

# Flight to Safety in the Regional Bank Crisis of 2023\*

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## Abstract

Using confidential weekly data on 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 remain higher than other banks' even after accounting for characteristics associated with failures during the period, including uninsured deposit funding and unrealized mark-to-market losses. Banks with the largest deposit outflows did not recover those funds and reduced lending over the following months.

JEL Codes: G21, G28

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## Introduction

In March 2023, the banking sector came under stress. 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. The effects of the runs extended beyond the banks experiencing them, as they lowered confidence about other banks. In the week of SVB’s failure, the KBW Bank Index fell by over 20 percent and it remains down by 14 percent year-to-date<sup>3</sup> even while the S&P 500 gained 20 percent. While a growing literature examines the drivers of the stress and bank stock price reactions (Drechsler *et al.*, 2023; Flannery and Sorescu, 2023; Jiang *et al.*, 2023; Cookson *et al.*, 2023; Chang *et al.*, 2023), ours is the first to examine depositors’ responses using high frequency data.

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 confounding effects, such as those from measures to stop the run. Third, it requires a sample of banks comprehensive and heterogeneous enough to account for variation in deposits across bank types.

In this paper, we use confidential weekly 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 dataset covers 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.

Deposits generally fly to the safest institutions during periods of stress, but those movements have varied substantially across stress episodes. Because of their advantage in hedging liquidity risk, banks may 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

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<sup>3</sup> Year-to-date through December 1, 2023.

pattern can break down, however, in severe crises or when the banking sector itself is the source of stress (Acharya and Mora, 2015). In addition, episodes of stress can trigger reallocations of deposits across banks within the sector, 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 (Mitchener and Richardson, 2019; Richardson and Van Horn, 2018; Baubeau *et al.*, 2021; Acharya *et al.*, 2022). Perceptions of safety may derive from bank strength and expectations of government support. The banking stress of 2023 is the first stress episode since the post-Global Financial Crisis (GFC) banking reforms, which strengthened capital and liquidity requirements, and may have changed depositors' views of bank safety during stress.

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.<sup>4</sup> 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 provides evidence consistent with a flight to safety towards large banks, it does not establish what drove movements in bank deposits. The flight to safety hypothesis has two 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. In our tests, we consider as weeks of heightened stress the week when SVB failed and the extraordinary government interventions were announced (the week ending March 15<sup>th</sup>) and the week after First Republic was acquired (the week ending May 3<sup>rd</sup>), the two weeks with the largest drops in the KBW regional bank stock price index in 2023.

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

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<sup>4</sup> Data on weekly deposits begin July 1, 2009, so the first observation of a weekly growth rate is the following week.

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 (median) 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.

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.

Deposit reallocations can have longer-term implications for bank lending and real activity (Khwaja and Mian, 2008; Gilje, Loutskina, and Strahan, 2016; Cortes and Strahan, 2017; Dlugosz *et al.*, 2023, Acharya *et al.*, 2023), therefore understanding whether these reallocations are persistent and whether they have longer-term credit supply effects is crucial. To examine these issues, we first divide banks into quintiles based on run period deposit growth (using the week ended March 15, 2023). Banks in the bottom quintile had the largest run period losses, whereas banks in the top quintile had the largest run period deposit gains. Extending our weekly bank level data through the end of July 2023, we find that differences in deposit amounts remain noticeable between banks in the upper and lower quintiles, indicating that run period deposit losses and gains are persistent.

We then examine whether large run period deposit gains or losses affect bank lending. Using bank-level data on lending from quarterly regulatory reports through the end of the second quarter of 2023, we show that loan growth slowed at banks with the largest run period deposit losses (relative to those in the middle quintile). Meanwhile, there is no evidence of faster loan growth at

banks with the largest deposit gains. Slower loan growth at run period losers is concentrated in residential real estate lending. While these results do not necessarily imply a causal relationship between deposit growth and loan supply, they suggest that deposit outflows weakened lending.

Our paper contributes to the literature on bank runs and panics<sup>5</sup>, and it is most closely related to papers about flights to safety by depositors during these events. 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. 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 to the nascent literature on the regional bank stress of 2023. This literature has mostly focused on the drivers of the regional bank 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 (Cookson *et al.*, 2023), mobile banking availability (Koont *et al.*, 2023), branch density (Benmelech *et al.*, 2023), and synergies between uninsured deposit taking and business lending (Chang *et al.*, 2023).

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<sup>5</sup> 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.*, 2022).

We contribute to this literature in several ways. First, we document the scale and scope of the event 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, we examine whether key risk factors identified as important by other papers (Cookson *et al.*, 2023; Jiang *et al.*, 2023) predict deposit losses, whereas these papers have focused on predicting bank failures or stock prices. We find that uninsured deposit funding and unrealized losses cannot explain large banks' faster deposit growth during stress weeks. Finally, our paper shows that these reallocations were persistent and weakened credit supply.

Our paper is organized as follows. Section 1 summarizes the main events of the regional bank crisis of 2023 while Section 2 describes the data. Section 3 contains the flight to safety analysis and results. Section 4 examines the persistence of the run period deposit reallocation and its longer-term implications. Section 5 concludes.

## **1. The Regional Bank Crisis 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 crisis of 2023 (Federal Reserve Board (FRB), 2023). After markets closed on that day, Silvergate Bank announced that would close its operations and liquidate (Silvergate Bank, 2023). Also, SVB disclosed it had sold \$21 billion from its available-for-sale 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, 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.<sup>6</sup> 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 1<sup>st</sup>, 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 relies on weekly data on deposits from the Federal Reserve’s 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.” The 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, and 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 begins 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.<sup>7</sup>

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<sup>6</sup> 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).

<sup>7</sup> <https://www.federalreserve.gov/releases/h8/current/default.htm>.

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 BHCs that file the FR Y-9C enter the data as independent observations.<sup>8</sup> 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. The week ending March 15<sup>th</sup> accounts for the largest weekly drop in total deposits across banks during the March 2023 regional bank crisis based on the H.8 data release. Deposit growth rates are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles to preserve panel confidentiality. Compared to weeks earlier in the year, the distribution of deposit growth for the week ending March 15<sup>th</sup> shifted to the left and exhibited increased mass in the tails.

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

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<sup>8</sup> 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.



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 available-for-sale (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.<sup>9</sup>

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 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

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<sup>9</sup> 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.

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.

### 3. Flight to Safety

#### 3.1 Empirical Strategy

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  $t$ .  $\beta_t, \dots, \beta_T$  are vectors of coefficients to be estimated.  $\varphi_i$  and  $\psi_t$  are bank and week fixed effects, and  $\epsilon_{it}$  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, i.e., 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 a week dummy. 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 power. 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.

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  $\beta_{Large,t} \leq 0$  if  $t$  is a week of heightened stress.

We consider the weeks ending in March 15 and May 3 the two weeks of heightened stress over our sample period. During these two weeks, the three largest bank failures of 2023 regional bank crisis occurred (see Figure 2). Also, as Figure 4 shows, regional bank stock prices, measured by the KBW Nasdaq Regional Bank Index, suffered their highest declines from Wednesday to Wednesday of the 2023 so far during these two weeks: 15.21 percent and 5.82 percent, respectively.

## **3.2 Flight to Safety Results**

### **3.2.1 Deposit Growth at Large Banks**

The analysis in this section uses weekly data for the weeks ending Jan. 4, 2023, through May 3, 2023. Table 2 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 (i.e., HHI by week). Column

(3) adds controls for uninsured deposit ratio plus its interaction with week. Column (4) adds controls for adjusted TCE ratio plus its interaction with week.

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 across the four columns of this table indicate that deposits rose faster at large banks by about 3 percentage points and 2 percentage points, respectively, in the weeks ending March 15 and May 3. 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.

There are three possible explanations of why large banks are perceived safer, 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 2 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. After including these controls, the coefficients on  $15mar2023 \times Large$  and  $03may2023 \times Large$  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 faster deposit growth can be explained by relative strength according to these metrics.

While not directly related to the flight to safety hypothesis, 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 on average 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 ( $0.171 \times 2.115$ ) in the week of March 15 and 0.48 percentage points ( $0.171 \times 2.787$ ) 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 on *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 A2, 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) 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.

Table 2, Column (4) shows that greater exposure to unrealized security losses does not have much predictive power for deposit growth in weeks of heightened stress. Since the adjusted TCE ratio reflects these unrealized losses, we would expect the *Adj. TCE ratio* x week to be positive and statistically significant in stress weeks if depositors began to pay more attention to liquidation values.

### **3.2.2 Deposit Rates at Large Banks**

The results in the previous section show that, during weeks of heightened stress, deposits flew to large banks. Does faster deposit growth at large banks reflect greater deposit supply by banks or greater demand by depositors, perhaps due to the perceived safety large banks can provide? 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 3 reports our results using weekly deposit rates as the dependent variable in equation (1), whereas Table 4 uses changes in weekly deposit rates. In each table, for the first two columns, the analysis is at the bank level while in the latter two columns the analysis is at the branch level. Odd

columns use the time deposit rate (CD) while even columns use the savings deposit rate (MM). The branch level regression allows us to include county fixed effects which remove heterogeneity related to local conditions. In the branch level regression, we also substitute county HHI for bank HHI.<sup>10</sup>

There is little evidence to suggest that large banks competed more aggressively for deposits after the onset of stress. The coefficients on *Large x week* in Table 3 show 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 4 examines weekly changes in deposit rates. There is only weak evidence to support the notion that large banks raised deposit rates by more in key crisis weeks. In the bank level analysis, the coefficient on *Large x week* is not statistically significant in key crisis weeks. In the branch level analysis, the coefficient on *Large x week* is positive for the week ending March 15 but only statistically significant at the 10 percent level. It 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 finding, we conclude that faster deposit growth at large banks in weeks of heightened stress should be interpreted as a flight to safety.

#### **4. Implications of the Deposit Reallocation**

The prior section provided evidence of a flight to safety by depositors from small and regional banks to large banks during the bank stress of 2023. In this section, we explore the persistence of the deposit reallocation, the effect on deposit composition, and longer-term effects on bank lending in the months that followed March 2023.

##### **4.1 Persistence of Deposit Reallocation**

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<sup>10</sup> The coefficient on HHI is absorbed by the county fixed effect but the HHI by week coefficients are estimated.

To examine the persistence of deposit gains and losses during the banking stress of 2023, we divide banks into quintiles based on deposit growth in the week after SVB failed (the week ending March 15, 2023), referring to this as the “run period”. We focus here on the first week of heightened stress for simplicity and because it was notably more severe. As shown in Table 5, banks in the bottom quintile had the largest run period deposit losses (-3.29 percent average growth) while banks in the top quintile had the largest run period deposit gains (2.60 percent average growth).<sup>11</sup> Average run period deposit growth for banks in the top and bottom quintiles is notably more extreme compared to that of banks in the middle quintile, which had an average growth rate of -0.22 percent.<sup>12</sup> To examine the persistence of the deposit reallocation, we run the following regression:

$$\Delta Y_{it} = \sum_j \left[ \beta_{j,t} \left( \text{Quint}_{i,j} \times D_t \right) + \alpha_j \left( \text{Quint}_{i,j} \right) \right] + X_{j,t} + \psi_t + \epsilon_{it} \quad (2)$$

Where  $\Delta Y_{it}$  is the log change in weekly deposits for bank  $i$  in week  $t$ , in an extended weekly sample that goes from Jan. 4, 2023 through Jul. 26, 2023.  $\text{Quint}_{i,j}$  are dummies that indicate whether bank  $i$  is in quintile  $j$  where  $j$  can take values between 1 and 5. Quintile 3 is the omitted category.  $D_t$  is a dummy variable for each week (the week ending March 8 is omitted).  $X_{j,t}$  are bank characteristics observed as of 2022Q4 including: log of assets, size class dummies, uninsured ratio, adjusted TCE ratio, Tier 1 RBC ratio, NPL ratio, and ROA.  $\psi_t$  are week fixed effects, and  $\epsilon_{it}$  is an idiosyncratic error.

Figure 8 plots the weekly coefficients ( $\beta_{j,t}$ 's) for banks in the bottom quintile (Panel A) and banks in the top quintile (Panel B). There is no evidence of pre-trends for banks in the top quintile. For banks in the bottom quintile the evidence is more mixed. While these banks have deposit growth that is statistically similar to banks in the middle quintile in the weeks just prior to the run period, there are some weeks earlier in the calendar year when their deposit growth lagged. However, for both types of banks — those with large run period losses and those with large run period gains —

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<sup>11</sup> Deposit growth rates are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles.

<sup>12</sup> The last three columns of Table 5 report the size composition of banks by quintile. In each quintile, the majority of banks are small, consistent with their being far more numerous than regional or large banks in the population. Large banks are most likely to be in the top quintile of deposit growth. Regional banks are most likely to be in the second lowest quintile. Small banks are about equally present in all quintiles, but notably less so in the top quintile.

losses or gains are persistent, at least through the end of July 2023. There is no evidence of deposit reversion during this period.

## 4.2 Deposit Composition

The weekly data we use to document a flight to safety in Section 3 includes only a subset of balance sheet items that are available in quarterly regulatory reports (Call Report and Y-9C). Specifically, we cannot separate insured deposits from uninsured deposits at the weekly frequency. In this section, we examine the relationship between *quarterly* uninsured deposit growth in the first two quarters of 2023 and run period deposit growth.

The regression specification is as follows:

$$Y_{it} = \sum_j \left[ \beta_{j,t} \left( \text{Quint}_{i,j} \times D_t \right) + \alpha_j \left( \text{Quint}_{i,j} \right) \right] + X_{j,t} + \psi_t + \epsilon_{it} \quad (3)$$

where  $i$  indexes banks and  $t$  indexes quarters.  $Y_{it}$  is, alternately, the growth rate of uninsured deposits or the change in the uninsured ratio. For each dependent variable we first run the regression without controls for pre-period bank characteristics observed as of 2022Q4, in the odd columns, before adding them in the even columns.

Table 6 reports the results. Column (1) shows that banks in the bottom quintile (i.e. those with the largest run period deposit losses) had slower quarterly uninsured deposit growth than those in the middle quintile by about 6 percentage points. This is economically large compared to average uninsured deposit growth of about -3.3 percent. Those in the top quintile had faster uninsured deposit growth, but the effect is not statistically significant at conventional levels.

Column (3) shows that for banks in the bottom quintile, uninsured ratios decreased by about 2.3 percentage points on average in the first two quarters of the year. This is a large effect, roughly 5%, relative to the average uninsured ratio of 38%. After including controls for bank characteristics, the effects remain statistically significant though slightly smaller (Column (4)), suggesting that pre-period bank characteristics cannot fully explain decreased reliance on uninsured deposit funding by banks with the largest run period deposit losses.



### 4.3 Post-Run Lending

Having established the persistence of run period deposit reallocations, we now explore the implications for bank lending. We estimate a regression analogous to the one in equation (3) using instead as the dependent variable *quarterly* loan growth. We examine total lending and lending by type including: commercial and industrial (C&I), residential real estate (RRE), commercial real estate (CRE) and loans to small and medium enterprises (SME).

Table 7 reports the results. The results in Column (3) show that banks with large run period losses had RRE lending that was 1.7 percentage points slower than banks in the middle quintile after the run. This is economically significant relative to mean RRE loan growth of 2.4 percentage points. As shown in Column (8), the slower lending of large deposit losers is not explained by pre-period characteristics. The fact that the effect survives the inclusion of these controls suggests that large run period deposit losses have an independent effect on lending that is not subsumed in the effect of unrealized losses on capital (Greenwald, Krainer, and Paul, 2023). The results indicate no evidence that large deposit gainers (the top quintile) increased lending, hinting at a potential contractionary effect of the stress period on aggregate lending. While these results do not necessarily imply a causal relationship between deposit growth and loan supply — which is challenging to identify in bank level data — they are consistent with the idea that deposit outflows weakened certain types of lending.

## V. Conclusion

This paper uses high frequency data to study bank deposits 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. 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.

A large body of literature shows that bank liquidity shocks have credit supply effects. We show that deposit losses and gains during the period of stress in early 2023 are persistent in the months that follow. Furthermore, banks with large deposit losses appear to contract lending while banks with large deposit gains do not appear to increase it.

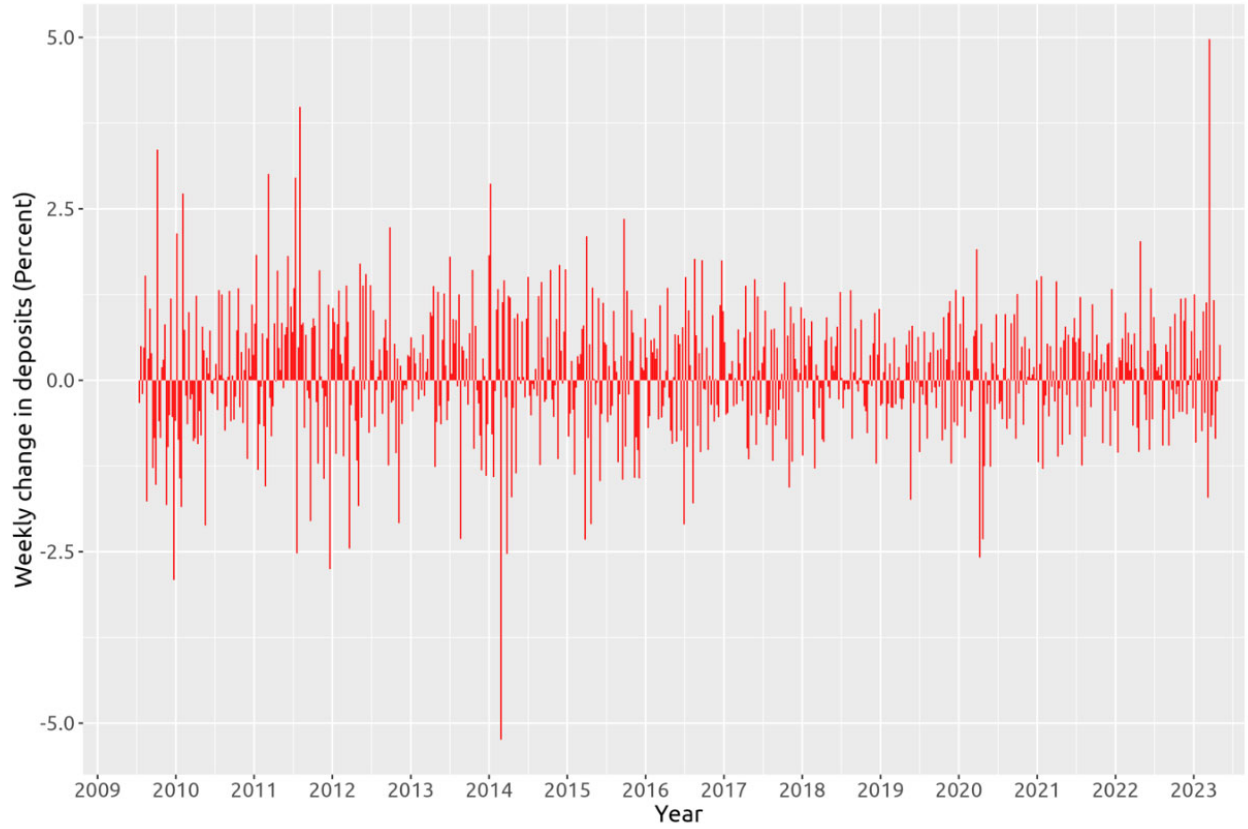
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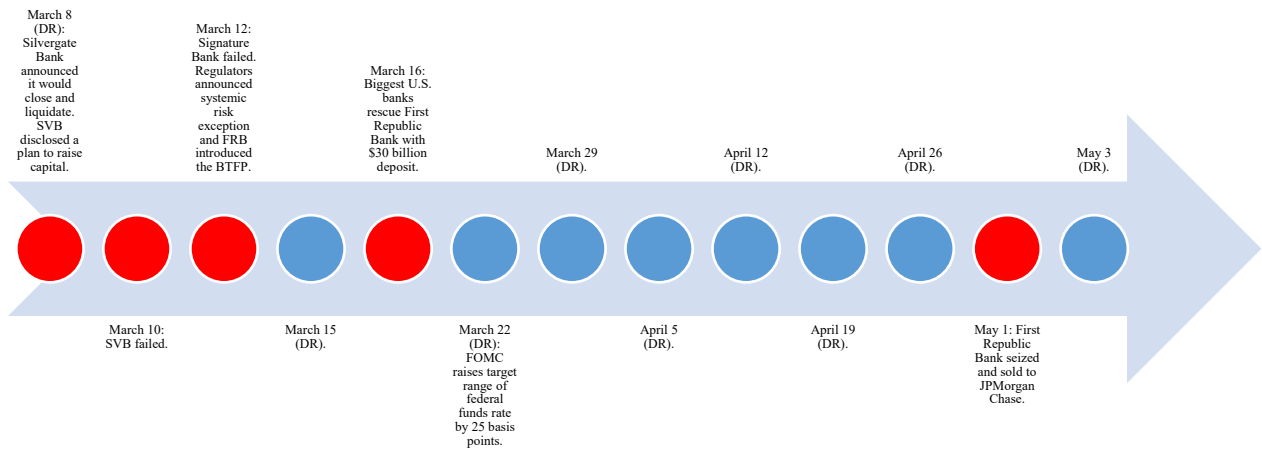
**Figure 1. Difference in Weekly Deposit Growth Rates of Large and Regional Banks**



Note: The figure shows estimates of the difference  $\beta_{large,t} - \beta_{regional,t}$  using the equation  $\Delta Y_{it} = \sum_{t=1}^T (\beta_{st} \times 1_s \times 1_t) + \varphi_i + \psi_t + \epsilon_{it}$ .  $\Delta Y_{it}$  is the weekly growth rate of deposits at bank  $i$  and week  $t$ .  $\beta_{st}$  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  $t$ .  $\varphi_i$  and  $\psi_t$  are bank and week fixed effects, and  $\epsilon_{it}$  is an idiosyncratic error. Data range from July 8, 2009, to May 3, 2023.

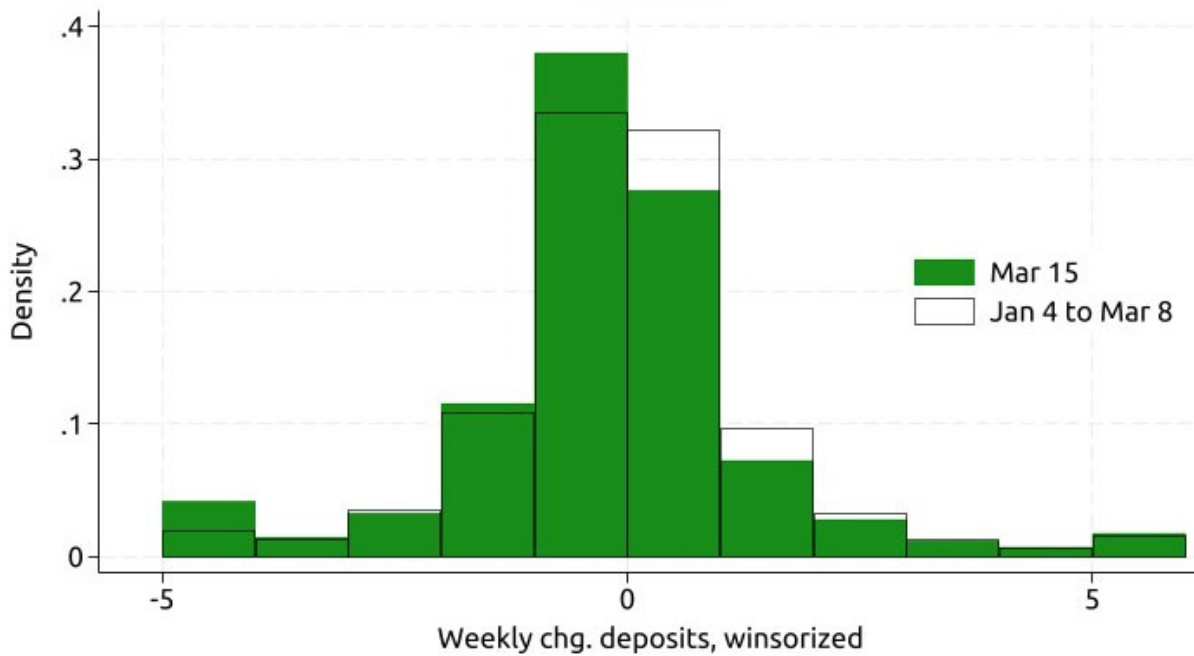
Source: Authors' estimates based on FR 2644 data.

**Figure 2. Timeline of the 2023 Regional Bank Crisis 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.

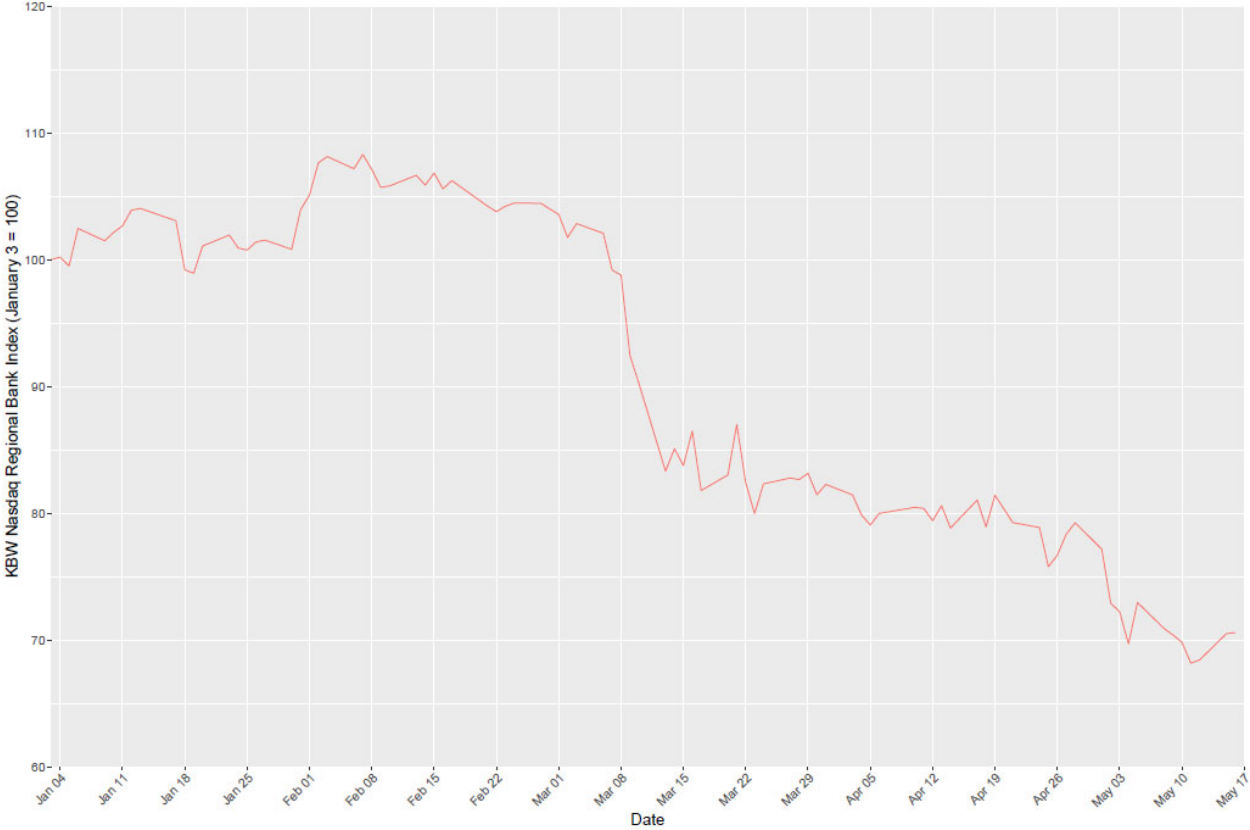
**Figure 3. Distribution of Weekly Deposit Growth Rates**



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 15<sup>th</sup> (green bars) compared to the preceding weeks of the calendar year (unshaded bars). Deposit growth rates are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles.  
Source: FR 2644 data.

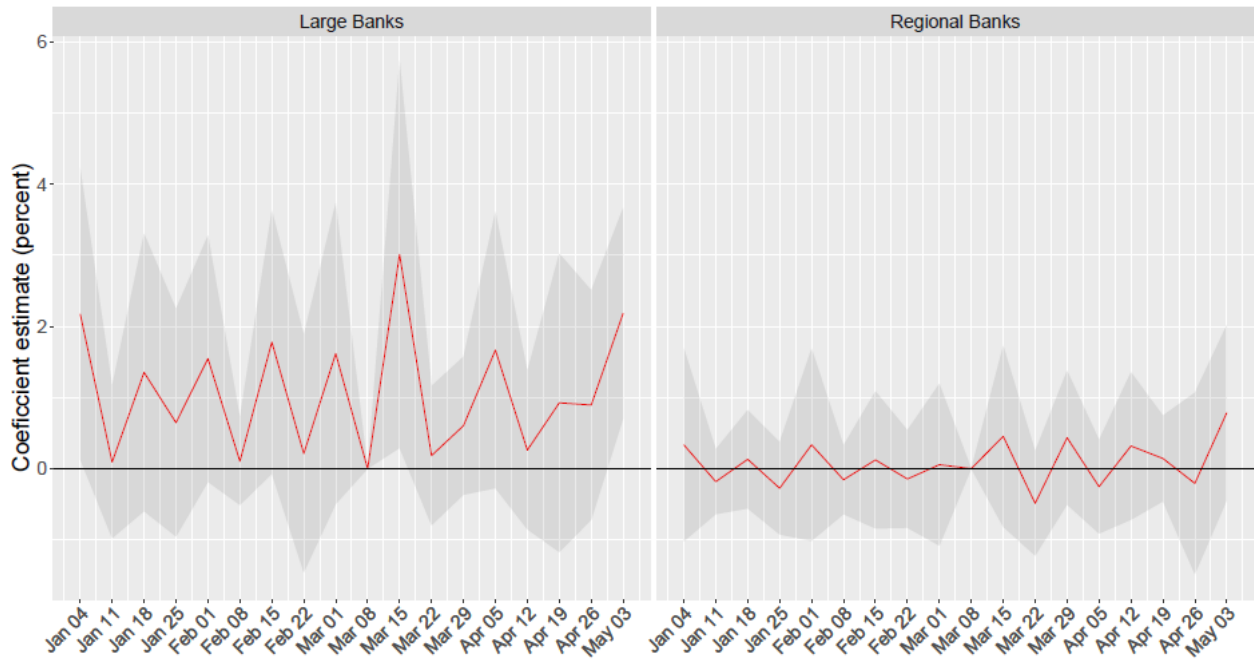


**Figure 4. KBW Nasdaq Regional Bank Index**



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 its January 3 value.  
Source: Yahoo Finance.

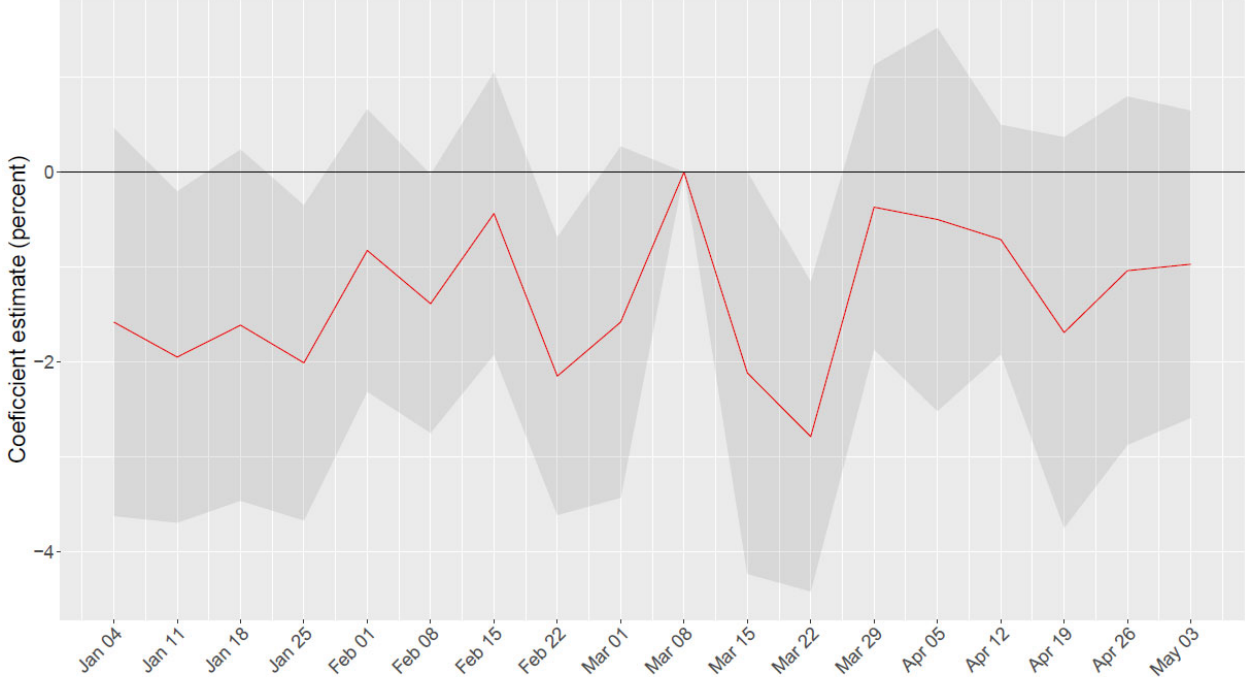
**Figure 5. Estimates of Difference in Weekly Deposit Growth Rates of Large and Regional Banks Relative to Small Banks**



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).

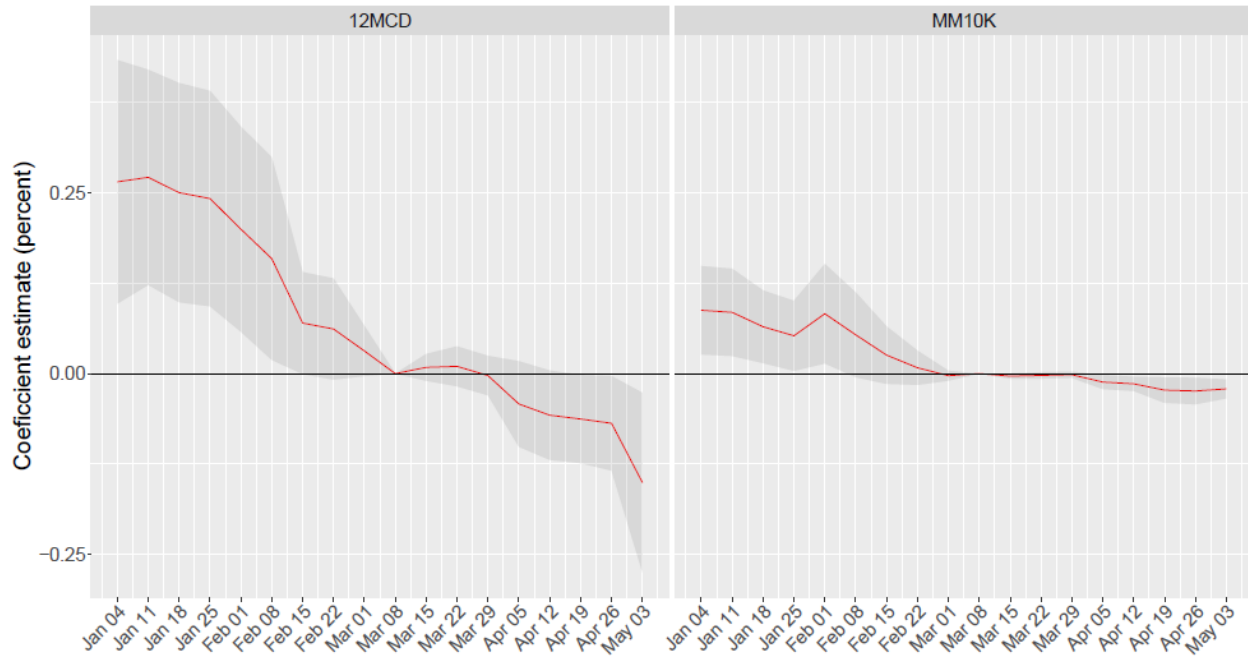
Source: Authors' estimates based on FR 2644, Call Report, and FR Y-9C data.

**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**



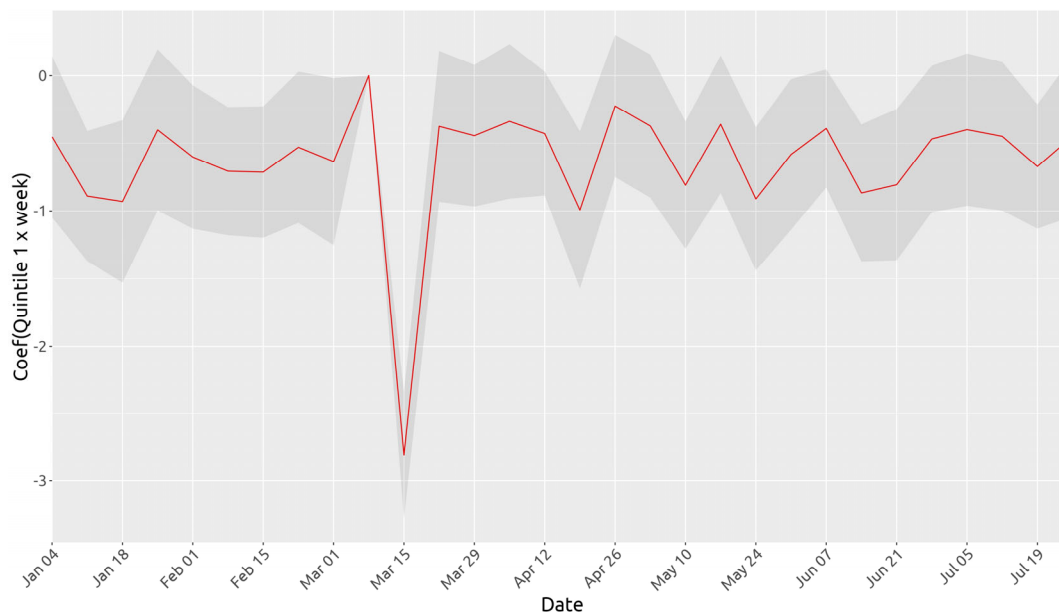
Note: This figure plots coefficient estimates of  $\beta_{large,t}$  from the regression results shown in Table 3, Column (3) (left panel) and Table 3, Column (4) (right panel).

Source: Authors' estimates based on RateWatch, Call Report, and FR Y-9C data.

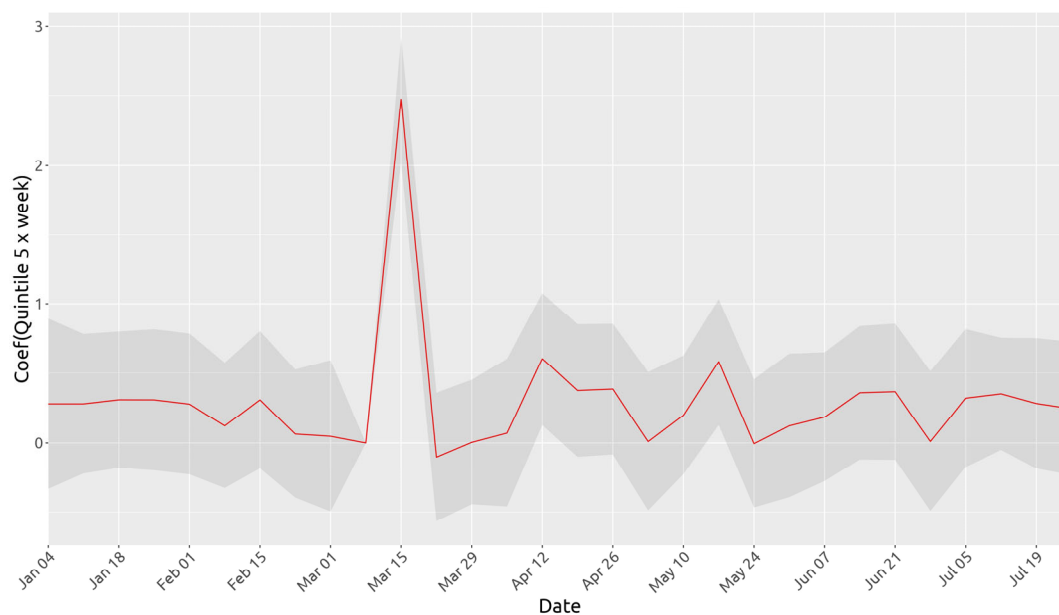
### Figure 8: Persistence of large deposit losses or gains

This table examines the persistence of large run period deposit losses or gains. Banks are divided into quintiles based on deposit growth rate for the week ending March 15, 2023. Quintile 1 banks had the largest losses while Quintile 5 banks had the largest gains. We regress banks' weekly deposit growth for the period Jan. 4, 2023-July 26, 2023 on the quintile dummies (Quintile 3 is omitted) and their interaction with a week dummy, plus week fixed effects. Standard errors are clustered by bank. Panel A plots the coefficient on Quintile 1  $\times$  week and its associated 95% confidence intervals and Panel B plots the coefficient on Quintile 5  $\times$  week and its associated 95% confidence intervals.

Panel A: Persistence of losses



Panel B: Persistence of gains



**Table 1: Summary statistics**

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 covers the period from January 4, 2023, through May 5, 2023. All weekly data is weekly as of Wednesdays. Weekly balance sheet data for banks comes from the Federal Reserve's FR 2644. Deposit rate data comes 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: 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 8<sup>th</sup> 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** (1.006)	1.982* (1.022)	2.263** (1.068)	2.176** (1.041)
11jan2023 * Large	-0.185 (0.468)	-0.186 (0.515)	0.159 (0.570)	0.092 (0.544)
18jan2023 * Large	1.070 (0.940)	1.090 (0.965)	1.375 (1.001)	1.353 (0.992)
25jan2023 * Large	0.490 (0.750)	0.448 (0.778)	0.807 (0.841)	0.646 (0.814)
01feb2023 * Large	1.587* (0.868)	1.475* (0.882)	1.623* (0.888)	1.547* (0.881)
08feb2023 * Large	0.078 (0.289)	-0.046 (0.293)	0.201 (0.325)	0.104 (0.313)
15feb2023 * Large	1.780* (0.953)	1.715* (0.969)	1.792* (0.945)	1.779* (0.942)
22feb2023 * Large	0.054 (0.796)	-0.090 (0.811)	0.290 (0.848)	0.212 (0.849)
01mar2023 * Large	1.782* (1.073)	1.509 (1.087)	1.793 (1.098)	1.618 (1.076)
15mar2023 * Large	2.852** (1.318)	2.676** (1.337)	3.048** (1.393)	3.013** (1.385)
22mar2023 * Large	-0.125 (0.443)	-0.275 (0.442)	0.216 (0.497)	0.183 (0.498)
29mar2023 * Large	0.750 (0.493)	0.495 (0.482)	0.557 (0.489)	0.604 (0.494)
05apr2023 * Large	1.591 (0.982)	1.653* (1.002)	1.742* (1.013)	1.667* (0.988)

12apr2023 * Large	0.278 (0.546)	0.181 (0.554)	0.306 (0.566)	0.261 (0.567)
19apr2023 * Large	0.687 (1.011)	0.660 (1.035)	0.958 (1.080)	0.925 (1.067)
26apr2023 * Large	0.848 (0.787)	0.714 (0.802)	0.897 (0.822)	0.895 (0.821)
03may2023 * Large	2.083*** (0.709)	2.089*** (0.740)	2.260*** (0.775)	2.186*** (0.753)
04jan2023 * Regional	0.208 (0.679)	0.181 (0.698)	0.392 (0.694)	0.335 (0.690)
11jan2023 * Regional	-0.398* (0.230)	-0.398 (0.244)	-0.140 (0.249)	-0.183 (0.232)
18jan2023 * Regional	-0.075 (0.338)	-0.068 (0.343)	0.145 (0.358)	0.131 (0.352)
25jan2023 * Regional	-0.425 (0.319)	-0.439 (0.326)	-0.171 (0.340)	-0.276 (0.331)
01feb2023 * Regional	0.311 (0.677)	0.273 (0.693)	0.385 (0.689)	0.335 (0.687)
08feb2023 * Regional	-0.231 (0.215)	-0.276 (0.223)	-0.091 (0.256)	-0.156 (0.246)
15feb2023 * Regional	0.094 (0.482)	0.073 (0.493)	0.131 (0.491)	0.123 (0.490)
22feb2023 * Regional	-0.331 (0.369)	-0.379 (0.379)	-0.095 (0.346)	-0.146 (0.349)
01mar2023 * Regional	0.048 (0.543)	-0.043 (0.582)	0.170 (0.588)	0.055 (0.579)
15mar2023 * Regional	0.304 (0.601)	0.246 (0.622)	0.484 (0.649)	0.454 (0.647)
22mar2023 * Regional	-0.674* (0.360)	-0.723** (0.359)	-0.458 (0.373)	-0.488 (0.374)
29mar2023 * Regional	0.420 (0.486)	0.330 (0.491)	0.423 (0.476)	0.435 (0.479)
05apr2023 * Regional	-0.335 (0.335)	-0.317 (0.340)	-0.204 (0.348)	-0.254 (0.335)
12apr2023 * Regional	0.257 (0.523)	0.224 (0.534)	0.354 (0.526)	0.318 (0.527)
19apr2023 * Regional	-0.023 (0.288)	-0.033 (0.299)	0.172 (0.315)	0.143 (0.307)
26apr2023 * Regional	-0.303 (0.638)	-0.347 (0.644)	-0.192 (0.647)	-0.207 (0.649)
03may2023 * Regional	0.683 (0.625)	0.681 (0.634)	0.836 (0.628)	0.787 (0.626)
04jan2023	0.087 (0.113)	-0.112 (0.444)	0.567 (0.676)	0.781 (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 3: 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 8<sup>th</sup> 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*** (0.059)	0.079*** (0.018)	0.265*** (0.085)	0.088*** (0.031)
11jan2023 * Large	0.288*** (0.057)	0.059*** (0.018)	0.271*** (0.075)	0.085*** (0.031)
18jan2023 * Large	0.235*** (0.053)	0.056*** (0.016)	0.250*** (0.077)	0.065** (0.025)
25jan2023 * Large	0.218*** (0.052)	0.050*** (0.016)	0.242*** (0.076)	0.052** (0.025)
01feb2023 * Large	0.146*** (0.042)	0.041*** (0.015)	0.200*** (0.072)	0.083** (0.035)
08feb2023 * Large	0.112*** (0.039)	0.031** (0.015)	0.159** (0.071)	0.054* (0.030)
15feb2023 * Large	0.064** (0.030)	0.016 (0.012)	0.070* (0.036)	0.026 (0.020)
22feb2023 * Large	0.012 (0.030)	-0.003 (0.003)	0.062* (0.035)	0.008 (0.012)
01mar2023 * Large	0.033 (0.020)	-0.004 (0.003)	0.031* (0.018)	-0.003 (0.003)
15mar2023 * Large	0.001 (0.020)	-0.001 (0.001)	0.009 (0.009)	-0.003* (0.002)
22mar2023 * Large	-0.014 (0.024)	-0.006 (0.004)	0.010 (0.014)	-0.002 (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 4: 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 8<sup>th</sup> 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<sub>i</sub>* and *Regional<sub>i</sub>*, while small banks are the omitted category), risk factors related to runs (*Uninsured ratio<sub>i</sub>* and *Adj. TCE ratio<sub>i</sub>*), and deposit market power (*HHI<sub>i</sub>*), fixed as of 2022Q4 except for deposit market power which comes from the 2022Q2 Summary of Deposits. In columns (1) and (2), *HHI<sub>i</sub>* 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	
	$\Delta$ CD Rate (1)	$\Delta$ MM Rate (2)	$\Delta$ CD Rate (3)	$\Delta$ MM Rate (4)
04jan2023 * Large	0.027 (0.021)	-0.004 (0.004)	0.016 (0.010)	-0.001 (0.001)
11jan2023 * Large	-0.000 (0.024)	-0.027** (0.011)	0.005 (0.009)	-0.001 (0.001)
18jan2023 * Large	-0.025 (0.033)	-0.005 (0.011)	-0.003 (0.009)	-0.003 (0.002)
25jan2023 * Large	0.011 (0.022)	-0.007 (0.006)	0.004 (0.005)	-0.000 (0.001)
01feb2023 * Large	-0.049 (0.046)	-0.010* (0.006)	-0.001 (0.006)	0.003 (0.002)
08feb2023 * Large	-0.002 (0.025)	-0.014* (0.007)	-0.010 (0.008)	-0.006* (0.003)
15feb2023 * Large	-0.027 (0.036)	-0.017 (0.011)	-0.004 (0.008)	-0.003 (0.002)
22feb2023 * Large	-0.029 (0.033)	-0.045 (0.030)	0.002 (0.005)	-0.001 (0.001)
01mar2023 * Large	0.064* (0.033)	-0.007 (0.008)	0.000 (0.008)	-0.000 (0.002)
15mar2023 * Large	0.028 (0.030)	-0.001 (0.004)	0.008* (0.004)	0.001 (0.001)
22mar2023 * Large	0.014 (0.024)	-0.007 (0.005)	0.005 (0.005)	0.000 (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 5: Run Period Deposit Growth Quintiles**

This table provides summary statistics on quintiles of run period deposit growth, used in the analyses in Tables 6 and 7. Banks are divided into quintiles based on deposit growth rates for the week ending March 15, 2023 (the “run period”). The mean and standard deviation of growth for each quintile is shown along with the number of banks in each quintile.

Quintile	N	Deposit growth, mean	Deposit growth, SD	1(Large), mean	1(Regional), mean	1(Small), mean
1 (lowest)	136	-3.29	6.13	0.007	0.015	0.978
2	134	-0.69	0.16	0.007	0.045	0.948
3	135	-0.22	0.14	0.015	0.007	0.978
4	134	0.28	0.18	0.007	0.030	0.963
5 (highest)	134	2.60	4.24	0.060	0.015	0.925

**Table 6: Deposit composition effects**

This table examines the relationship between run period deposit growth and uninsured deposit funding which can be observed only in quarterly data. We regress quarterly uninsured deposit growth or the change in the uninsured ratio (from regulatory reports covering 2023Q1 and 2023Q2) on quintiles of run period deposit growth, which are summarized in Table 5. Quintile 3 is the omitted group. 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.

	Unins. deposits, growth	Unins. deposits, growth	$\Delta$ Unins. Ratio	$\Delta$ Unins. Ratio
	(1)	(2)	(3)	(4)
Quintile 1	-5.952*** (1.995)	-2.930 (1.933)	-0.023*** (0.007)	-0.013** (0.006)
Quintile 2	-0.801 (2.032)	-1.285 (1.898)	-0.002 (0.006)	-0.003 (0.006)
Quintile 4	-0.992 (1.725)	-0.091 (1.680)	-0.003 (0.005)	-0.000 (0.005)
Quintile 5	1.416 (2.102)	2.330 (1.993)	-0.002 (0.005)	0.001 (0.005)
Ln(Assets)		-1.101** (0.528)		-0.004** (0.002)
Large		9.213** (3.866)		0.046*** (0.012)
Regional		2.900 (3.866)		0.014 (0.011)
Uninsured ratio		-24.465*** (5.090)		-0.095*** (0.013)
Adj. TCE ratio		58.815*** (21.839)		0.099 (0.094)
Tier 1 RBC ratio		-27.221 (18.623)		-0.033 (0.123)
NPL ratio		134.453 (212.367)		-0.159 (0.330)
ROA		308.399 (405.174)		1.602 (1.227)
Observations	757	675	761	679
Adjusted R-squared	0.023	0.104	0.042	0.144
Time FE	Y	Y	Y	Y

**Table 7: Post-run lending**

This table explores the relationship between run period deposit growth and lending. We regress quarterly loan growth (from regulatory reports covering 2023Q1 and 2023Q2) on quintiles of run period deposit growth, which are summarized in Table 5. Quintile 3 is the omitted group. Specifications (1)-(5) omit bank controls while specifications (6)-(10) include them. Bank controls, when included, are the same as in Table 6. For compactness, coefficients on bank controls are not shown. 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.

	Loans, growth	C&I loans, growth	RRE loans, growth	CRE loans, growth	SME loans, growth
	(1)	(2)	(3)	(4)	(5)
Quintile 1	-0.653*	-0.803	-1.042**	-0.163	-1.873
	(0.346)	(0.827)	(0.510)	(0.550)	(1.273)
Quintile 2	-0.148	-0.040	-0.507	0.073	-0.614
	(0.297)	(0.803)	(0.486)	(0.396)	(1.115)
Quintile 4	-0.147	-0.233	-0.480	0.336	-1.389
	(0.291)	(0.995)	(0.506)	(0.430)	(1.672)
Quintile 5	-0.252	0.771	-0.380	-0.225	-0.945
	(0.324)	(0.885)	(0.499)	(0.448)	(1.129)
Observations	1337	1325	1300	1308	674
Adjusted R-squared	0.010	0.004	0.003	-0.001	-0.002
Bank controls	N	N	N	N	N
Time FE	Y	Y	Y	Y	Y

	Loans, growth	C&I loans, growth	RRE loans, growth	CRE loans, growth	SME loans, growth
	(6)	(7)	(8)	(9)	(10)
Quintile 1	-0.448	-0.439	-1.628**	-0.027	-1.876
	(0.463)	(0.999)	(0.633)	(0.479)	(1.244)
Quintile 2	-0.359	-0.448	-0.680	-0.270	-0.955
	(0.350)	(0.981)	(0.629)	(0.418)	(0.988)
Quintile 4	0.143	-2.018	-0.137	1.012*	-0.564
	(0.456)	(1.460)	(0.787)	(0.610)	(1.802)
Quintile 5	-0.293	0.511	-0.790	-0.079	-0.842
	(0.492)	(1.016)	(0.650)	(0.648)	(1.181)
Observations	683	672	656	660	530
Adjusted R-squared	0.022	0.035	0.012	0.022	0.005
Bank controls	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y



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

**Table A1: Variable Definitions**

Variable	Definition
<i>FR 2644 variables</i>	
<i>(Weekly Wednesdays. Log changes are winsorized at 1<sup>st</sup> and 99<sup>th</sup> percentiles)</i>	
Deposit growth	Log change in weekly deposits
<i>RateWatch variables</i>	
<i>(Bank rate is calculated as the median weekly rate across a bank's branches. Branch rate is directly reported.)</i>	
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.
<i>Other variables</i>	
<i>(Bank level data is aggregated to BHCs for Y-9C filers).</i>	
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: 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 (1)	CD Rate (2)	MM Rate (3)	Chg. CD Rate (4)	Chg. MM Rate (5)
04jan2023 * Large	2.167** (1.039)	0.317*** (0.059)	0.078*** (0.018)	0.027 (0.021)	-0.004 (0.004)
11jan2023 * Large	0.081 (0.543)	0.290*** (0.057)	0.059*** (0.018)	0.003 (0.024)	-0.026** (0.011)
18jan2023 * Large	1.341 (0.989)	0.238*** (0.054)	0.056*** (0.017)	-0.025 (0.033)	-0.005 (0.011)
25jan2023 * Large	0.642 (0.815)	0.221*** (0.053)	0.050*** (0.016)	0.011 (0.023)	-0.007 (0.006)
01feb2023 * Large	1.537* (0.880)	0.146*** (0.042)	0.041*** (0.015)	-0.050 (0.047)	-0.010 (0.006)
08feb2023 * Large	0.121 (0.314)	0.114*** (0.040)	0.031** (0.015)	-0.002 (0.025)	-0.014* (0.007)
15feb2023 * Large	1.767* (0.939)	0.063** (0.030)	0.016 (0.012)	-0.030 (0.037)	-0.017 (0.011)
22feb2023 * Large	0.188 (0.847)	0.010 (0.030)	-0.003 (0.003)	-0.029 (0.033)	-0.046 (0.031)
01mar2023 * Large	1.606 (1.073)	0.033 (0.020)	-0.004 (0.003)	0.063* (0.033)	-0.007 (0.008)
15mar2023 * Large	2.989** (1.379)	0.002 (0.020)	-0.001 (0.001)	0.027 (0.030)	-0.001 (0.004)
22mar2023 * Large	0.174 (0.497)	-0.013 (0.024)	-0.006* (0.004)	0.014 (0.024)	-0.007 (0.005)
29mar2023 * Large	0.588 (0.492)	-0.038 (0.026)	-0.006 (0.004)	-0.005 (0.025)	-0.002 (0.004)
05apr2023 * Large	1.659* (0.986)	-0.070** (0.034)	-0.019*** (0.006)	-0.006 (0.033)	-0.017** (0.007)
12apr2023 * Large	0.254 (0.566)	-0.085** (0.034)	-0.020** (0.008)	0.017 (0.024)	0.001 (0.008)
19apr2023 * Large	0.917 (1.065)	-0.088** (0.034)	-0.035*** (0.012)	0.030 (0.022)	-0.043 (0.030)
26apr2023 * Large	0.874 (0.817)	-0.097*** (0.035)	-0.035*** (0.012)	0.051 (0.035)	-0.002 (0.004)
03may2023 * Large	2.176*** (0.751)	-0.120*** (0.039)	-0.040*** (0.014)	0.007 (0.027)	-0.013 (0.010)
04jan2023 * Regional	0.453 (0.768)	0.296*** (0.069)	0.077*** (0.017)	0.028 (0.024)	0.006 (0.007)

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

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

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