Boom and Bust in Uninsured Bank Deposits… and What Can Be Done About It

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Chapter II of "Banking Turmoil and Regulatory Reform"

CEPR and IESE Banking Initiative Report 2024

(Sixth Report of the CEPR on the Future of Banking)

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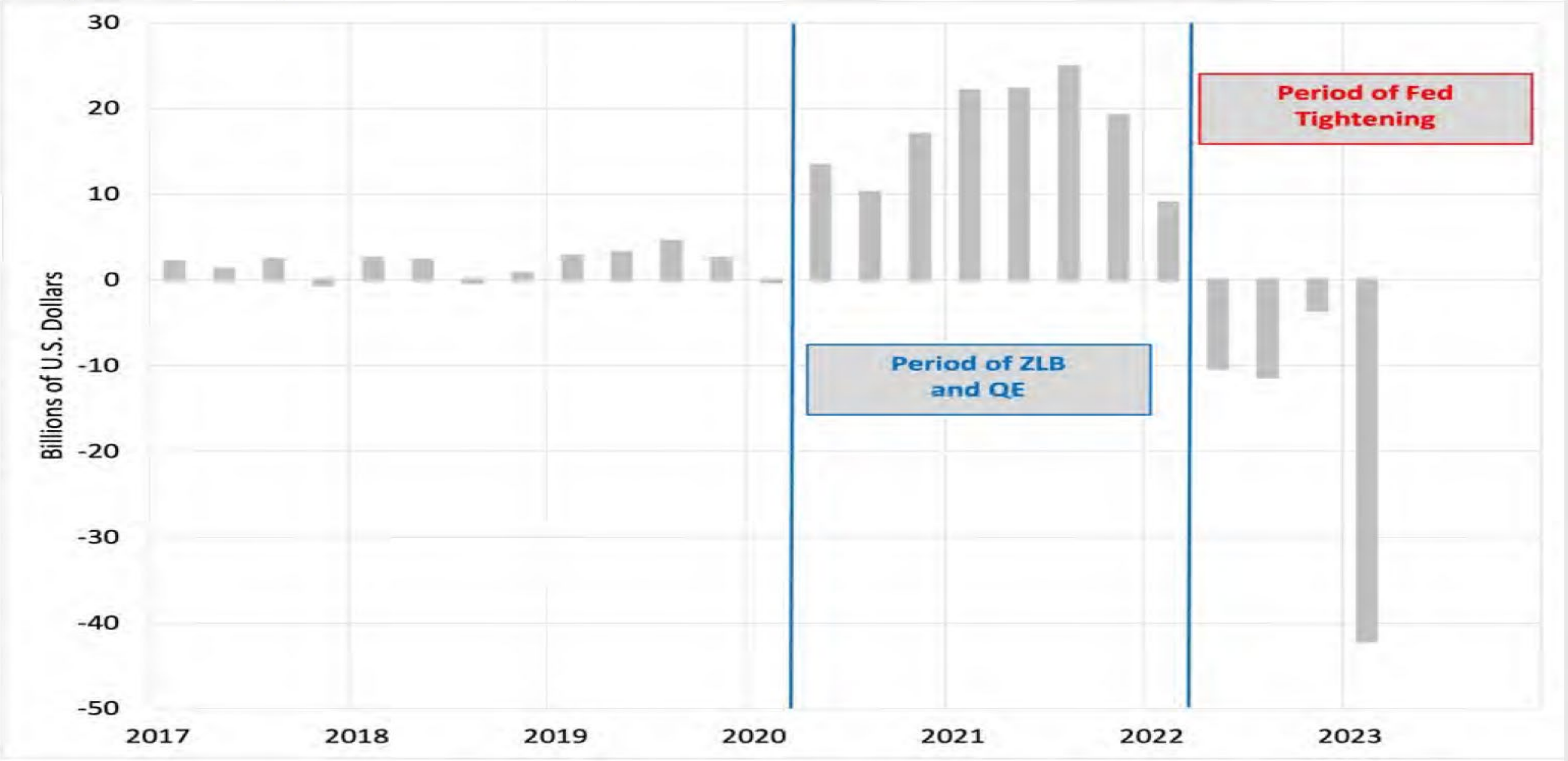
Outline

- Boom and Bust pattern in bank uninsured deposit growth
- Bank runs larger and faster, vulnerability everywhere?
- Ex-post: More deposit insurance vs. Better collateral pre-positioning
- Ex-ante I: More capital – Asset quality review against higher for longer rates?
- Ex-ante II: Role for market signals
- Revisiting QE and QT: Financial stability vs monetary policy tradeoff

Figure 1: Silicon Valley Bank: Quarterly Change in Deposits (Billions of U.S. Dollars), 2017-1Q 2023



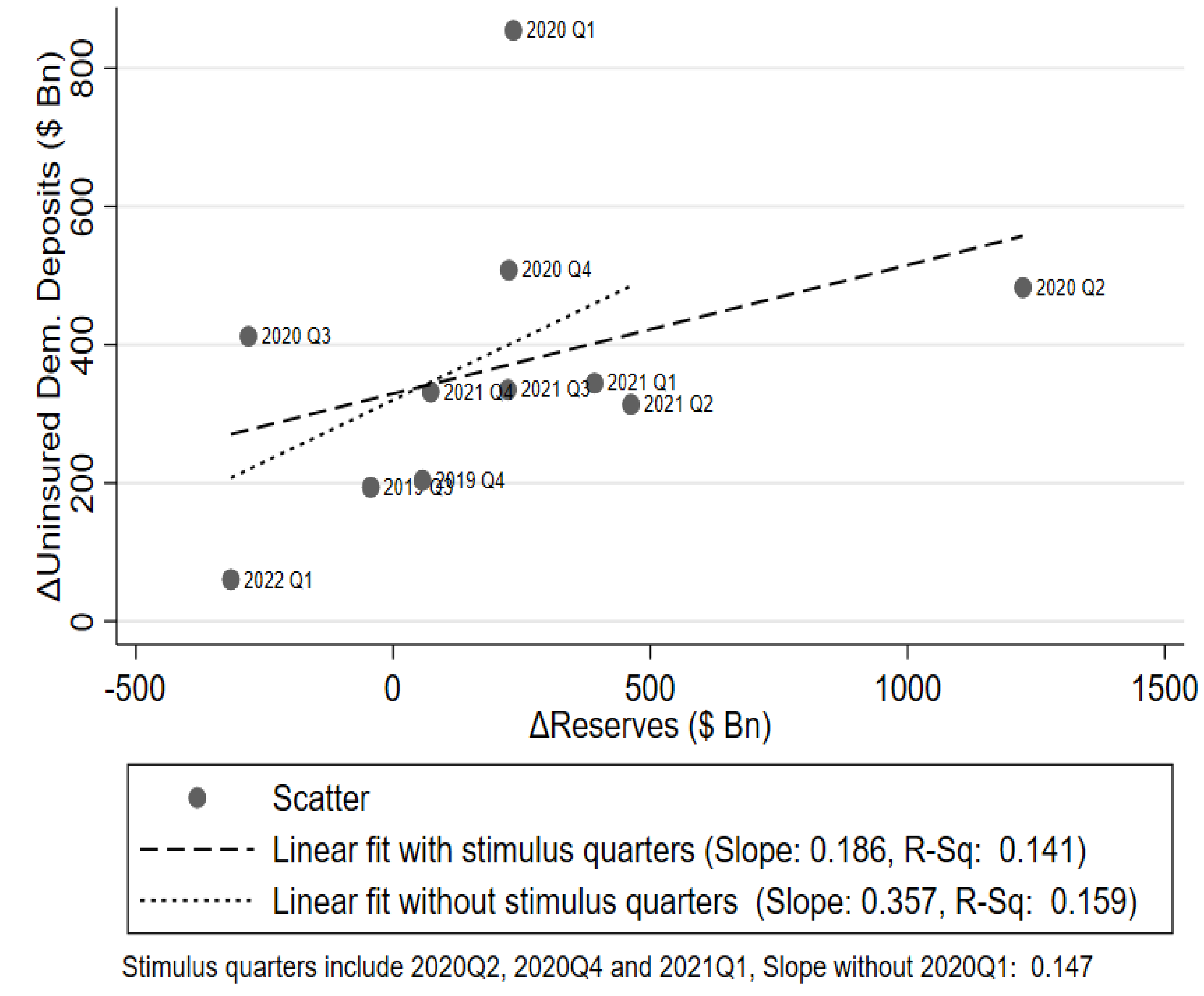
Source: Call Reports. The estimate for 1Q 2023 is based on Silicon Valley Bank's mid-quarter update.

Figure 2: Uninsured Deposits: Quarterly Change (Billions of U.S. Dollars) and the Share of Total Deposits (Percent of Total), 4Q 2016-1Q 2023

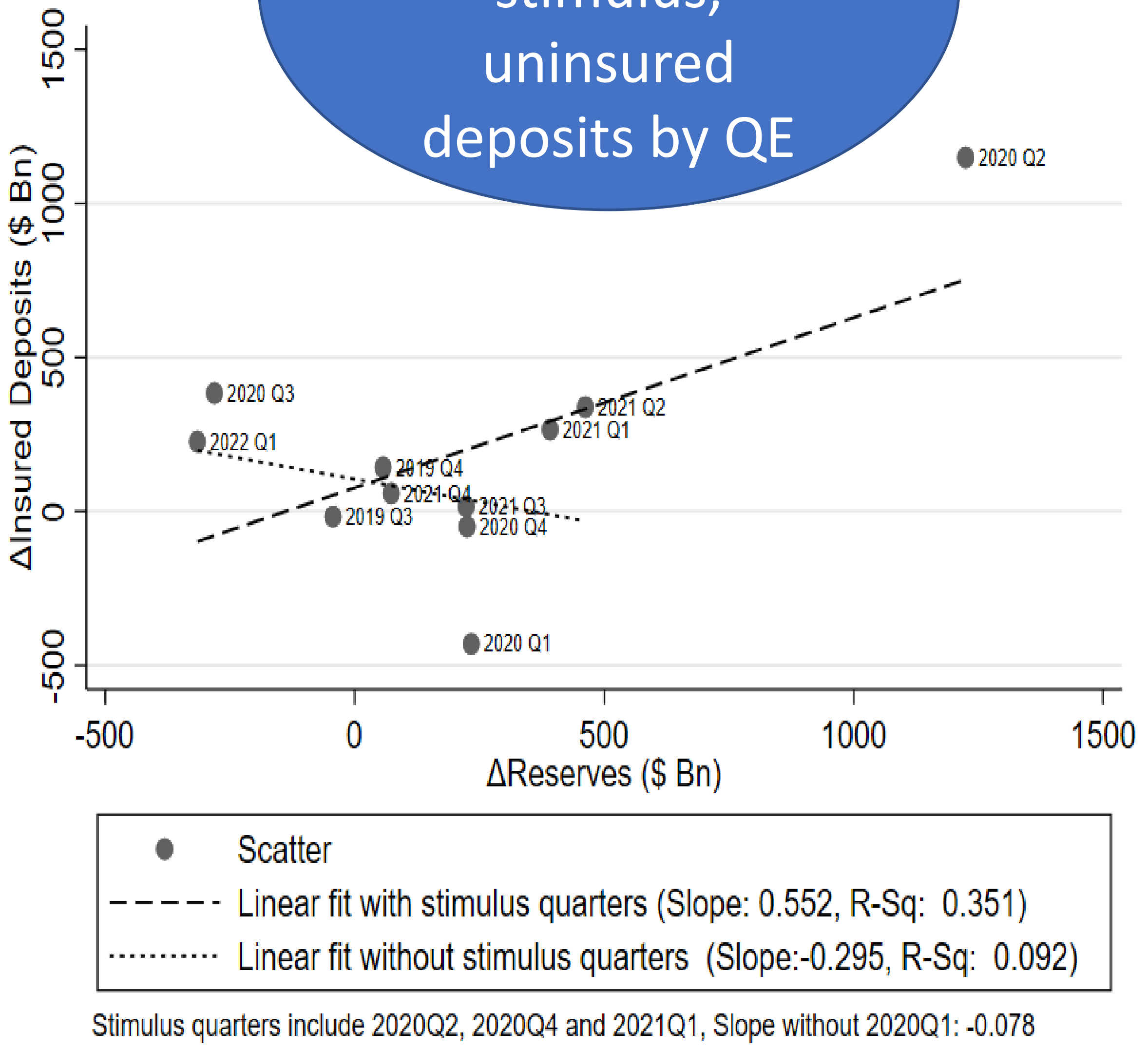
Notes: The line (left axis) shows the ratio of uninsured deposits to total deposits of FDIC-insured banks. The total includes foreign deposits, none of which are insured. The bars (right axis) show the changes in uninsured deposits in billions of U.S. dollars. Source: FDIC Quarterly Banking Profile.

Uninsured vs Insured Deposits during Pandemic: QE or Fiscal stimulus?

Insured deposits driven by fiscal stimulus, uninsured deposits by QE



Uninsured Demandable Deposits vs. Reserves



Insured Deposits vs. Reserves

QE: Purchase from non-banks– Bank BS expansion

Initial Balance Sheet Conditions

FEDERAL RESERVE	
Assets	Liabilities
Treasury securities	Reserves held by banks Cash held by the Treasury

BANKING SECTOR	
Assets	Liabilities
Treasury securities Reserves at the Fed	Deposits Capital

PUBLIC	
Assets	Liabilities
Deposits Treasury securities	Net worth

The Fed Purchases Assets from the Public

Balance Sheet Effects

FEDERAL RESERVE	
Assets	Liabilities
Treasury securities +$1	Reserves held by banks +$1 Cash held by the Treasury

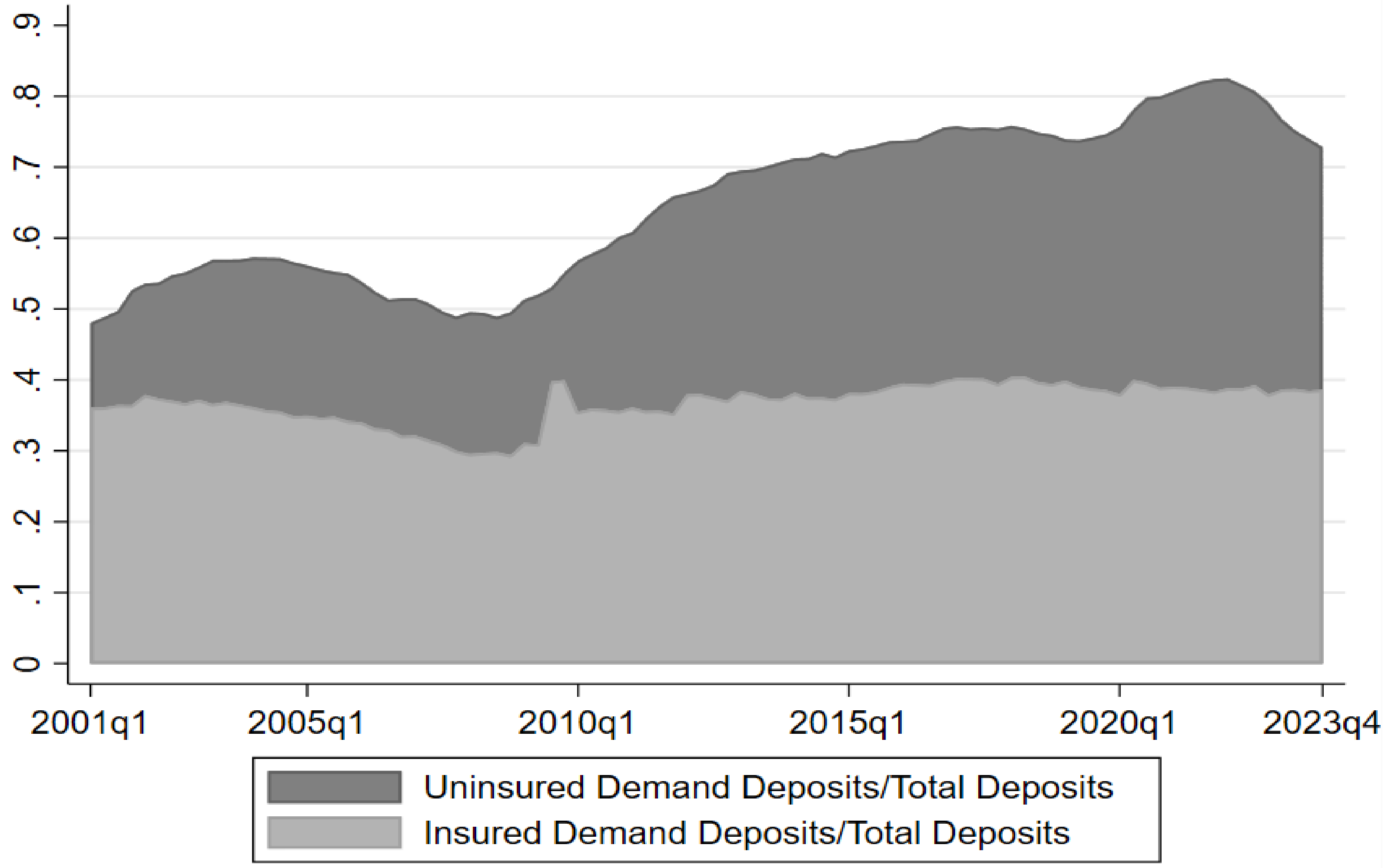
Bank balance sheets expand, financed with deposits (typically wholesale or uninsured)

BANKING SECTOR	
Assets	Liabilities
Treasury securities Reserves at the Fed +$1	Deposits +$1 Capital

PUBLIC	
Assets	Liabilities
Deposits +$1 Treasury securities -$1	Net worth

Source: "How the Fed Changes the Size of its Balance Sheet" (Leonard, Martin and Potter, *Liberty Street Economics,* 2017)

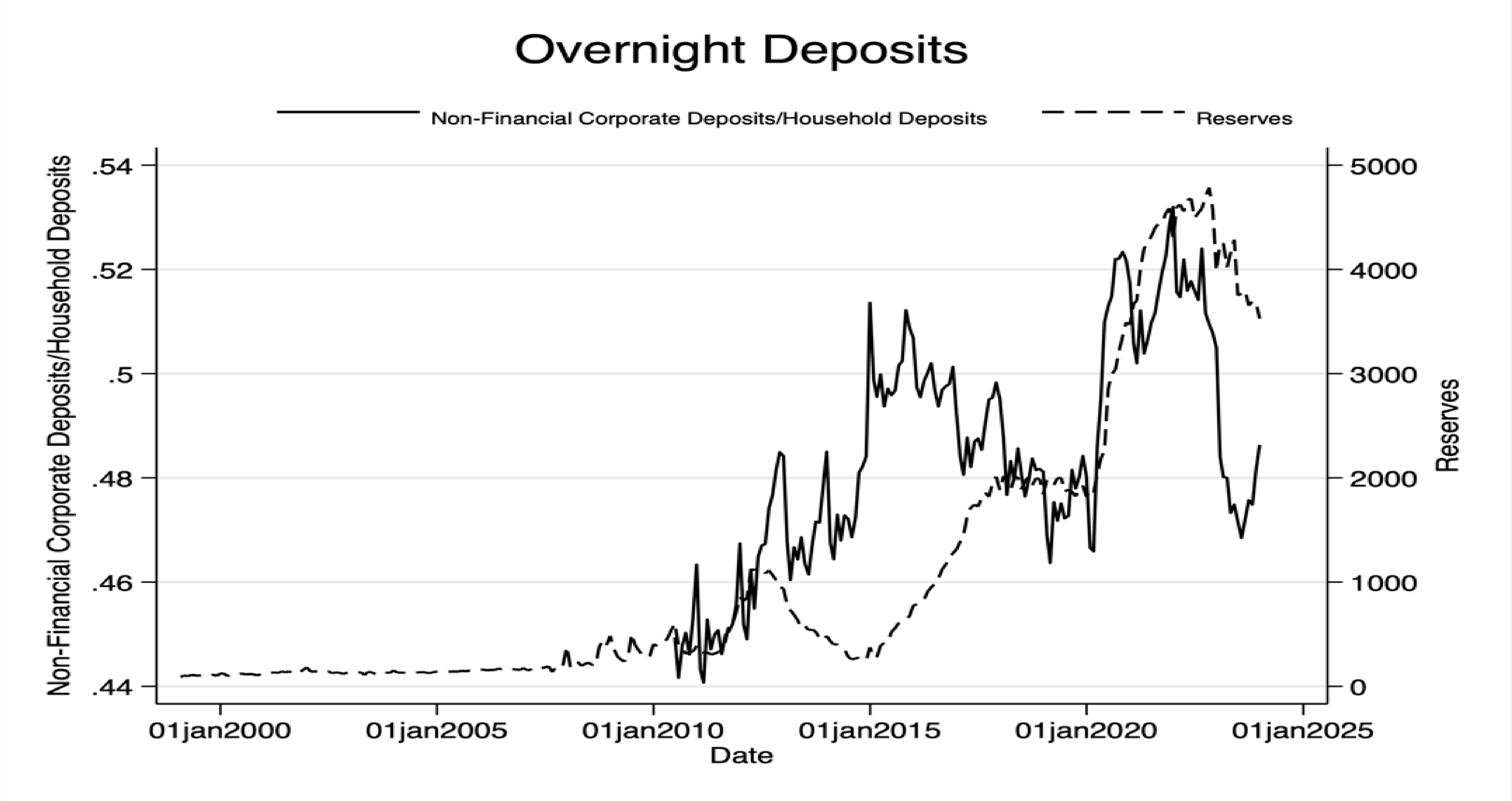
Uninsured Demandable Share of Deposits Rising Since the GFC: QE?



Source: Acharya, Chauhan, Rajan and Steffen (2023)

Growth is in financial and corporate transaction deposits

Insured Demandable Share is constant → Unlikely that Households are liking deposits per se

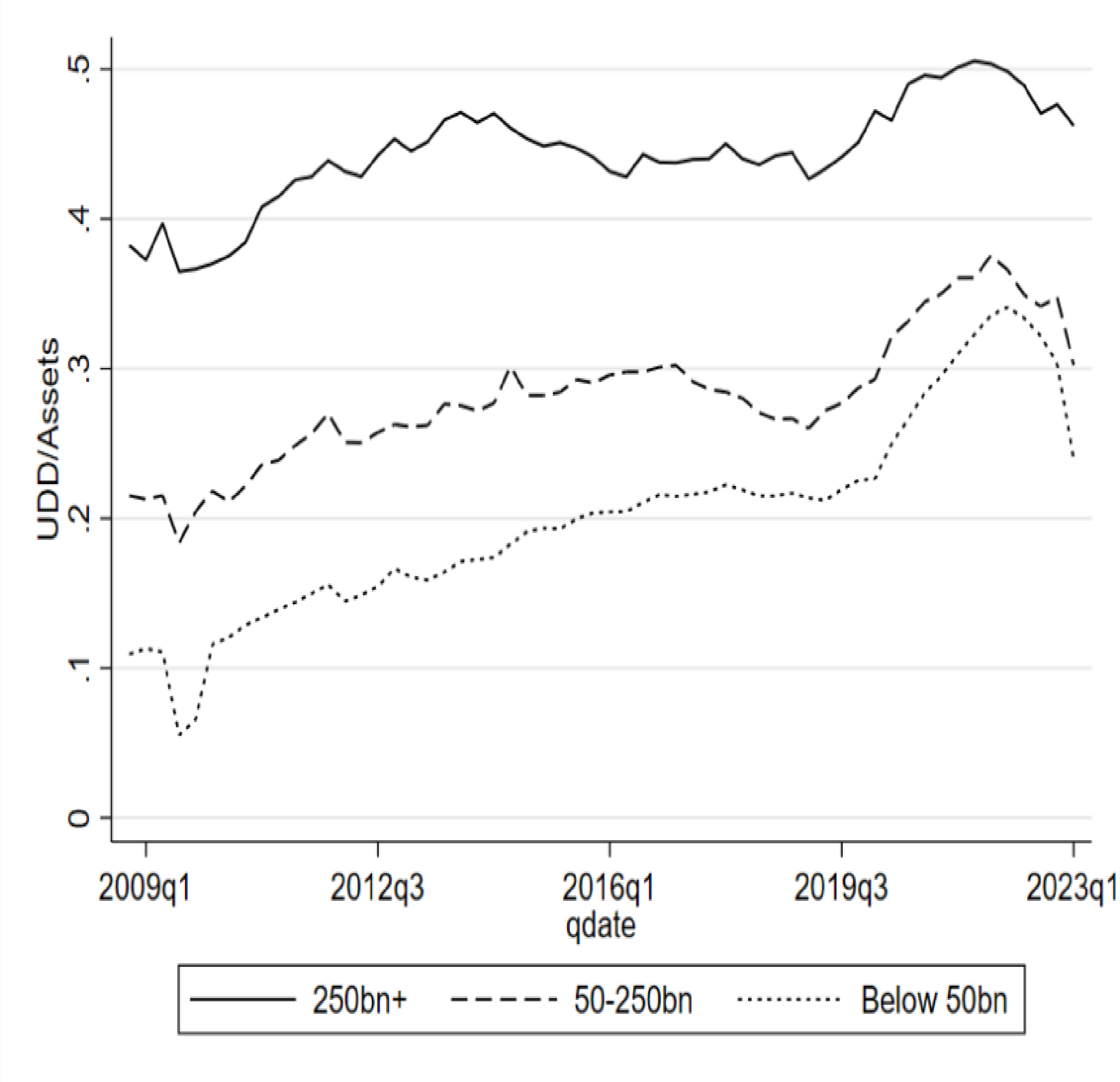


Source: ECB Statistical Warehoouse

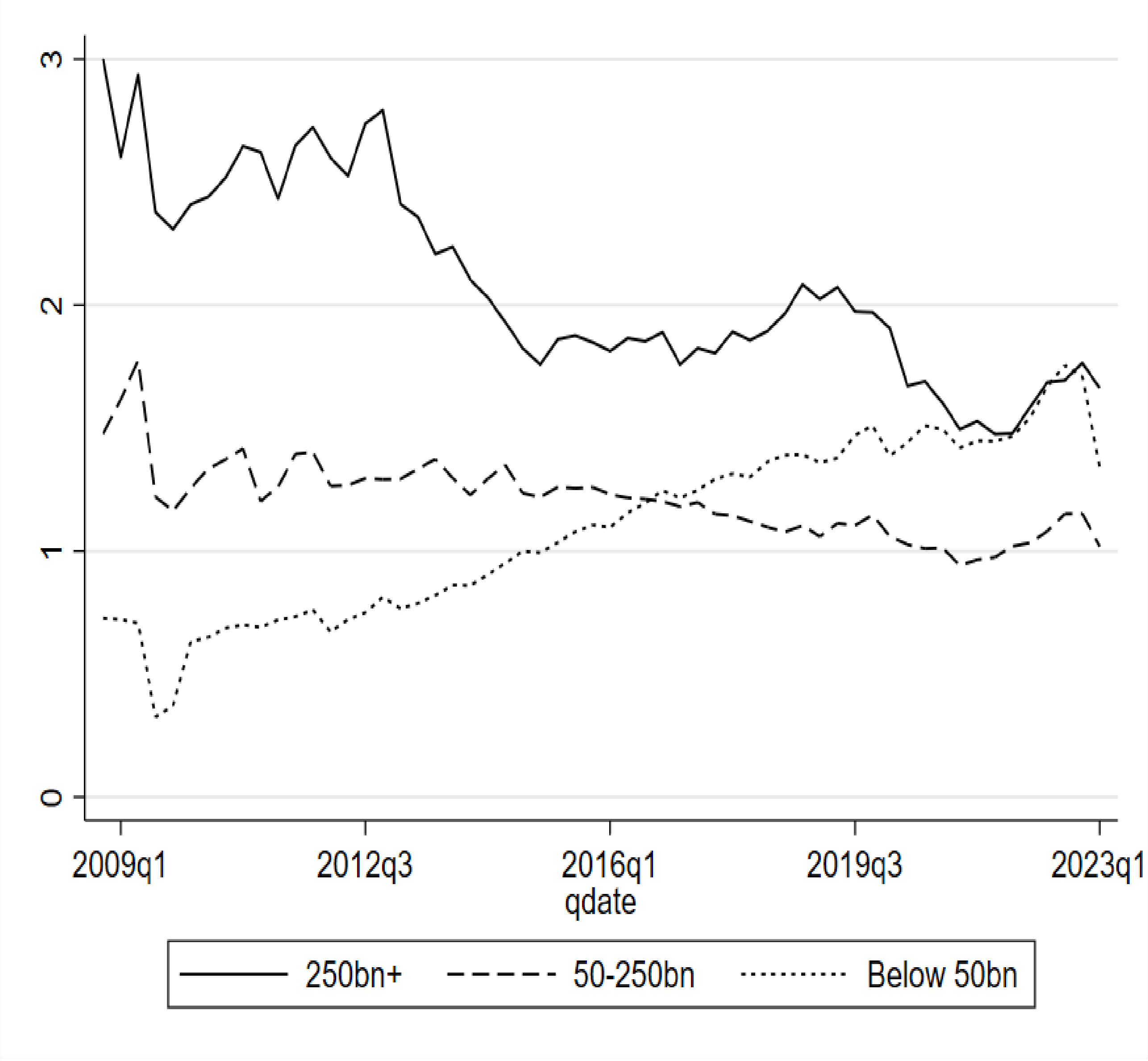
Key insight

- Reserves financed with demand deposits
    - QE is not just an expansion of central bank balance sheet
    - QE is also an expansion of commercial bank balance sheets, with uninsured demand deposits
- Post-QE?
- Reserves do not necessarily stay where Demandable Deposits are
    - Causes? Liquidity risk, search for yield, …
    - Consequences? Repo rate spike in Sept 2019; "Dash for cash" in March 2020; Turmoil in UK gilts in Sep 2022; Silicon Valley, Signature and First Republic Bank failures in March 2023

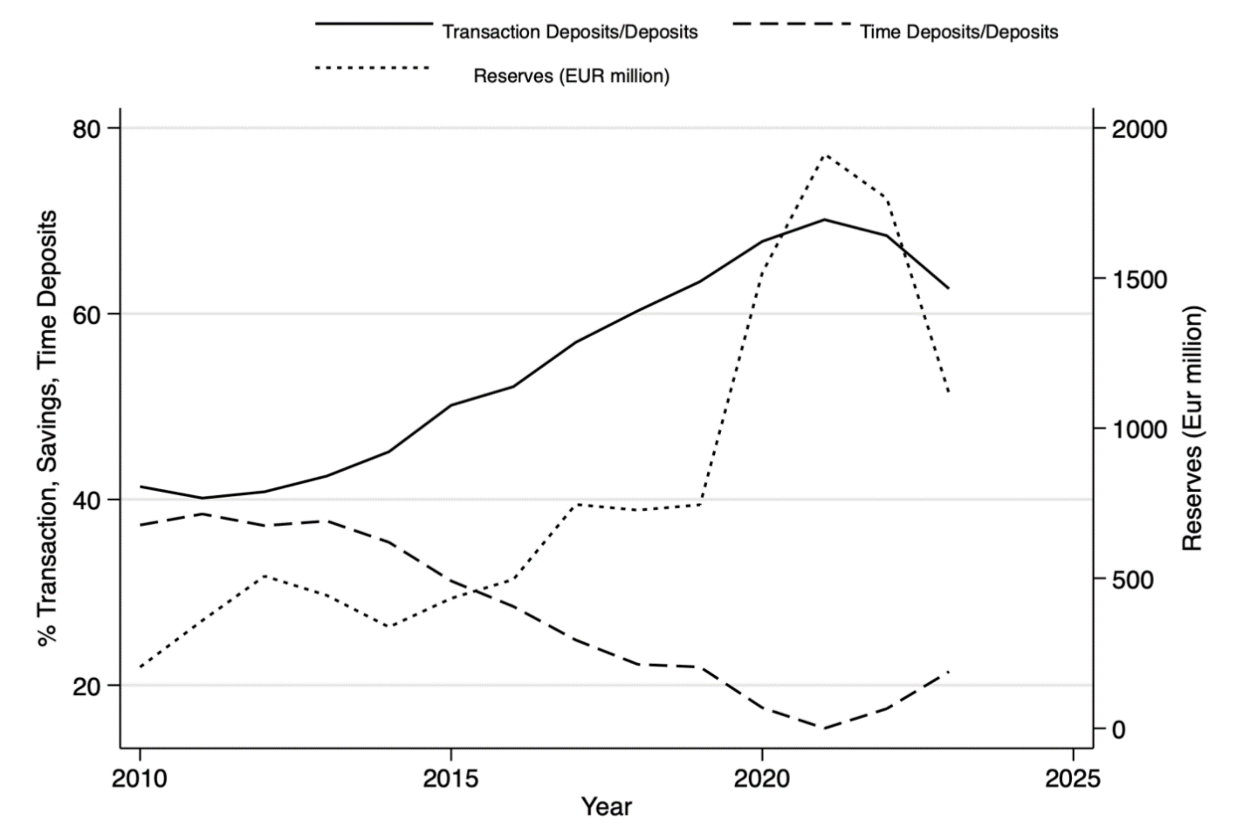
Ratcheting-up of Liquidity Risk

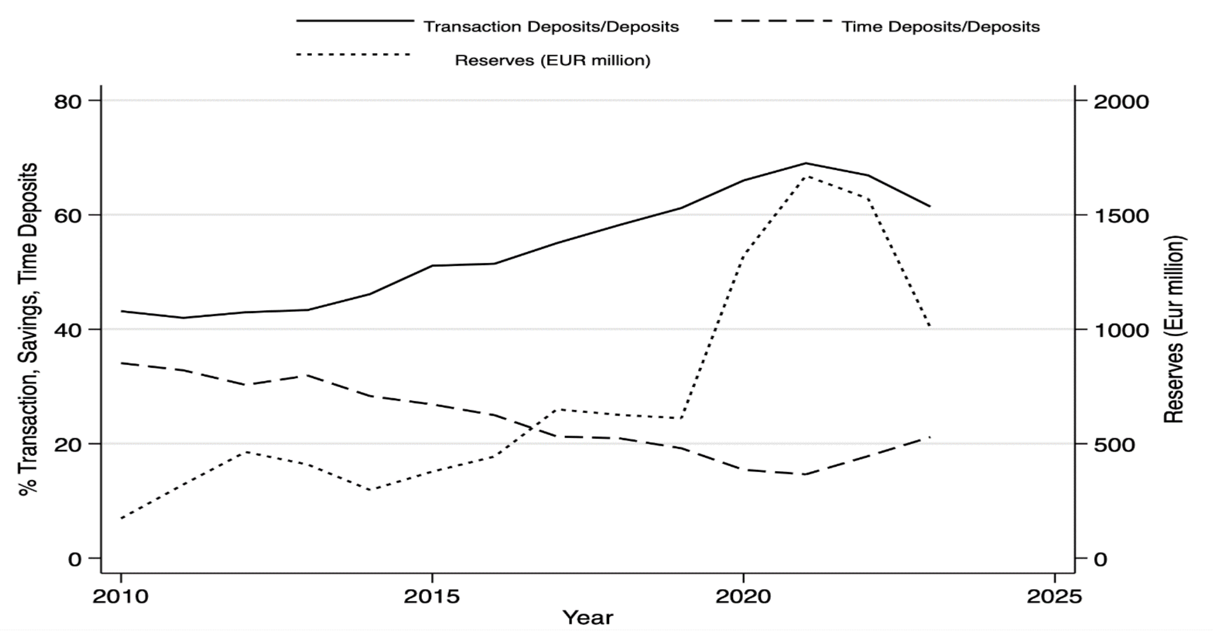


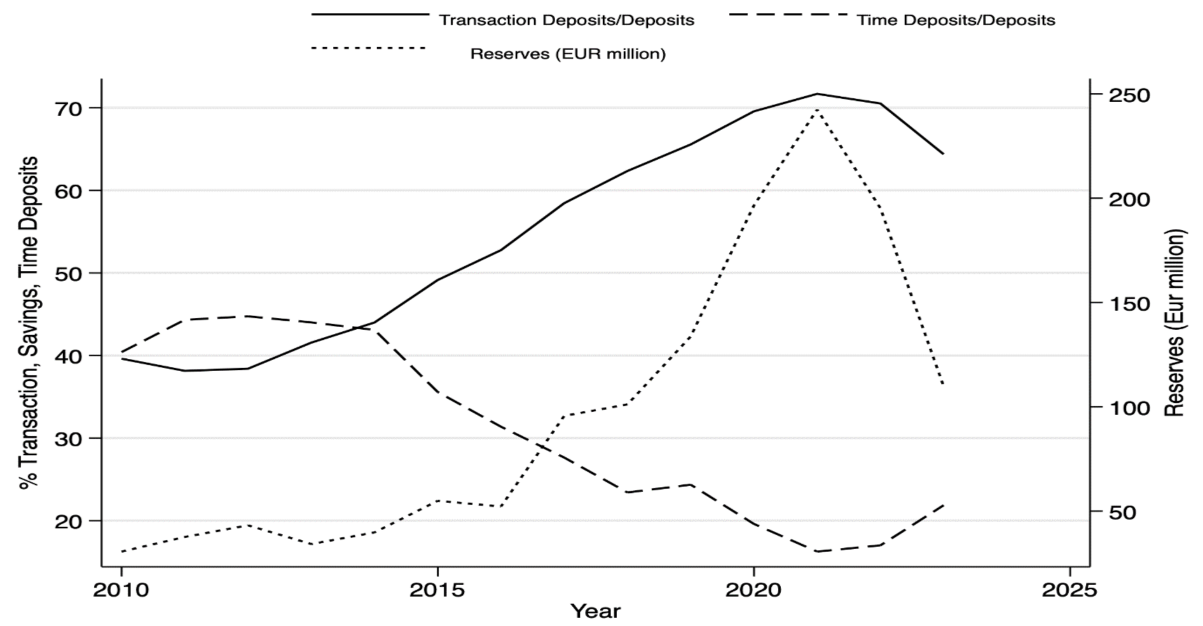
Claims to Liquidity:
(Uninsured Demandable Deposits)
/(Reserves + Eligible Assets)



Boom holds for Europe also (Overall: bottom left Large banks: top right Small banks: bottom right)







The sample consists all 75 European Banking Authority (EBA) 2023 stress test banks and adding the remaining 5 non-EU globally systemic institutions (G-SIBs), the latter being 3 from United Kingdom and 2 from Switzerland. US subsidiaries included in the stress tests are dropped due to a lack of balance sheet data. The data is sourced from S&P Capital IQ. Source: Steffen (2024)

Financial stability vs Monetary policy tradeoff in QE/QT

- Tightening post QE associated with financial fragility despite excess reserves (reverse repo) and presence of Federal Home Loan Banks.
- When central bank balance-sheets are durably maintained to be "large"…
  - Accidents waiting to happen? Not just banks, also shadow banks? E.g., BOE in 2022
  - Agency problems in banks and bailouts? E.g., Fed and Treasury in March 2023
- Liquidity dependence? Can liquidity support be pursued indefinitely?
- Zombie lending to CRE borrowers by Fed-dependent banks?

- Engage in QT while "feeling the stones" for financial fragility
- Revisit desirable scale, scope, duration of QE: "pushing on a string"?
- Are we in a policy trap? Inflation, financial fragility higher for longer? ☹

Proposals to address Boom and Bust in Uninsured Bank Depsits

So what should be done with banks now?

- Backstop it all, provide (more) guarantees?

- FDIC “Options for Deposit Insurance (DI) Reform” (May 2023)

  - Limited, unlimited or targeted (SME transaction deposit) coverage + Restrict DI “arbitrage”

  - This helps stem runs, but does not restore confidence or restore lending, as in 2007-09

  - More DI ignores that banks seek liquidity that is flighty (easy to get) to meet shocks

  - Restricting DI “arbitrage” seems like a good idea → Requires deposit registry

Novel ex-post options?

- Pawnbroker For All Seasons (PFAS, King 2016, also Tucker 2024)

  - Pre-position liquid collateral with haircuts against demandable liabilities (banks + non-banks)

  - Expands coverage of a liquidity coverage ratio of sorts to all banks (+ non-banks)

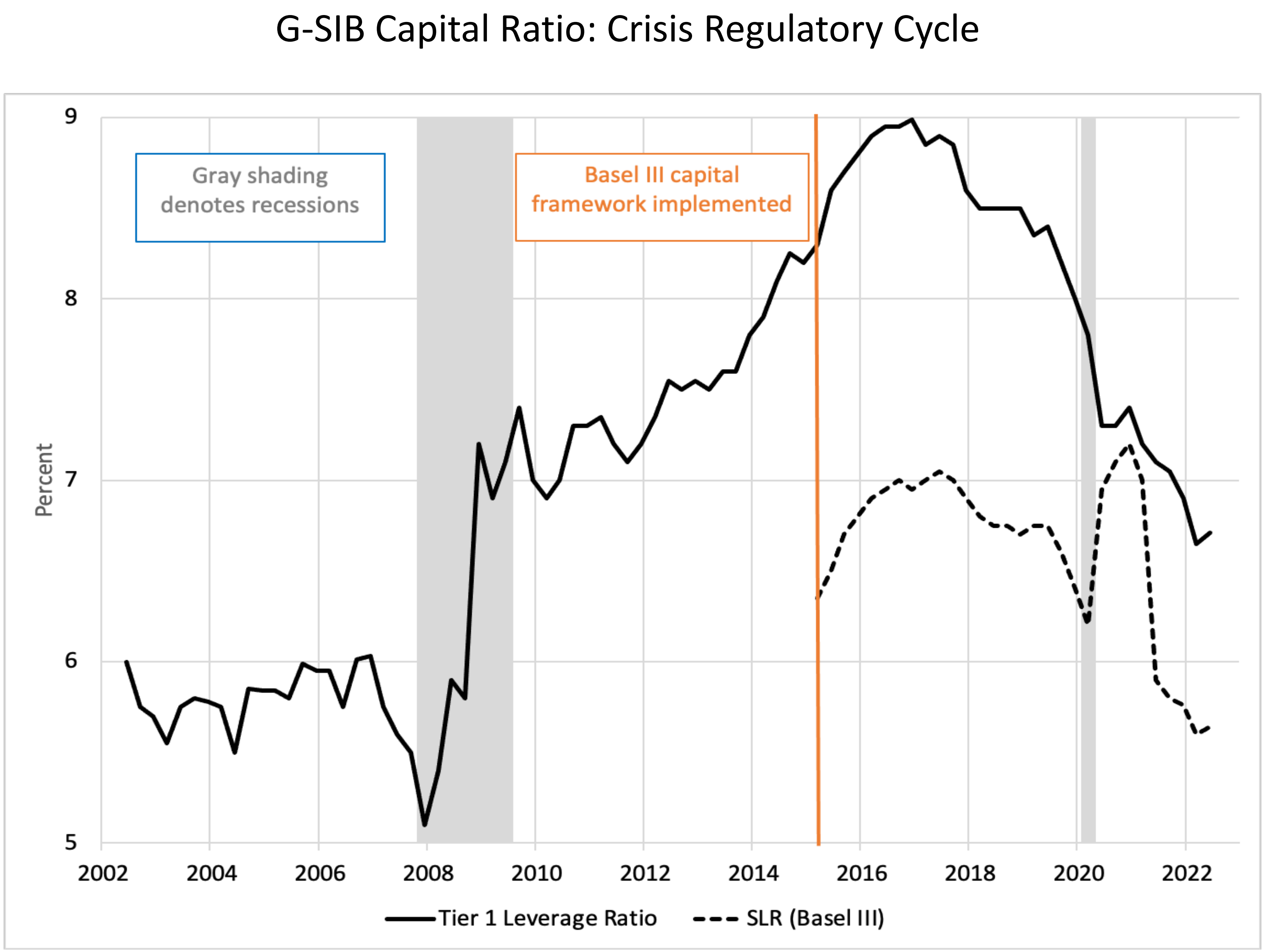
  - Daily supervision of collateral and gathering of intelligence on assets

  Issues:

  - Fed as the effective deposit insurer? Political economy?
  - Through-the-cycle or stress-time haircuts? Which demandable liabilities (credit lines)?
  - Greater liquidity hoarding and flight to quality?
  - Not tried anywhere yet… but for LCR

Ex-ante options to reduce banking fragility

- FDIC (August 2023):
  - Comprehensive resolution planning rules for banks with assets > $100 bln (first ones in 2025)
  - Minimum level of long-term debt (akin to TLAC for GSIBs) for banks with assets > $100 bln
- Why not more equity capital? But against what?
  - Current stresses: CRE, Small banks/firms, Higher for longer, …
  - Arbitrage of capital requirements and stress tests over time
  - Complement with market data and tools to improve supervisory alerts



Crisis Regulatory Cycle

2008: Crisis triggers G-SIB recapitalization

2010: Dodd-Frank introduces annual stress tests (boosts effective capital requirements)

2017: New Admin aims to scale back Dodd-Frank rules

2018: S. 2155 relaxes regulations (especially on midsize banks)

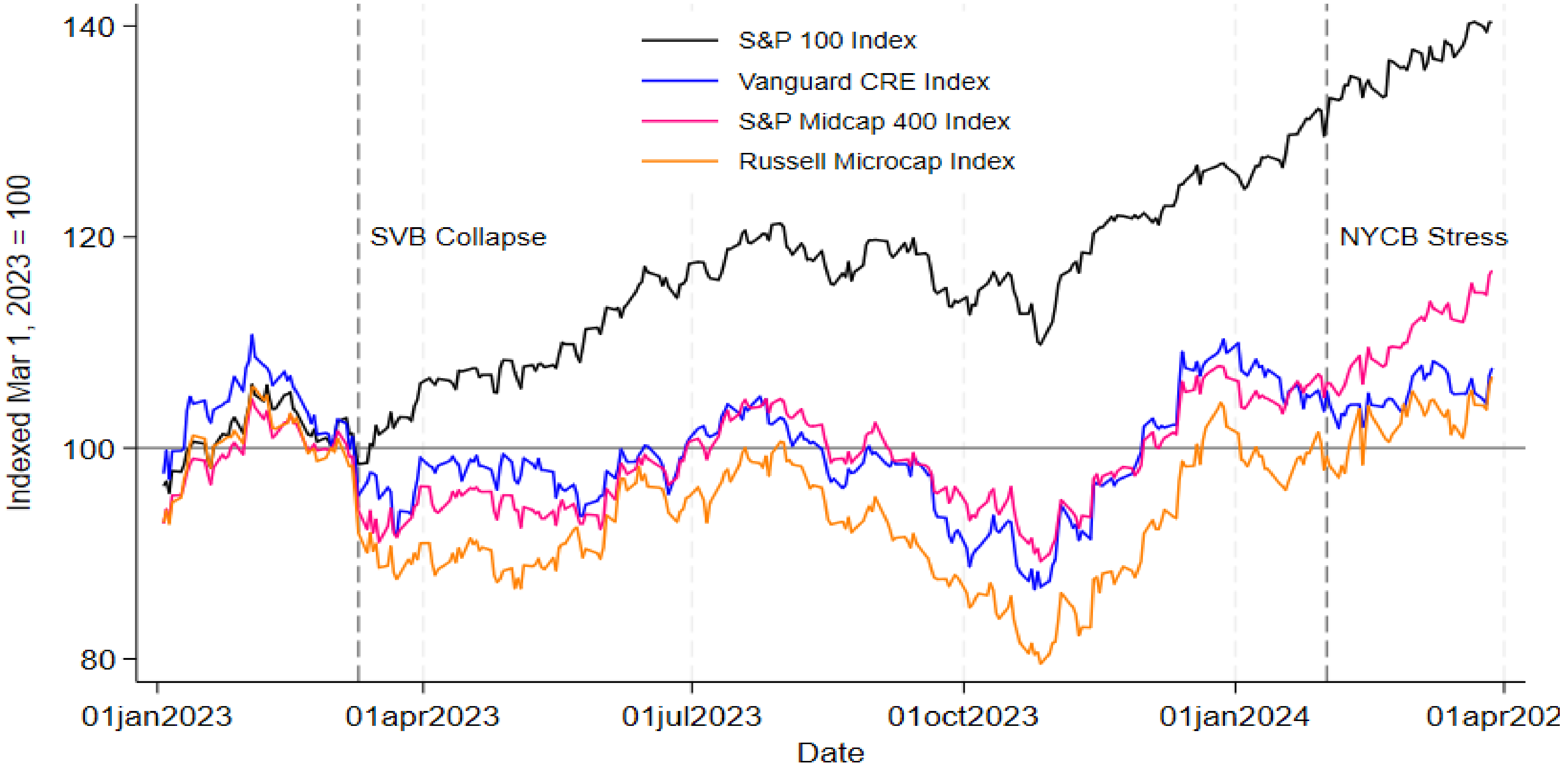
2019: Fed eases supervision of midsize banks

2023: Midsize bank crisis

2023: New bank rules …

Note: Jun 2020-Mar 2021 SLR (Basel III) ratio bounce reflects Fed's COVID-period definition of exposure (denominator).
Source: Interpolated from Chart 1 of FRB KC Bank Capital Analysis, 2Q 2022

CRE/Small firm underperformance since SVB stress



Inbox - vva1@stern.nyu.edu - N | CME FedWatch Tool - CME Grou

https://www.cmegroup.com/markets/interest-rates/cme-fedwatch-tool.html

Little Rules About Bi... | Fabricated Fairy Tale... | Understanding the "... | Survey of Consumer... | FRB: Charge-Off an... | BPEA Spring 2024 c...

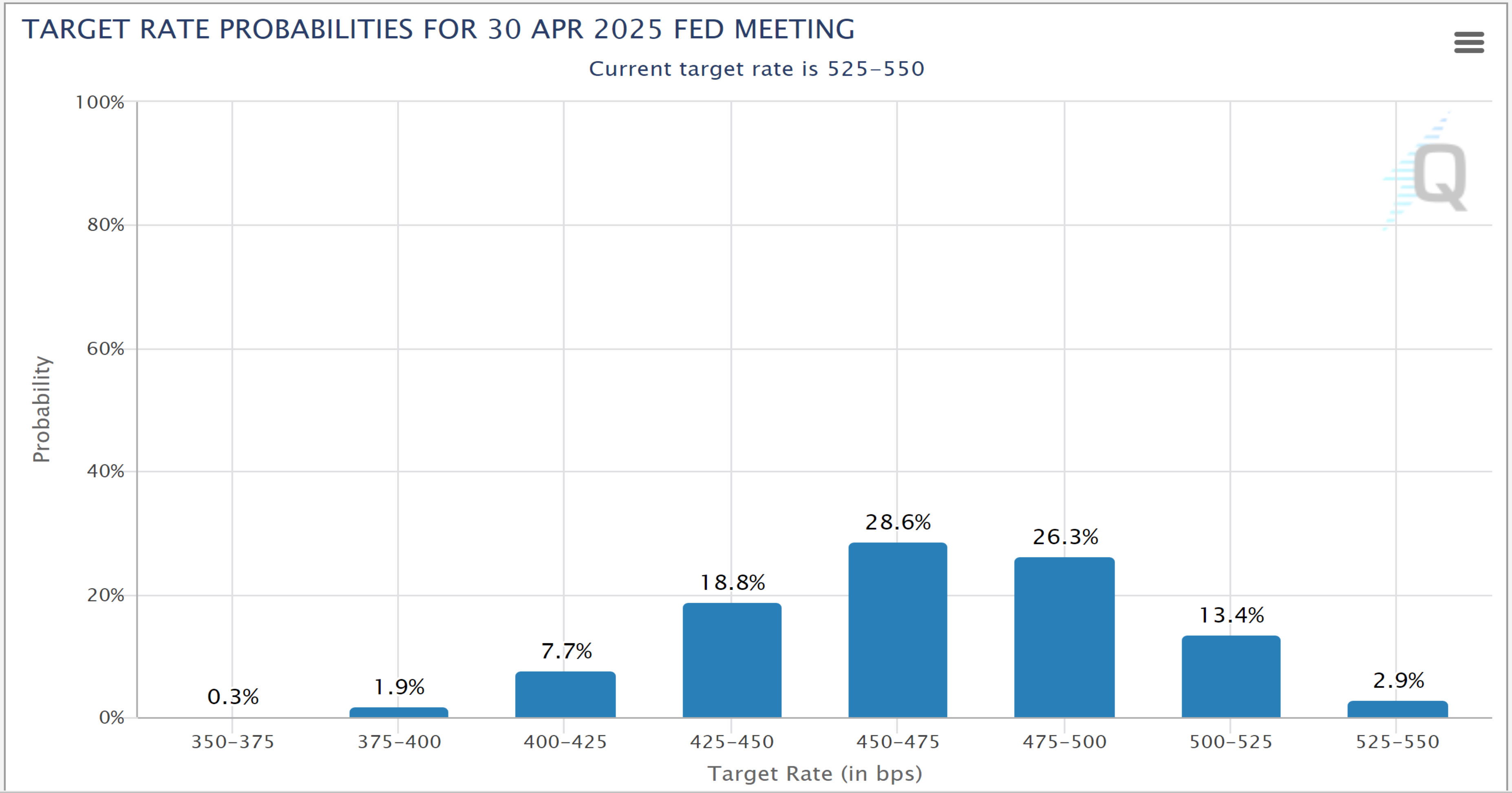
Compare
Probabilities

Historical
Historical
Downloads
Prior Hikes

Dot Plot
Chart
Table

Tools
CVOL
SOFR Watch

MEETING INFORMATION						PROBABILITIES		
MEETING DATE	CONTRACT	EXPIRES	MID PRICE	PRIOR VOLUME	PRIOR OI	EASE	NO CHANGE	HIKE
30 Apr 2025	ZQJ5	30 Apr 2025	95.3000	1,782	5,268	97.1 %	2.9 %	0.0 %



Acharya_IESE_Report_... | CME FedWatch Tool - ... | 5:02 PM

The Case for Asset Quality Review via a Stress Test

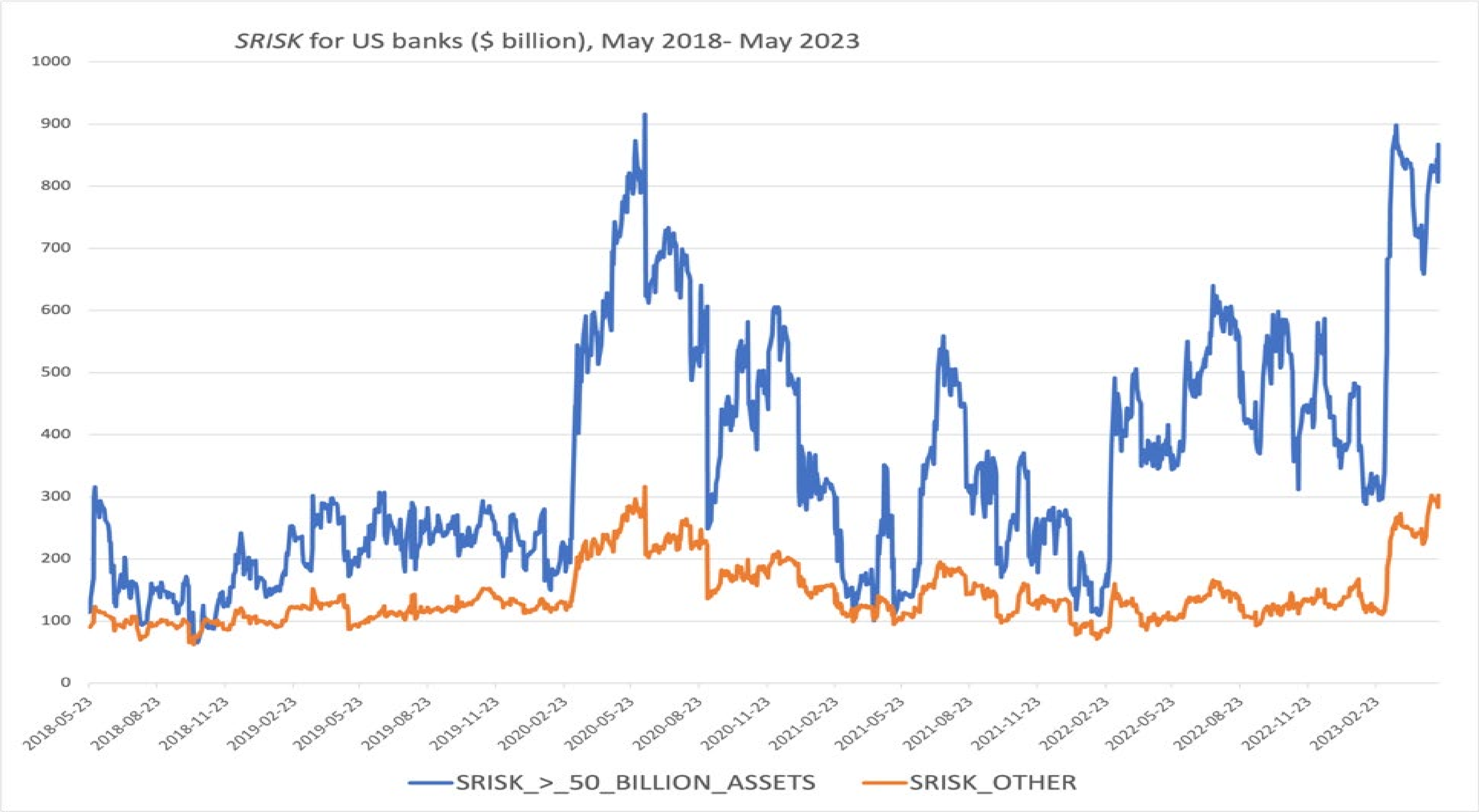
- Stress test + capital-raising, as in Feb-July 2009, for the current scenario?

  - Mark capital honestly in Asset Quality Review for rate hike (or higher for longer) + decline in commercial real estate (CRE) + regional/small bank/firm stress
  - Cover banks beyond the largest banks: Requires simplicity of approach
  - Stress it for plausible losses and cross-check with independent metrics like NYU Stern's SRISK

  - Get banks to raise capital or sell assets/franchise to more valuable banks
  - If not raise it for them via government-funded (preferred) stakes in equity
  - If done well, government funds might not be required as in 2009

- Give some formulaic concession in marking-to-market (MTM) of assets based on truly stable, insured, retail deposit base of banks ("mark to maturity")
- It is best to assume remaining debts might be all due and payable

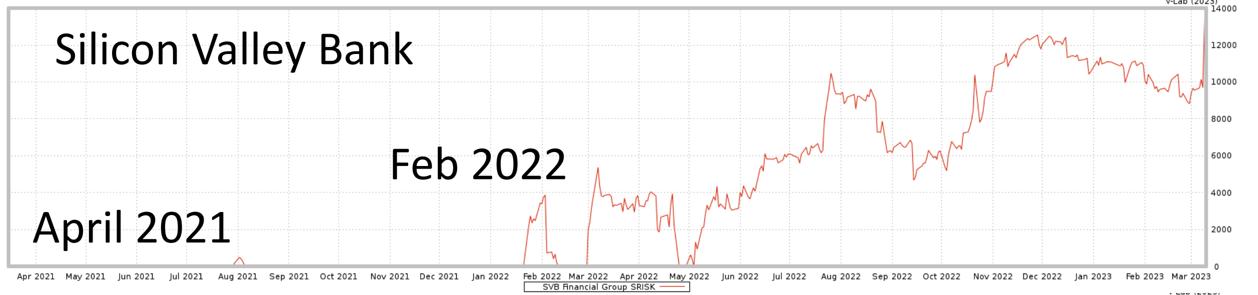
Market signals (SRISK) suggest bank capital shortfalls

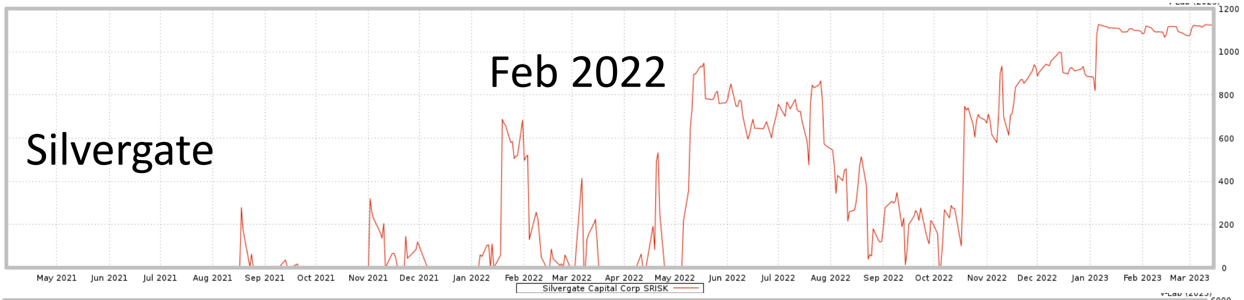


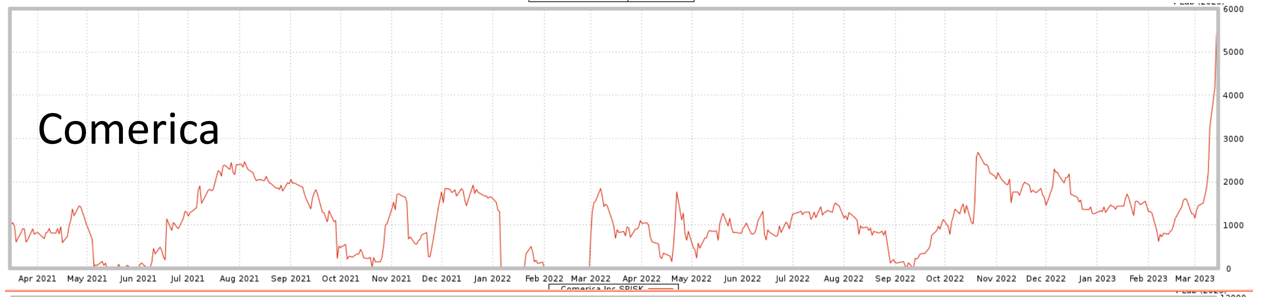
← Level at $650 bln
As of Apr 19 2024

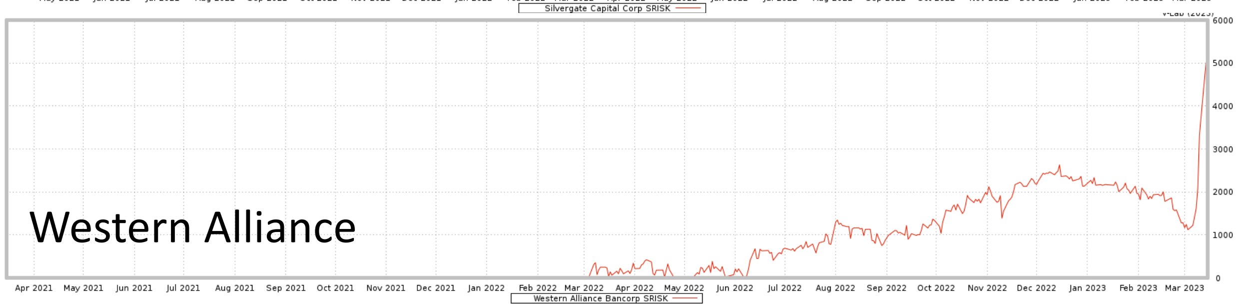
$$SRISK = E_0\left[k(D_t + E_t) - E_t \mid Crisis\right] = k.D_0 - (1-k).(1-LRMES).E_0$$

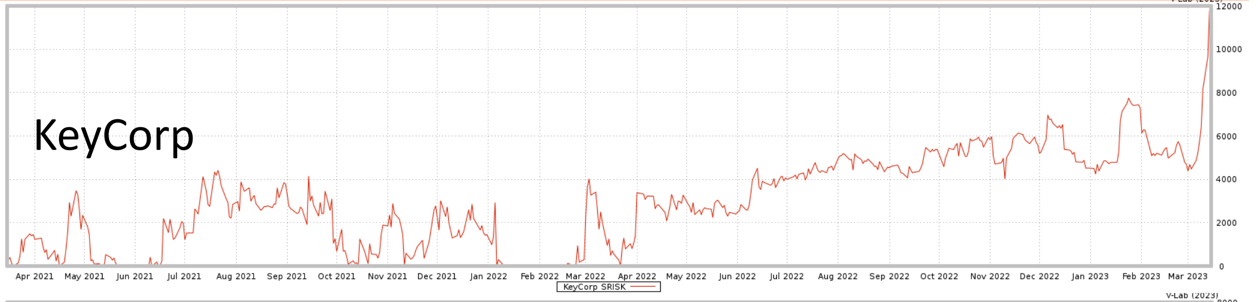

Source: NYU-Stern VLAB
(vlab.stern.nyu.edu/welcome/risk)
March 2023
Oct 2022
First Republic Bank
First Republic Bank/CA SRISK

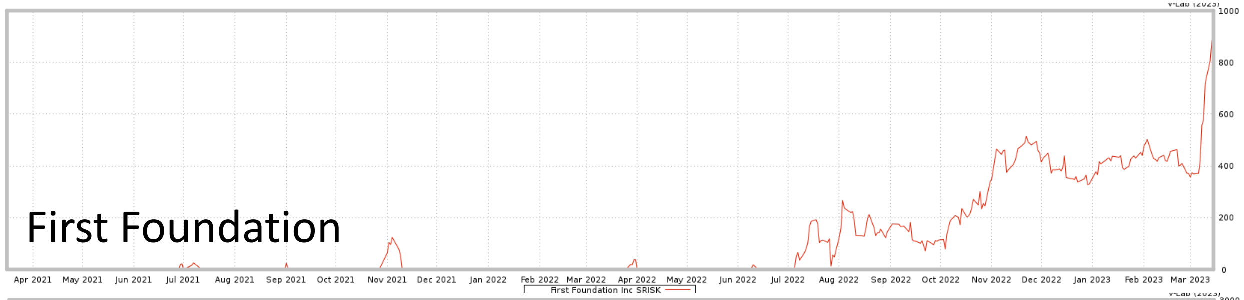

Silicon Valley Bank
Feb 2022
April 2021
SVB Financial Group SRISK

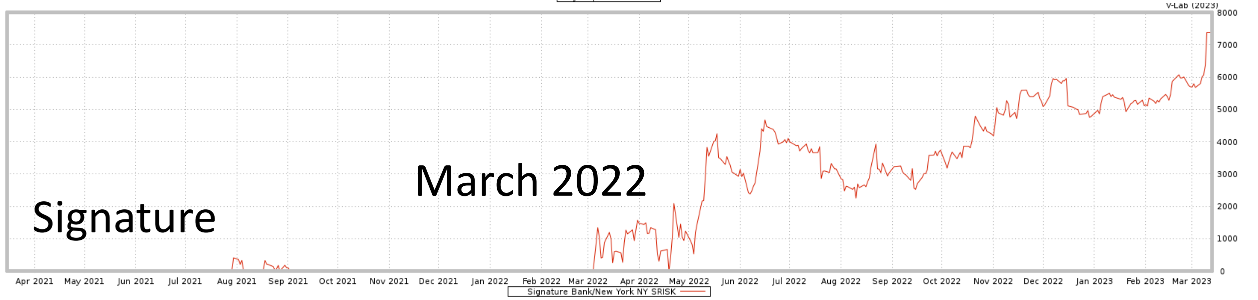

Feb 2022
Silvergate
Silvergate Capital Corp SRISK

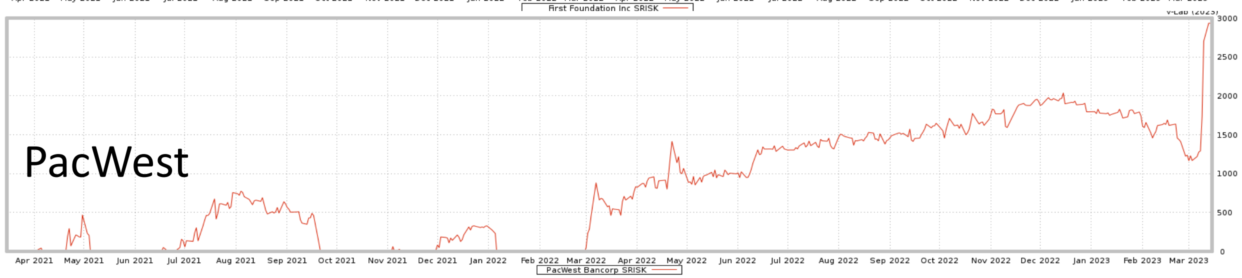

Comerica

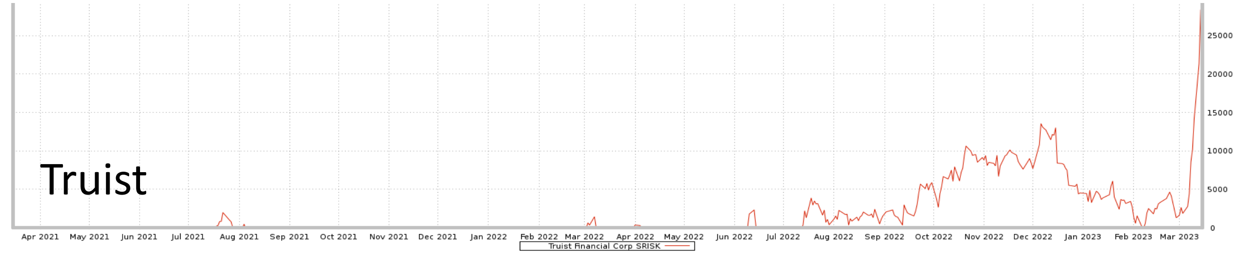

Western Alliance
Western Alliance Bancorp SRISK


KeyCorp
KeyCorp SRISK


First Foundation
First Foundation Inc SRISK


March 2022
Signature
Signature Bank/New York NY SRISK


PacWest
PacWest Bancorp SRISK

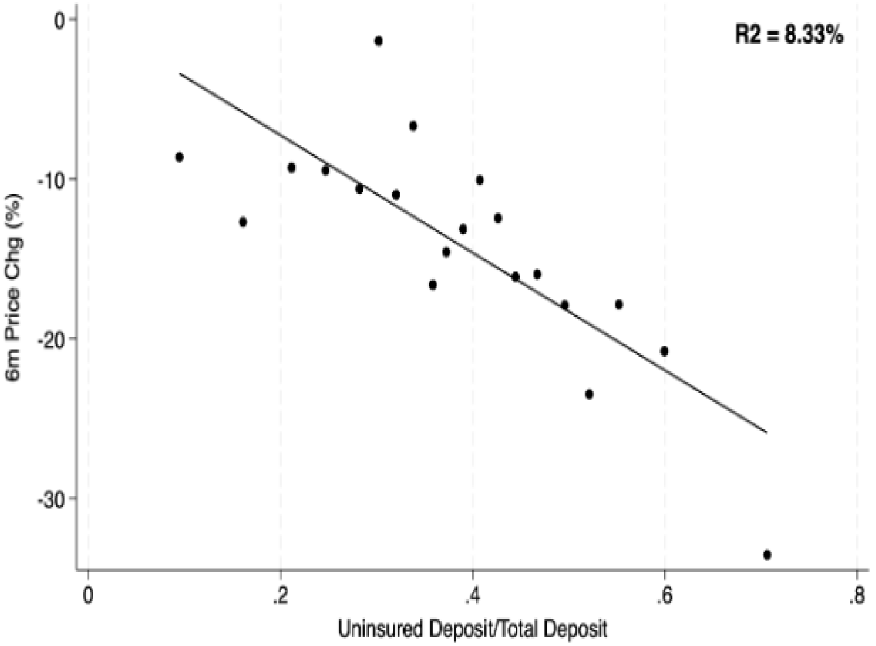

Truist
Truist Financial Corp SRISK

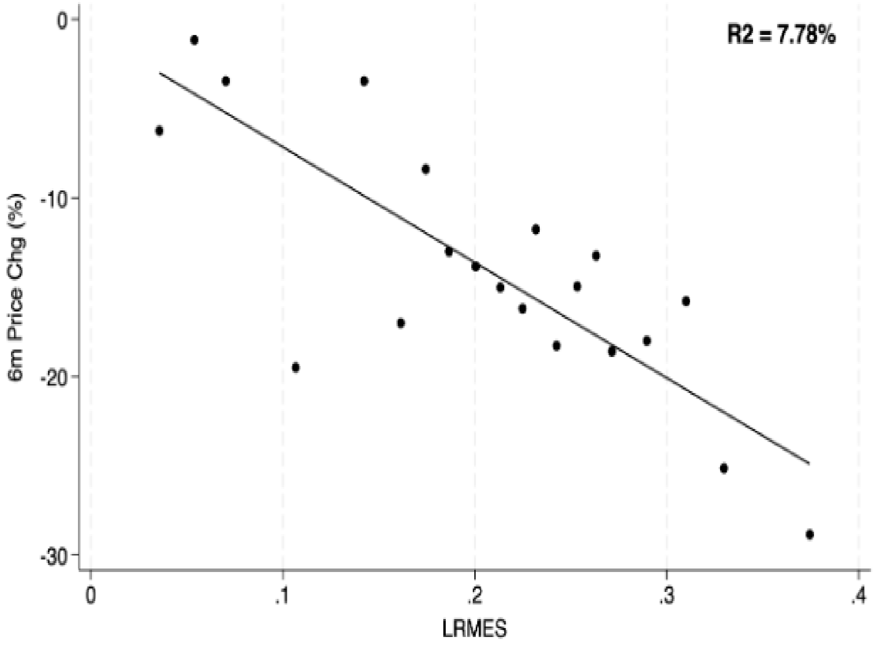
Signals:

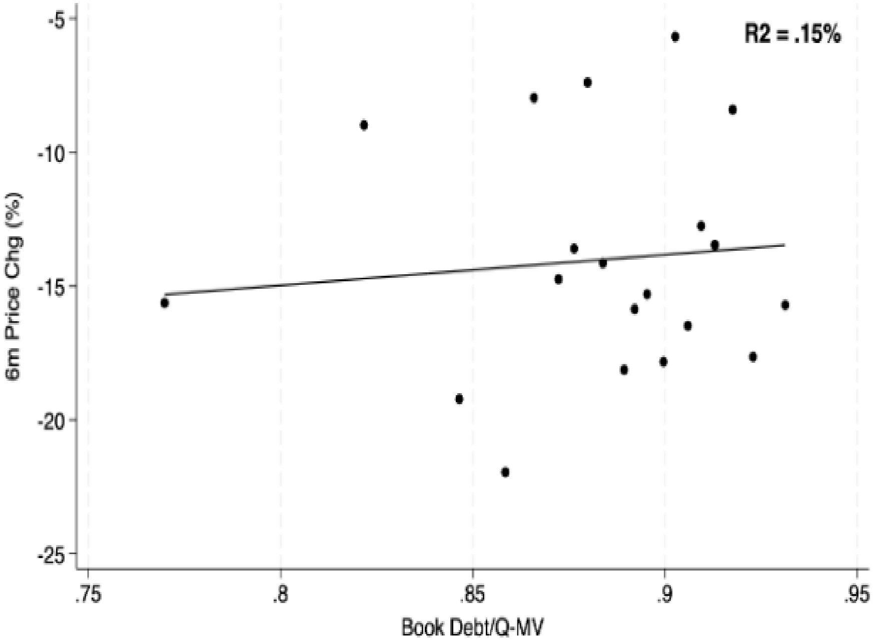
Uninsured Deposit ratio

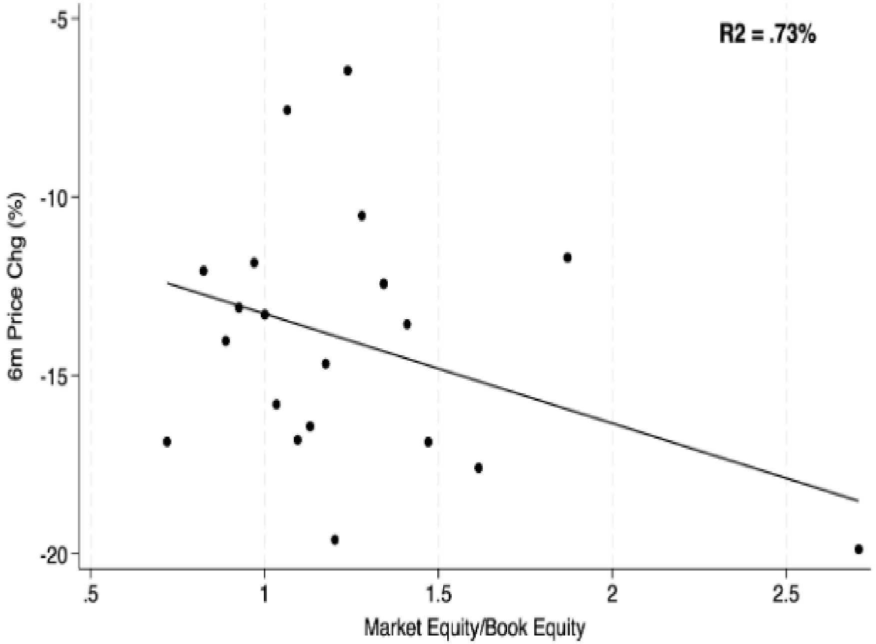
Mkt beta (LRMES)

Option Implied Vol









Other market-value indicators: Option Implied Vols?

Boom-bust of uninsured bank deposits
→Bank runs: Slow at first, then fast…

Is there a robust response to the liquidity risk?

1. More pre-positioned liquidity (all banks)

2. Increase capital (private deposit insurance) for present and visible risks, benchmarked to market data

Bank capital: Mark it, stress it, (where needed) raise it