25jan2023 * Uninsured ratio			-2.038**	-2.012**
			(0.884)	(0.846)
01feb2023 * Uninsured ratio			-0.837	-0.826
			(0.763)	(0.758)
08feb2023 * Uninsured ratio			-1.402**	-1.388**
			(0.713)	(0.693)
15feb2023 * Uninsured ratio			-0.434	-0.437
			(0.758)	(0.757)

22feb2023 * Uninsured ratio	-2.163***	-2.152***
	(0.756)	(0.745)
01mar2023 * Uninsured ratio	-1.614*	-1.582*
	(0.967)	(0.942)
15mar2023 * Uninsured ratio	-2.115*	-2.118*
	(1.085)	(1.078)
22mar2023 * Uninsured ratio	-2.787***	-2.790***
	(0.829)	(0.830)
29mar2023 * Uninsured ratio	-0.352	-0.370
	(0.769)	(0.763)
05apr2023 * Uninsured ratio	-0.503	-0.499
	(1.048)	(1.028)
12apr2023 * Uninsured ratio	-0.710	-0.711
	(0.617)	(0.615)
19apr2023 * Uninsured ratio	-1.689	-1.692
	(1.054)	(1.048)
26apr2023 * Uninsured ratio	-1.031	-1.040
	(0.935)	(0.935)
03may2023 * Uninsured ratio	-0.974	-0.971
	(0.827)	(0.824)
04jan2023 * Adj. TCE ratio		-3.682
		(4.193)
11jan2023 * Adj. TCE ratio		-2.831
		(4.155)
18jan2023 * Adj. TCE ratio		-0.901
		(4.204)
25jan2023 * Adj. TCE ratio		-6.822*
		(3.852)
01feb2023 * Adj. TCE ratio		-3.244
		(3.147)
08feb2023 * Adj. TCE ratio		-4.111
		(3.059)
15feb2023 * Adj. TCE ratio		-0.555
		(2.755)
22feb2023 * Adj. TCE ratio		-3.308
		(2.314)
01mar2023 * Adj. TCE ratio		-7.410**
		(3.573)
15mar2023 * Adj. TCE ratio		-1.520
		(4.325)
22mar2023 * Adj. TCE ratio		-1.447
		(2.761)
29mar2023 * Adj. TCE ratio		1.861
		(2.505)
05apr2023 * Adj. TCE ratio		-3.238

				(4.943)
12apr2023 * Adj. TCE ratio				-1.987
				(2.179)
19apr2023 * Adj. TCE ratio				-1.416
				(4.337)
26apr2023 * Adj. TCE ratio				-0.119
				(2.755)
03may2023 * Adj. TCE ratio				-3.200
				(3.955)
HHI x week controls	N	Y	Y	Y
Bank FE	Y	Y	Y	Y
Week FE	Y	Y	Y	Y
Observations	6808	6808	6808	6808
Adjusted R-squared	0.044	0.046	0.050	0.051

Table 4: Weekly deposit rates

This table examines weekly deposit rates offered by banks from January 4 through May 5, 2023, by size class and bank financial condition. The table reports the results from the following regression:

$$Rate_{it} = \beta_t(X_i \times D_t) + \varphi_i + \psi_t + \epsilon_{it}$$

Where $Rate_{it}$ is either the time deposit rate (CD) or savings deposit rate (MM) offered by bank *i* (in the first two columns) or branch *i* (in the latter two columns) in week t. In the branch level analysis, we add county fixed effects. Rate data is from RateWatch and weekly Wednesday with weeks ending on the dates shown in the table. The week ending March 8th is omitted. The CD rate corresponds to 12-month certificates of deposit with an account size of $10,000 and the MM rate corresponds to money market deposit accounts with an account size of $10,000. We compute the bank rate in each week as the median rate across a banks' branches. The bank rate sample is limited to banks with at least 50 percent of deposits reporting. D_t is an indicator that takes the value of 1 in week t, 0 otherwise. X_i is a vector of bank characteristics that includes size class dummies ($Large_i$ and $Regional_i$, while small banks are the omitted category), risk factors related to runs ($Uninsured\ ratio_i$ and $Adj.TCE\ ratio_i$), and deposit market power (HHI_i), fixed as of 2022Q4 except for deposit market power which comes from the 2022Q2 Summary of Deposits. In columns (1) and (2), HHI_i is the weighted average of county HHI across a bank's branches using branch deposits for the weights and in columns (3) and (4), it is the HHI of the county where the branch is located. Otherwise, control variables are defined the same as in Table 2. Certain coefficients are not reported in the table for brevity. Fixed effects are denoted at the bottom of each panel. Standard errors (in parentheses) are clustered by bank. ***, **, * indicates statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

	Bank level		Branch level	
	CD Rate	MM Rate	CD Rate	MM Rate
	(1)	(2)	(3)	(4)
04jan2023 * Large	0.319***	0.079***	0.265***	0.088***
	(0.059)	(0.018)	(0.085)	(0.031)
11jan2023 * Large	0.288***	0.059***	0.271***	0.085***
	(0.057)	(0.018)	(0.075)	(0.031)
18jan2023 * Large	0.235***	0.056***	0.250***	0.065**
	(0.053)	(0.016)	(0.077)	(0.025)
25jan2023 * Large	0.218***	0.050***	0.242***	0.052**
	(0.052)	(0.016)	(0.076)	(0.025)
01feb2023 * Large	0.146***	0.041***	0.200***	0.083**
	(0.042)	(0.015)	(0.072)	(0.035)
08feb2023 * Large	0.112***	0.031**	0.159**	0.054*
	(0.039)	(0.015)	(0.071)	(0.030)
15feb2023 * Large	0.064**	0.016	0.070*	0.026
	(0.030)	(0.012)	(0.036)	(0.020)
22feb2023 * Large	0.012	-0.003	0.062*	0.008
	(0.030)	(0.003)	(0.035)	(0.012)
01mar2023 * Large	0.033	-0.004	0.031*	-0.003
	(0.020)	(0.003)	(0.018)	(0.003)
15mar2023 * Large	0.001	-0.001	0.009	-0.003*
	(0.020)	(0.001)	(0.009)	(0.002)
22mar2023 * Large	-0.014	-0.006	0.010	-0.002
	(0.024)	(0.004)	(0.014)	(0.002)
29mar2023 * Large	-0.038	-0.005	-0.003	-0.002

	(0.026)	(0.004)	(0.014)	(0.002)
05apr2023 * Large	-0.071**	-0.019***	-0.042	-0.012**
	(0.034)	(0.006)	(0.030)	(0.005)
12apr2023 * Large	-0.086**	-0.019**	-0.057*	-0.014***
	(0.034)	(0.008)	(0.031)	(0.005)
19apr2023 * Large	-0.088***	-0.035***	-0.063**	-0.023**
	(0.034)	(0.012)	(0.031)	(0.009)
26apr2023 * Large	-0.098***	-0.034***	-0.069**	-0.024**
	(0.035)	(0.012)	(0.033)	(0.009)
03may2023 * Large	-0.121***	-0.039***	-0.150**	-0.021***
	(0.039)	(0.014)	(0.063)	(0.007)
04jan2023 * Regional	0.193*	0.062***	0.211*	0.102***
	(0.102)	(0.023)	(0.112)	(0.031)
11jan2023 * Regional	0.271***	0.042*	0.210**	0.090***
	(0.071)	(0.023)	(0.103)	(0.030)
18jan2023 * Regional	0.042	0.053***	-0.136	0.061***
	(0.186)	(0.016)	(0.370)	(0.023)
25jan2023 * Regional	0.025	0.047***	-0.079	0.049**
	(0.185)	(0.015)	(0.314)	(0.022)
01feb2023 * Regional	0.125**	0.039***	-0.008	0.054**
	(0.058)	(0.014)	(0.216)	(0.022)
08feb2023 * Regional	-0.084	0.030**	-0.160	0.028*
	(0.181)	(0.014)	(0.313)	(0.015)
15feb2023 * Regional	0.144	0.019	0.126**	0.025
	(0.113)	(0.013)	(0.061)	(0.017)
22feb2023 * Regional	0.096	-0.003	0.146	0.009
	(0.113)	(0.004)	(0.089)	(0.011)
01mar2023 * Regional	0.002	-0.003	0.027	-0.001
	(0.034)	(0.003)	(0.018)	(0.003)
15mar2023 * Regional	0.020	-0.004	0.010	-0.003**
	(0.024)	(0.004)	(0.009)	(0.002)
22mar2023 * Regional	0.119	-0.010*	0.116	-0.002
	(0.117)	(0.005)	(0.098)	(0.002)
29mar2023 * Regional	-0.019	-0.011**	0.007	-0.001
	(0.029)	(0.006)	(0.016)	(0.002)
05apr2023 * Regional	-0.055	-0.022***	-0.031	-0.011**
	(0.038)	(0.006)	(0.032)	(0.005)
12apr2023 * Regional	0.041	-0.034***	0.029	-0.015***
	(0.120)	(0.010)	(0.084)	(0.005)
19apr2023 * Regional	0.041	-0.049***	0.024	-0.023***
	(0.120)	(0.012)	(0.085)	(0.008)
26apr2023 * Regional	-0.084**	-0.051***	-0.073**	-0.024***
	(0.039)	(0.012)	(0.034)	(0.008)
03may2023 * Regional	-0.121***	-0.052***	-0.155**	-0.021***

	(0.039)	(0.013)	(0.062)	(0.006)
04jan2023	-0.182	-0.040	-0.087	-0.061
	(0.111)	(0.033)	(0.141)	(0.059)
11jan2023	-0.162	-0.034	-0.129	-0.052
	(0.109)	(0.031)	(0.125)	(0.059)
18jan2023	-0.168	-0.036	-0.095	-0.052
	(0.105)	(0.028)	(0.149)	(0.059)
25jan2023	-0.148	-0.036	-0.091	-0.043
	(0.104)	(0.028)	(0.139)	(0.059)
01feb2023	-0.133	-0.034	-0.097	-0.027
	(0.102)	(0.026)	(0.126)	(0.062)
08feb2023	-0.079	-0.026	0.018	0.008
	(0.099)	(0.025)	(0.111)	(0.041)
15feb2023	-0.104	0.000	-0.137	-0.057
	(0.096)	(0.019)	(0.114)	(0.057)
22feb2023	-0.025	-0.017*	-0.140	-0.077
	(0.061)	(0.010)	(0.115)	(0.052)
01mar2023	-0.050	-0.013	-0.014	-0.022
	(0.045)	(0.009)	(0.022)	(0.020)
15mar2023	0.018	0.004*	-0.015	0.000
	(0.029)	(0.003)	(0.014)	(0.002)
22mar2023	0.029	0.011	-0.038	-0.001
	(0.034)	(0.008)	(0.037)	(0.006)
29mar2023	0.032	0.004	-0.006	-0.005
	(0.034)	(0.010)	(0.027)	(0.006)
05apr2023	0.012	0.012	0.000	0.003
	(0.048)	(0.011)	(0.040)	(0.010)
12apr2023	0.013	-0.017	-0.002	0.007
	(0.055)	(0.017)	(0.044)	(0.009)
19apr2023	0.055	-0.018	0.046	-0.011
	(0.069)	(0.025)	(0.056)	(0.015)
26apr2023	0.050	-0.018	0.072	-0.015
	(0.070)	(0.025)	(0.057)	(0.015)
03may2023	0.137*	-0.019	0.197**	-0.007
	(0.081)	(0.025)	(0.091)	(0.011)
04jan2023 * Uninsured ratio	-0.580***	-0.012	-0.492*	-0.054
	(0.223)	(0.077)	(0.294)	(0.140)
11jan2023 * Uninsured ratio	-0.491**	-0.007	-0.405	-0.074
	(0.221)	(0.076)	(0.278)	(0.139)
18jan2023 * Uninsured ratio	-0.464**	-0.005	-0.414	-0.052
	(0.213)	(0.072)	(0.352)	(0.135)
25jan2023 * Uninsured ratio	-0.424**	-0.003	-0.408	-0.042
	(0.212)	(0.072)	(0.329)	(0.135)
01feb2023 * Uninsured ratio	-0.272	0.008	-0.315	-0.079

	(0.177)	(0.070)	(0.289)	(0.139)
08feb2023 * Uninsured ratio	-0.222	0.019	-0.398	-0.067
	(0.168)	(0.069)	(0.314)	(0.118)
15feb2023 * Uninsured ratio	-0.041	0.001	0.125	0.047
	(0.082)	(0.064)	(0.131)	(0.122)
22feb2023 * Uninsured ratio	-0.053	0.044	0.124	0.128
	(0.068)	(0.032)	(0.134)	(0.080)
01mar2023 * Uninsured ratio	-0.044	0.040	-0.020	0.059
	(0.057)	(0.032)	(0.044)	(0.053)
15mar2023 * Uninsured ratio	-0.086	-0.005	0.018	0.006
	(0.069)	(0.004)	(0.024)	(0.006)
22mar2023 * Uninsured ratio	-0.097	-0.014	0.049	0.012
	(0.071)	(0.010)	(0.074)	(0.011)
29mar2023 * Uninsured ratio	-0.035	-0.004	0.033	0.015
	(0.090)	(0.012)	(0.052)	(0.012)
05apr2023 *Uninsured ratio	0.012	0.014	0.076	0.021
	(0.110)	(0.016)	(0.065)	(0.018)
12apr2023 * Uninsured ratio	0.001	0.014	0.096	0.007
	(0.113)	(0.023)	(0.088)	(0.016)
22apr2023 * Uninsured ratio	-0.053	0.060	0.019	0.059
	(0.126)	(0.051)	(0.100)	(0.041)
19apr2023 * Uninsured ratio	-0.037	0.064	-0.024	0.068
	(0.132)	(0.051)	(0.103)	(0.042)
03may2023 * Uninsured ratio	-0.073	0.076	-0.027	0.048*
	(0.147)	(0.056)	(0.144)	(0.025)
04jan2023 * Adj. TCE ratio	1.188	0.268	0.492	-0.048
	(1.411)	(0.228)	(1.156)	(0.372)
11jan2023 * Adj. TCE ratio	0.917	0.218	1.009	0.064
	(1.410)	(0.217)	(1.037)	(0.351)
18jan2023 * Adj. TCE ratio	0.745	0.263	0.681	0.250
	(1.388)	(0.212)	(1.459)	(0.317)
25jan2023 * Adj. TCE ratio	0.598	0.229	0.738	0.251
	(1.385)	(0.206)	(1.336)	(0.316)
01feb2023 * Adj. TCE ratio	-0.154	0.134	0.991	0.298
	(1.293)	(0.201)	(1.120)	(0.343)
08feb2023 * Adj. TCE ratio	-0.554	0.102	0.173	-0.036
	(1.277)	(0.198)	(1.158)	(0.175)
15feb2023 * Adj. TCE ratio	-0.358	-0.073	0.691	0.204
	(1.289)	(0.113)	(0.835)	(0.317)
22feb2023 * Adj. TCE ratio	-0.886	-0.060	0.603	0.212
	(1.198)	(0.074)	(0.853)	(0.320)
01mar2023 * Adj. TCE ratio	0.418	-0.060	-0.193	-0.090
	(0.282)	(0.070)	(0.238)	(0.095)
15mar2023 * Adj. TCE ratio	-0.957	-0.012	-0.063	0.011

	(1.103)	(0.008)	(0.132)	(0.026)
22mar2023 * Adj. TCE ratio	-0.916	0.017	0.173	0.004
	(1.112)	(0.046)	(0.332)	(0.027)
29mar2023 * Adj. TCE ratio	-0.960	0.088	-0.110	0.008
	(1.128)	(0.068)	(0.146)	(0.024)
05apr2023 * Adj. TCE ratio	-0.937	-0.031	0.026	0.012
	(1.150)	(0.087)	(0.277)	(0.059)
12apr2023 * Adj. TCE ratio	-0.549	0.354	0.418	0.142
	(1.287)	(0.231)	(0.557)	(0.097)
22apr2023 * Adj. TCE ratio	-0.700	0.396	0.190	0.211*
	(1.295)	(0.245)	(0.562)	(0.120)
19apr2023 * Adj. TCE ratio	-0.436	0.506*	0.095	0.271*
	(1.332)	(0.272)	(0.545)	(0.141)
03may2023 * Adj. TCE ratio	-1.196	0.410	-0.965	0.183
	(1.479)	(0.277)	(0.926)	(0.117)
HHI x week controls	Y	Y	Y	Y
Bank FE	Y	Y	Y	Y
Week FE	Y	Y	Y	Y
County FE	--	--	Y	Y
Observations	5580	5351	595751	461561
Adjusted R-squared	0.934	0.938	0.892	0.872

Table 5: Weekly changes in deposit rates

This table examines weekly deposit rates offered by banks from January 4 through May 5, 2023, by size class and bank financial condition. The table reports the results from the following regression:

$$\Delta Rate_{it} = \beta_t(X_i \times D_t) + \varphi_i + \psi_t + \epsilon_{it}$$

Where $\Delta Rate_{it}$ is either the time deposit rate (CD) or savings deposit rate (MM) offered by bank *i* (in the first two columns) or branch *i* (in the latter two columns) in week t. In the branch level analysis, we add county fixed effects. Rate data is from RateWatch and weekly Wednesday with weeks ending on the dates shown in the table. The week ending March 8th is omitted. The CD rate corresponds to 12-month certificates of deposit with an account size of $10,000 and the MM rate corresponds to money market deposit accounts with an account size of $10,000. We compute the bank rate in each week as the median rate across a banks' branches. The bank rate sample is limited to banks with at least 50 percent of deposits reporting. D_t is an indicator that takes the value of 1 in week t, 0 otherwise. X_i is a vector of bank characteristics that includes size class dummies ($Large_i$ and $Regional_i$, while small banks are the omitted category), risk factors related to runs ($Uninsured\ ratio_i$ and $Adj.TCE\ ratio_i$), and deposit market power (HHI_i), fixed as of 2022Q4 except for deposit market power which comes from the 2022Q2 Summary of Deposits. In columns (1) and (2), HHI_i is the weighted average of county HHI across a bank's branches using branch deposits for the weights and in columns (3) and (4), it is the HHI of the county where the branch is located. Otherwise, control variables are defined the same as in Table 2. Certain coefficients are not reported in the table for brevity. Fixed effects are denoted at the bottom of each panel. Standard errors (in parentheses) are clustered by bank. ***, **, * indicates statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

	Bank level		Branch level	
	ΔCD Rate	ΔMM Rate	ΔCD Rate	ΔMM Rate
	(1)	(2)	(3)	(4)
04jan2023 * Large	0.027	-0.004	0.016	-0.001
	(0.021)	(0.004)	(0.010)	(0.001)
11jan2023 * Large	-0.000	-0.027**	0.005	-0.001
	(0.024)	(0.011)	(0.009)	(0.001)
18jan2023 * Large	-0.025	-0.005	-0.003	-0.003
	(0.033)	(0.011)	(0.009)	(0.002)
25jan2023 * Large	0.011	-0.007	0.004	-0.000
	(0.022)	(0.006)	(0.005)	(0.001)
01feb2023 * Large	-0.049	-0.010*	-0.001	0.003
	(0.046)	(0.006)	(0.006)	(0.002)
08feb2023 * Large	-0.002	-0.014*	-0.010	-0.006*
	(0.025)	(0.007)	(0.008)	(0.003)
15feb2023 * Large	-0.027	-0.017	-0.004	-0.003
	(0.036)	(0.011)	(0.008)	(0.002)
22feb2023 * Large	-0.029	-0.045	0.002	-0.001
	(0.033)	(0.030)	(0.005)	(0.001)
01mar2023 * Large	0.064*	-0.007	0.000	-0.000
	(0.033)	(0.008)	(0.008)	(0.002)
15mar2023 * Large	0.028	-0.001	0.008*	0.001
	(0.030)	(0.004)	(0.004)	(0.001)
22mar2023 * Large	0.014	-0.007	0.005	0.000
	(0.024)	(0.005)	(0.005)	(0.001)
29mar2023 * Large	-0.005	-0.002	0.003	0.001

	(0.025)	(0.004)	(0.005)	(0.001)
05apr2023 * Large	-0.006	-0.017**	-0.000	-0.006*
	(0.033)	(0.007)	(0.006)	(0.003)
12apr2023 * Large	0.017	0.000	0.000	0.000
	(0.024)	(0.008)	(0.006)	(0.001)
19apr2023 * Large	0.030	-0.043	-0.001	0.000
	(0.022)	(0.030)	(0.008)	(0.001)
26apr2023 * Large	0.051	-0.002	0.001	-0.000
	(0.035)	(0.004)	(0.007)	(0.001)
03may2023 *Large	0.008	-0.013	-0.001	0.001
	(0.027)	(0.010)	(0.007)	(0.001)
04jan2023 * Regional	0.002	0.003	-0.005	-0.000
	(0.035)	(0.007)	(0.010)	(0.001)
11jan2023 * Regional	0.070	-0.034***	-0.008	-0.001
	(0.056)	(0.013)	(0.009)	(0.001)
18jan2023 * Regional	-0.086	0.004	-0.018	-0.003
	(0.062)	(0.018)	(0.011)	(0.002)
25jan2023 * Regional	-0.060	-0.012	-0.010	0.000
	(0.053)	(0.009)	(0.012)	(0.001)
01feb2023 * Regional	-0.096*	-0.014	-0.014	0.001
	(0.056)	(0.009)	(0.012)	(0.001)
08feb2023 * Regional	-0.061	-0.008	-0.022*	-0.005*
	(0.055)	(0.006)	(0.013)	(0.003)
15feb2023 * Regional	0.210	-0.013	0.000	-0.003
	(0.278)	(0.012)	(0.011)	(0.002)
22feb2023 * Regional	-0.096*	-0.058*	-0.009	-0.000
	(0.058)	(0.033)	(0.010)	(0.001)
01mar2023 * Regional	0.036	-0.002	-0.009	0.000
	(0.042)	(0.012)	(0.010)	(0.002)
15mar2023 * Regional	0.030	0.021	-0.004	0.001
	(0.046)	(0.019)	(0.011)	(0.001)
22mar2023 * Regional	-0.060	-0.004	-0.007	0.001
	(0.057)	(0.011)	(0.011)	(0.001)
29mar2023 * Regional	-0.033	-0.008	0.003	0.001
	(0.038)	(0.007)	(0.006)	(0.001)
05apr2023 * Regional	-0.016	-0.002	-0.013	-0.005
	(0.052)	(0.012)	(0.012)	(0.003)
12apr2023 * Regional	-0.060	-0.019*	-0.012	-0.000
	(0.057)	(0.010)	(0.012)	(0.001)
19apr2023 * Regional	-0.040	-0.034	-0.015	0.001
	(0.055)	(0.035)	(0.014)	(0.001)
26apr2023 * Regional	-0.031	-0.008	-0.011	0.000
	(0.041)	(0.008)	(0.013)	(0.001)
03may2023 * Regional	-0.011	-0.014	-0.013	0.001

	(0.033)	(0.010)	(0.012)	(0.001)
04jan2023	-0.049	-0.013	-0.007	-0.003
	(0.050)	(0.017)	(0.017)	(0.004)
11jan2023	-0.038	-0.020	-0.012	-0.000
	(0.051)	(0.019)	(0.016)	(0.003)
18jan2023	-0.049	-0.024	0.006	-0.001
	(0.059)	(0.019)	(0.013)	(0.004)
25jan2023	-0.040	-0.018	0.002	-0.003
	(0.049)	(0.018)	(0.011)	(0.003)
01feb2023	-0.058	-0.015	0.005	0.003
	(0.058)	(0.021)	(0.012)	(0.004)
08feb2023	0.010	0.000	0.028	0.003
	(0.060)	(0.020)	(0.020)	(0.007)
15feb2023	-0.098	-0.012	-0.010	-0.003
	(0.074)	(0.025)	(0.011)	(0.004)
22feb2023	0.020	-0.074*	0.003	-0.004
	(0.091)	(0.040)	(0.012)	(0.004)
01mar2023	-0.089	-0.009	0.023	0.003
	(0.071)	(0.023)	(0.023)	(0.007)
15mar2023	-0.005	-0.007	-0.003	-0.004
	(0.057)	(0.018)	(0.010)	(0.003)
22mar2023	-0.049	-0.022	0.004	-0.002
	(0.051)	(0.018)	(0.012)	(0.003)
29mar2023	-0.029	-0.034**	0.001	-0.005*
	(0.052)	(0.016)	(0.011)	(0.003)
05apr2023	-0.096	-0.016	-0.005	-0.002
	(0.064)	(0.016)	(0.011)	(0.005)
12apr2023	-0.064	-0.042	0.002	-0.000
	(0.058)	(0.026)	(0.008)	(0.004)
19apr2023	-0.009	-0.023	0.026	-0.006*
	(0.067)	(0.057)	(0.023)	(0.003)
26apr2023	-0.059	-0.024	-0.000	-0.006*
	(0.051)	(0.016)	(0.010)	(0.003)
03may2023	0.033	-0.030*	0.003	-0.004
	(0.074)	(0.016)	(0.011)	(0.003)
04jan2023 * Uninsured ratio	-0.049	0.045	-0.002	0.008
	(0.068)	(0.037)	(0.033)	(0.008)
11jan2023 * Uninsured ratio	0.044	0.066	0.025	0.002
	(0.076)	(0.041)	(0.028)	(0.007)
18jan2023 * Uninsured ratio	-0.017	0.054	0.004	0.009
	(0.090)	(0.044)	(0.027)	(0.010)
25jan2023 * Uninsured ratio	-0.002	0.042	-0.002	0.007
	(0.068)	(0.040)	(0.025)	(0.007)
01feb2023 * Uninsured ratio	0.166	0.047	-0.008	-0.005

	(0.161)	(0.041)	(0.026)	(0.008)
08feb2023 * Uninsured ratio	-0.021	0.041	-0.014	0.011
	(0.097)	(0.040)	(0.032)	(0.013)
15feb2023 * Uninsured ratio	0.190	0.040	0.040	0.013
	(0.193)	(0.047)	(0.032)	(0.010)
22feb2023 * Uninsured ratio	-0.057	0.211	-0.002	0.011
	(0.081)	(0.148)	(0.026)	(0.008)
01mar2023 * Uninsured ratio	-0.043	0.034	-0.035	-0.002
	(0.074)	(0.038)	(0.031)	(0.010)
15mar2023 * Uninsured ratio	-0.199**	0.028	-0.003	0.008
	(0.099)	(0.038)	(0.021)	(0.007)
22mar2023 * Uninsured ratio	-0.061	0.041	-0.012	0.006
	(0.063)	(0.037)	(0.024)	(0.006)
29mar2023 * Uninsured ratio	0.029	0.069*	0.001	0.010
	(0.083)	(0.036)	(0.024)	(0.007)
05apr2023 * Uninsured ratio	0.035	0.072*	0.013	0.018
	(0.090)	(0.037)	(0.024)	(0.011)
12apr2023 * Uninsured ratio	-0.076	0.023	0.004	-0.000
	(0.073)	(0.050)	(0.026)	(0.008)
22apr2023 * Uninsured ratio	-0.120	0.176	-0.033	0.012*
	(0.087)	(0.160)	(0.033)	(0.007)
19apr2023 * Uninsured ratio	-0.042	0.058	0.007	0.013*
	(0.071)	(0.036)	(0.026)	(0.008)
03may2023 * Uninsured ratio	-0.089	0.098**	-0.001	0.008
	(0.106)	(0.049)	(0.023)	(0.007)
04jan2023 * Adj. TCE ratio	0.405	-0.171	0.061	-0.014
	(0.304)	(0.116)	(0.136)	(0.018)
11jan2023 * Adj. TCE ratio	-0.013	-0.196	0.022	0.004
	(0.326)	(0.130)	(0.112)	(0.019)
18jan2023 * Adj. TCE ratio	-0.033	-0.130	-0.068	-0.006
	(0.444)	(0.127)	(0.098)	(0.019)
25jan2023 * Adj. TCE ratio	0.088	-0.160	-0.164*	-0.017
	(0.337)	(0.127)	(0.087)	(0.018)
01feb2023 * Adj. TCE ratio	-0.633	-0.235*	-0.055	-0.010
	(0.684)	(0.127)	(0.117)	(0.020)
08feb2023 * Adj. TCE ratio	-0.203	-0.274*	-0.343**	-0.091*
	(0.358)	(0.148)	(0.166)	(0.049)
15feb2023 * Adj. TCE ratio	0.463	-0.249	-0.142	-0.028
	(0.463)	(0.223)	(0.102)	(0.027)
22feb2023 * Adj. TCE ratio	-0.241	-0.106	-0.149*	-0.010
	(0.565)	(0.200)	(0.080)	(0.019)
01mar2023 * Adj. TCE ratio	1.621	-0.285	-0.223	-0.056
	(1.272)	(0.177)	(0.153)	(0.047)
15mar2023 * Adj. TCE ratio	-0.718	-0.188	-0.108	-0.013

	(1.189)	(0.116)	(0.077)	(0.018)
22mar2023 * Adj. TCE ratio	0.327	-0.139	-0.104	-0.019
	(0.323)	(0.120)	(0.079)	(0.017)
29mar2023 * Adj. TCE ratio	0.029	-0.110	-0.108	-0.017
	(0.372)	(0.120)	(0.075)	(0.019)
05apr2023 * Adj. TCE ratio	0.267	-0.301**	-0.082	-0.036
	(0.386)	(0.130)	(0.084)	(0.028)
12apr2023 * Adj. TCE ratio	0.756	0.358	-0.153	-0.000
	(0.689)	(0.311)	(0.103)	(0.022)
22apr2023 * Adj. TCE ratio	0.104	-0.049	-0.298*	-0.012
	(0.356)	(0.210)	(0.166)	(0.017)
19apr2023 * Adj. TCE ratio	0.645	-0.058	-0.145	-0.010
	(0.506)	(0.158)	(0.098)	(0.018)
03may2023 * Adj. TCE ratio	-0.438	-0.264*	-0.074	-0.018
	(0.779)	(0.141)	(0.116)	(0.018)
HHI x week controls	Y	Y	Y	Y
Bank FE	Y	Y	Y	Y
Week FE	Y	Y	Y	Y
County FE	--	--	Y	Y
Observations	5563	5336	592205	460544
Adjusted R-squared	0.012	0.011	0.107	0.095

Table 6: Monthly Deposit Growth Rates of GSIBs and non-GSIBs

This table examines monthly growth in deposits for banks from November 2022 through July 2023 by deposit insurance status (insured or uninsured). Monthly deposits data from banks come from the Federal Reserve's FR 2052a filings. Data are reported as of the last business day of the month. The table reports the results from the following regression:

$$Y_{it} = \beta_t(GSIB_i \times D_t) + \omega_i + \xi_t + \epsilon_{it}$$

Where Y_{it} is the monthly log change in deposits for bank *i* in month *t*. $GSIB_i$ is an indicator equal to 1 if the bank is a GSIB, and 0 otherwise. D_t is an indicator that takes the value of 1 in month *t*, and 0 otherwise. The coefficient is omitted for February 2023, which serves as the reference month. ω_i is a bank fixed effect, ξ_t a time fixed effect, and ϵ_{it} an idiosyncratic error. Fixed effects are denoted at the bottom of each panel. Standard errors (in parentheses) are clustered by bank and month. ***, **, * indicates statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

	All deposits (1)	Insured deposits (2)	Uninsured deposits (3)
nov2022 * GSIB	-0.814	-0.110	-1.109
	(0.797)	(0.845)	(0.845)
dec2022 * GSIB	-2.259	-0.889	-3.101
	(1.383)	(1.927)	(1.738)
jan2023 * GSIB	-0.231	-0.705	-0.667
	(0.384)	(0.487)	(0.587)
mar2023 * GSIB	-0.069	-3.013**	3.661***
	(0.443)	(1.044)	(0.963)
apr2023 * GSIB	0.249	2.134**	0.543
	(0.375)	(0.809)	(0.492)
may2023 * GSIB	2.010***	1.650	1.427**
	(0.566)	(1.249)	(0.506)
jun2023 * GSIB	-1.149	-0.374	-1.437
	(1.046)	(1.758)	(1.362)
Bank fixed effects	Y	Y	Y
Month fixed effects	Y	Y	Y
Banks	25	25	25
Observations	190	190	190
R-squared	0.398	0.401	0.549

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 7: Monthly Deposit Growth Rates by Depositor Type

This table examines monthly growth in deposits for banks from November 2022 through July 2023 by deposit insurance status (insured or uninsured) and between GSIBs and non-GSIBs. Monthly deposits data from banks come from the Federal Reserve's FR 2052a filings. Data are reported as of the last business day of the month. The table reports the results from the following regression:

$$Y_{ist} = \beta_t(GSIB_i \times U_s \times D_t) + \omega_{it} + \xi_{is} + \chi_{st} + \epsilon_{ist}$$

Where Y_{ist} is the monthly log change in deposits with insurance status *s* for bank *i* in week *t*. Insurance status *s* is either insured or uninsured. $GSIB_i$ is an indicator equal to 1 if the bank is a GSIB, and 0 otherwise. U_s is an indicator equal to 1 for uninsured deposits, and 0 for insured. D_t is an indicator that takes the value of 1 in month *t*, and 0 otherwise. The coefficient is omitted for February 2023, which serves as the reference month, and for insured deposits and non-GSIBs, the reference deposit insurance status and bank type. ω_{it} is a bank-month fixed effect, ξ_{is} a bank-insurance status fixed effect, χ_{st} an insurance status-month fixed effect, and ϵ_{ist} an idiosyncratic error. Fixed effects are denoted at the bottom of each panel. Standard errors (in parentheses) are clustered by bank and month. ***, **, * indicates statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

	All depositors	Retail & small business	Nonfinancial corporations	Other
	(1)	(2)	(3)	(4)
nov2022 * GSIB * uninsured	-0.930	-1.714	7.046	-12.864
	(1.436)	(1.327)	(5.219)	(7.245)
dec2022 * GSIB * uninsured	-2.242	-1.158	2.123	-2.763
	(3.298)	(0.913)	(4.225)	(12.995)
jan2023 * GSIB * uninsured	0.109	-0.921	-6.534	1.703
	(0.473)	(0.852)	(4.072)	(5.633)
mar2023 * GSIB * uninsured	5.921***	5.661**	28.821***	-2.136
	(1.449)	(2.387)	(5.323)	(12.322)
apr2023 * GSIB * uninsured	-1.517**	-2.036*	7.773	11.731
	(0.556)	(1.026)	(4.973)	(11.149)
may2023 * GSIB * uninsured	-0.150	0.486	1.687	-1.091
	(0.884)	(1.436)	(2.778)	(3.946)
jun2023 * GSIB * uninsured	-0.990	-1.015	2.555	-25.104**
	(3.042)	(1.845)	(10.053)	(10.065)
Bank-month fixed effects	Y	Y	Y	Y
Bank-insurance fixed effects	Y	Y	Y	Y
Insurance-month	Y	Y	Y	Y
Banks	25	24	22	22
Observations	380	364	332	332
R-squared	0.741	0.765	0.633	0.627

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 8: Deposit Amounts of GSIBs and non-GSIBs

This table examines deposit amounts for banks from November 2022 through October 2023 by deposit insurance status (insured or uninsured). Monthly deposits data from banks come from the Federal Reserve's FR 2052a filings. Data are reported as of the last business day of the month. The table reports the results from the following regression:

$$Y_{it} = \beta_t(GSIB_i \times D_t) + \omega_i + \xi_t + \epsilon_{it}$$

Where Y_{it} is the natural logarithm of the amount of deposits for bank *i* in month *t*. $GSIB_i$ is an indicator equal to 1 if the bank is a GSIB, and 0 otherwise. D_t is an indicator that takes the value of 1 in month *t*, and 0 otherwise. The coefficient is omitted for February 2023, which serves as the reference month. ω_i is a bank fixed effect, ξ_t a time fixed effect, and ϵ_{it} an idiosyncratic error. Fixed effects are denoted at the bottom of each panel. Standard errors (in parentheses) are clustered by bank and month. ***, **, * indicates statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

	All deposits (1)	Insured deposits (2)	Uninsured deposits (3)
nov2022 * GSIB	0.023**	0.040***	0.012
	(0.009)	(0.011)	(0.018)
dec2022 * GSIB	-0.002	0.021	-0.012
	(0.012)	(0.015)	(0.018)
jan2023 * GSIB	-0.002	0.007	-0.007
	(0.009)	(0.012)	(0.017)
mar2023 * GSIB	-0.005*	-0.029**	0.035**
	(0.003)	(0.012)	(0.015)
apr2023 * GSIB	-0.002	-0.015	0.051**
	(0.008)	(0.014)	(0.022)
may2023 * GSIB	0.019	-0.017	0.147**
	(0.015)	(0.023)	(0.053)
jun2023 * GSIB	0.008	-0.023	0.075**
	(0.012)	(0.018)	(0.028)
jul2023 * GSIB	-0.012	-0.023	0.030
	(0.014)	(0.022)	(0.036)
aug2023 * GSIB	-0.020	-0.016	0.019
	(0.018)	(0.023)	(0.037)
sep2023 * GSIB	-0.020	-0.025	0.019
	(0.016)	(0.023)	(0.040)
oct2023 * GSIB	-0.012	-0.024	0.028
	(0.020)	(0.029)	(0.040)
Bank fixed effects	Y	Y	Y
Month fixed effects	Y	Y	Y
Banks	25	25	25
Observations	281	281	281
R-squared	0.998	0.999	0.993

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Appendix to “Flight to Safety in the Regional Bank Stress of 2023”

Table A1: Variable Definitions

Variable	Definition
FR 2644 variables	
(Weekly Wednesdays. Log changes are winsorized at 1st and 99th percentiles)	
Deposit growth	Log change in weekly deposits
RateWatch variables	
(Bank rate is calculated as the median weekly rate across a bank's branches. Branch rate is directly reported.)	
CD rate	Annual percentage yield (APY) on 12-month certificates of deposits (CD) with a $10,000 account size.
MM rate	Annual percentage yield (APY) on a money market savings account with a $10,000 account size. Bank rate is calculated as the median weekly rate across a bank's branches. Branch rate is directly reported.
Other variables	
(Bank level data is aggregated to BHCs for Y-9C filers).	
Large	An indicator if the bank has assets of $250 billion or more.
Regional	An indicator if the bank has assets of between $100 and $250 billion.
HHI	Herfindahl-Hirschmann index of deposit market concentration. County HHI the sum of squared deposit market shares for banks with branches in a county. Bank level HHI is the deposit-weighted average of county HHI in which branches are located. Source: Summary of Deposits.
Uninsured ratio	Uninsured deposits as a share of total deposits. Estimated uninsured deposits only required to be reported for banks with assets of at least $1 billion. Source: Call Report.
Adj. TCE ratio	Tangible common equity (TCE) ratio adjusted for unrealized gains or losses on securities holdings. The TCE ratio is (total bank equity capital - intangible assets - perpetual preferred stock and related surplus)/(total assets-intangible assets). The adjusted ratio assumes unrealized gains and losses on securities are realized and flow through to capital after being taxed at a 21 percent rate. For banks that have opted-out of including unrealized gains and losses on available-for-sale (AFS) securities, capital is hit by realization of gains and losses on both AFS and held-to-maturity (HTM) securities. For banks that already include unrealized AFS losses either due to regulatory requirements or an election to opt-in, their capital is hit by realization of unrealized gains and losses on HTM securities only. Source: Call Report, FR Y-9C
Ln(assets)	Natural log of assets. Source: Call Report, FR Y-9C
ROA	Net income/quarterly average assets. Note: quarterly; not annualized. Source: Call Report, FR Y-9C
Tier 1 RBC ratio	Tier 1 risk-based capital ratio defined as Tier 1 (core) capital, less low-level recourse deduction, divided by risk-weighted assets Source: Call Report, FR Y-9C
NPL ratio	Non-performing loans to total loans. Source: Call Report, FR Y-9C
BHC	Indicator for whether entity is aggregated to the BHC level, 0 if bank level. Source: Call Report, FR Y-9C

Table A2: Banks in the Monthly FR 2052a Data

GSIBs	Non-GSIBs
Bank of America Corp.	Ally Financial Inc.
Bank of New York Mellon Corp.	American Express Co.
Citigroup Inc.	Capital One Financial Corp.
Goldman Sachs Group	Charles Schwab Corp.
JPMorgan Chase & Co.	Citizens Financial Group
Morgan Stanley	Discover Financial Services
State Street Corp.	Fifth Third Bancorp
Wells Fargo & Co.	First Citizens Bancshares
	Huntington Bancshares Inc.
	KeyCorp
	M&T Bank Corp.
	Northern Trust Corp.
	PNC Financial Services Group
	Regions Financial Corp.
	SVB Financial Group
	Truist Financial Corp.
	U.S. Bancorp

Source: FR 2052a data.

Table A3: Robustness: Excluding banks that stop reporting

This table repeats the bank level analysis in Tables 2-4 excluding banks that stopped reporting the FR 2644 data during our sample period for any reasons, which include failures, acquisitions and voluntary leaves. Certain coefficients are not reported in the table for brevity. Fixed effects are denoted at the bottom of each panel. Standard errors in parentheses are clustered by bank. ***, **, * indicates statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

	Deposit growth	CD Rate	MM Rate	Chg. CD Rate	Chg. MM Rate
	(1)	(2)	(3)	(4)	(5)
04jan2023 * Large	2.167**	0.317***	0.078***	0.027	-0.004
	(1.039)	(0.059)	(0.018)	(0.021)	(0.004)
11jan2023 * Large	0.081	0.290***	0.059***	0.003	-0.026**
	(0.543)	(0.057)	(0.018)	(0.024)	(0.011)
18jan2023 * Large	1.341	0.238***	0.056***	-0.025	-0.005
	(0.989)	(0.054)	(0.017)	(0.033)	(0.011)
25jan2023 * Large	0.642	0.221***	0.050***	0.011	-0.007
	(0.815)	(0.053)	(0.016)	(0.023)	(0.006)
01feb2023 * Large	1.537*	0.146***	0.041***	-0.050	-0.010
	(0.880)	(0.042)	(0.015)	(0.047)	(0.006)
08feb2023 * Large	0.121	0.114***	0.031**	-0.002	-0.014*
	(0.314)	(0.040)	(0.015)	(0.025)	(0.007)
15feb2023 * Large	1.767*	0.063**	0.016	-0.030	-0.017
	(0.939)	(0.030)	(0.012)	(0.037)	(0.011)
22feb2023 * Large	0.188	0.010	-0.003	-0.029	-0.046
	(0.847)	(0.030)	(0.003)	(0.033)	(0.031)
01mar2023 * Large	1.606	0.033	-0.004	0.063*	-0.007
	(1.073)	(0.020)	(0.003)	(0.033)	(0.008)
15mar2023 * Large	2.989**	0.002	-0.001	0.027	-0.001
	(1.379)	(0.020)	(0.001)	(0.030)	(0.004)
22mar2023 * Large	0.174	-0.013	-0.006*	0.014	-0.007
	(0.497)	(0.024)	(0.004)	(0.024)	(0.005)
29mar2023 * Large	0.588	-0.038	-0.006	-0.005	-0.002
	(0.492)	(0.026)	(0.004)	(0.025)	(0.004)
05apr2023 * Large	1.659*	-0.070**	-0.019***	-0.006	-0.017**
	(0.986)	(0.034)	(0.006)	(0.033)	(0.007)
12apr2023 * Large	0.254	-0.085**	-0.020**	0.017	0.001
	(0.566)	(0.034)	(0.008)	(0.024)	(0.008)
19apr2023 * Large	0.917	-0.088**	-0.035***	0.030	-0.043
	(1.065)	(0.034)	(0.012)	(0.022)	(0.030)
26apr2023 * Large	0.874	-0.097***	-0.035***	0.051	-0.002
	(0.817)	(0.035)	(0.012)	(0.035)	(0.004)
03may2023 * Large	2.176***	-0.120***	-0.040***	0.007	-0.013
	(0.751)	(0.039)	(0.014)	(0.027)	(0.010)
04jan2023 * Regional	0.453	0.296***	0.077***	0.028	0.006
	(0.768)	(0.069)	(0.017)	(0.024)	(0.007)

11jan2023 * Regional	-0.203	0.272***	0.057***	-0.007	-0.032**
	(0.233)	(0.064)	(0.017)	(0.022)	(0.012)
18jan2023 * Regional	0.315	0.009	0.053***	-0.069	-0.010
	(0.345)	(0.212)	(0.014)	(0.060)	(0.013)
25jan2023 * Regional	-0.231	-0.006	0.047***	-0.039	-0.012
	(0.332)	(0.211)	(0.013)	(0.051)	(0.009)
01feb2023 * Regional	0.546	0.134***	0.040***	-0.060	-0.013
	(0.755)	(0.051)	(0.013)	(0.041)	(0.009)
08feb2023 * Regional	-0.331	-0.103	0.032**	-0.040	-0.006
	(0.207)	(0.208)	(0.013)	(0.053)	(0.006)
15feb2023 * Regional	0.221	0.184	0.019*	0.296	-0.012
	(0.540)	(0.124)	(0.011)	(0.320)	(0.013)
22feb2023 * Regional	0.103	0.136	-0.000	-0.079	-0.049*
	(0.308)	(0.124)	(0.003)	(0.057)	(0.026)
01mar2023 * Regional	0.200	0.027	-0.001	0.065*	-0.000
	(0.636)	(0.020)	(0.003)	(0.034)	(0.014)
15mar2023 * Regional	0.861	0.003	-0.001	0.048	0.023
	(0.585)	(0.021)	(0.001)	(0.043)	(0.019)
22mar2023 * Regional	-0.358	0.113	-0.007*	-0.040	-0.004
	(0.368)	(0.124)	(0.004)	(0.053)	(0.012)
29mar2023 * Regional	0.657	-0.036	-0.008*	-0.007	-0.007
	(0.489)	(0.026)	(0.004)	(0.024)	(0.008)
05apr2023 * Regional	-0.163	-0.071**	-0.018***	0.011	0.001
	(0.346)	(0.036)	(0.005)	(0.043)	(0.013)
12apr2023 * Regional	0.390	0.037	-0.030***	-0.040	-0.020*
	(0.574)	(0.127)	(0.010)	(0.053)	(0.011)
19apr2023 * Regional	0.245	0.036	-0.045***	-0.021	-0.030
	(0.310)	(0.126)	(0.011)	(0.051)	(0.034)
26apr2023 * Regional	0.095	-0.101***	-0.046***	-0.009	-0.008
	(0.638)	(0.037)	(0.011)	(0.034)	(0.008)
03may2023 * Regional	0.916	-0.117***	-0.049***	0.008	-0.013
	(0.647)	(0.037)	(0.012)	(0.024)	(0.010)
04jan2023	0.722	-0.200*	-0.045	-0.052	-0.014
	(0.836)	(0.113)	(0.033)	(0.050)	(0.017)
11jan2023	0.597	-0.160	-0.039	-0.021	-0.021
	(0.711)	(0.111)	(0.031)	(0.049)	(0.020)
18jan2023	0.537	-0.159	-0.036	-0.050	-0.019
	(0.682)	(0.106)	(0.029)	(0.059)	(0.019)
25jan2023	0.633	-0.140	-0.036	-0.042	-0.018
	(0.644)	(0.105)	(0.028)	(0.049)	(0.018)
01feb2023	0.469	-0.132	-0.034	-0.062	-0.016
	(0.467)	(0.103)	(0.026)	(0.059)	(0.021)
08feb2023	0.619	-0.072	-0.026	0.009	-0.000
	(0.518)	(0.100)	(0.026)	(0.061)	(0.021)

15feb2023	-0.063	-0.111	0.000	-0.114	-0.012
	(0.462)	(0.097)	(0.020)	(0.076)	(0.026)
22feb2023	0.633	-0.031	-0.017*	0.020	-0.076*
	(0.387)	(0.062)	(0.010)	(0.091)	(0.041)
01mar2023	0.707	-0.052	-0.013	-0.092	-0.010
	(0.548)	(0.046)	(0.010)	(0.071)	(0.023)
15mar2023	0.014	0.021	0.003	-0.007	-0.008
	(0.819)	(0.029)	(0.002)	(0.058)	(0.018)
22mar2023	0.477	0.032	0.010	-0.051	-0.022
	(0.493)	(0.034)	(0.008)	(0.051)	(0.018)
29mar2023	-0.569	0.036	0.003	-0.031	-0.034**
	(0.401)	(0.034)	(0.010)	(0.052)	(0.017)
05apr2023	1.006	0.015	0.011	-0.099	-0.016
	(0.842)	(0.048)	(0.011)	(0.064)	(0.017)
12apr2023	0.035	0.015	-0.018	-0.065	-0.042
	(0.329)	(0.055)	(0.017)	(0.059)	(0.026)
19apr2023	0.074	0.057	-0.019	-0.010	-0.023
	(0.787)	(0.069)	(0.025)	(0.067)	(0.057)
26apr2023	-0.405	0.053	-0.020	-0.061	-0.024
	(0.491)	(0.071)	(0.025)	(0.052)	(0.016)
03may2023	0.682	0.137*	-0.021	0.031	-0.030*
	(0.739)	(0.081)	(0.025)	(0.074)	(0.017)
04jan2023 * Uninsured ratio	-1.542	-0.535**	0.000	-0.042	0.046
	(1.071)	(0.230)	(0.079)	(0.069)	(0.038)
11jan2023 * Uninsured ratio	-1.896**	-0.499**	0.004	-0.004	0.066
	(0.907)	(0.229)	(0.078)	(0.072)	(0.043)
18jan2023 * Uninsured ratio	-1.512	-0.491**	-0.003	-0.015	0.046
	(0.958)	(0.220)	(0.075)	(0.093)	(0.045)
25jan2023 * Uninsured ratio	-1.970**	-0.449**	-0.001	0.002	0.043
	(0.861)	(0.219)	(0.075)	(0.070)	(0.041)
01feb2023 * Uninsured ratio	-0.763	-0.272	0.009	0.181	0.048
	(0.777)	(0.182)	(0.073)	(0.167)	(0.043)
08feb2023 * Uninsured ratio	-1.498**	-0.242	0.020	-0.016	0.042
	(0.700)	(0.174)	(0.072)	(0.100)	(0.041)
15feb2023 * Uninsured ratio	-0.374	-0.023	0.001	0.236	0.041
	(0.776)	(0.084)	(0.066)	(0.199)	(0.049)
22feb2023 * Uninsured ratio	-2.001***	-0.035	0.045	-0.054	0.217
	(0.751)	(0.070)	(0.033)	(0.083)	(0.153)
01mar2023 * Uninsured ratio	-1.504	-0.037	0.041	-0.033	0.035
	(0.965)	(0.059)	(0.033)	(0.076)	(0.039)
15mar2023 * Uninsured ratio	-1.958*	-0.096	-0.002	-0.195*	0.029
	(1.084)	(0.070)	(0.002)	(0.100)	(0.039)
22mar2023 * Uninsured ratio	-2.727***	-0.104	-0.011	-0.056	0.041
	(0.836)	(0.072)	(0.009)	(0.064)	(0.038)

29mar2023 * Uninsured ratio	-0.277	-0.045	-0.001	0.037	0.069*
	(0.772)	(0.091)	(0.011)	(0.085)	(0.037)
05apr2023 * Uninsured ratio	-0.450	0.002	0.017	0.043	0.073*
	(1.038)	(0.111)	(0.016)	(0.091)	(0.038)
12apr2023 * Uninsured ratio	-0.668	-0.005	0.017	-0.071	0.023
	(0.629)	(0.114)	(0.023)	(0.074)	(0.051)
19apr2023 * Uninsured ratio	-1.638	-0.059	0.063	-0.115	0.177
	(1.059)	(0.127)	(0.051)	(0.088)	(0.161)
26apr2023 * Uninsured ratio	-0.914	-0.047	0.068	-0.036	0.058
	(0.939)	(0.133)	(0.051)	(0.073)	(0.037)
03may2023 * Uninsured ratio	-0.908	-0.076	0.079	-0.084	0.098*
	(0.832)	(0.148)	(0.056)	(0.107)	(0.050)
04jan2023 * Adj. TCE ratio	-3.765	1.182	0.268	0.406	-0.165
	(4.223)	(1.413)	(0.228)	(0.304)	(0.115)
11jan2023 * Adj. TCE ratio	-2.855	0.922	0.224	-0.001	-0.189
	(4.182)	(1.411)	(0.216)	(0.327)	(0.130)
18jan2023 * Adj. TCE ratio	-0.831	0.753	0.258	-0.035	-0.141
	(4.200)	(1.387)	(0.212)	(0.445)	(0.127)
25jan2023 * Adj. TCE ratio	-6.795*	0.605	0.224	0.088	-0.160
	(3.851)	(1.385)	(0.206)	(0.337)	(0.127)
01feb2023 * Adj. TCE ratio	-3.294	-0.163	0.129	-0.642	-0.236*
	(3.136)	(1.293)	(0.201)	(0.688)	(0.127)
08feb2023 * Adj. TCE ratio	-4.088	-0.550	0.102	-0.205	-0.274*
	(3.047)	(1.276)	(0.199)	(0.358)	(0.148)
15feb2023 * Adj. TCE ratio	-0.574	-0.361	-0.073	0.454	-0.249
	(2.755)	(1.290)	(0.113)	(0.467)	(0.223)
22feb2023 * Adj. TCE ratio	-3.348	-0.889	-0.060	-0.242	-0.108
	(2.318)	(1.198)	(0.075)	(0.565)	(0.202)
01mar2023 * Adj. TCE ratio	-7.429**	0.416	-0.061	1.619	-0.285
	(3.582)	(0.282)	(0.070)	(1.272)	(0.177)
15mar2023 * Adj. TCE ratio	-1.594	-0.955	-0.013	-0.719	-0.188
	(4.347)	(1.102)	(0.008)	(1.190)	(0.116)
22mar2023 * Adj. TCE ratio	-1.466	-0.914	0.017	0.326	-0.139
	(2.763)	(1.112)	(0.046)	(0.323)	(0.120)
29mar2023 * Adj. TCE ratio	1.822	-0.958	0.087	0.026	-0.110
	(2.501)	(1.128)	(0.068)	(0.372)	(0.121)
05apr2023 * Adj. TCE ratio	-3.250	-0.935	-0.032	0.264	-0.301**
	(4.946)	(1.150)	(0.087)	(0.387)	(0.130)
12apr2023 * Adj. TCE ratio	-1.995	-0.547	0.353	0.755	0.359
	(2.181)	(1.287)	(0.231)	(0.689)	(0.312)
19apr2023 * Adj. TCE ratio	-1.431	-0.699	0.395	0.103	-0.050
	(4.345)	(1.295)	(0.246)	(0.356)	(0.210)
26apr2023 * Adj. TCE ratio	-0.178	-0.434	0.505*	0.643	-0.058
	(2.765)	(1.332)	(0.272)	(0.506)	(0.158)

03may2023 * Adj. TCE ratio	-3.221	-1.195	0.409	-0.439	-0.265*
	(3.957)	(1.479)	(0.277)	(0.779)	(0.141)
HHI x week controls	Y	Y	Y	Y	Y
Bank FE	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y
Observations	6755	5525	5296	5508	5281
Adjusted R-squared	0.051	0.933	0.937	-0.011	-0.011