SVB and Beyond: Understanding the Banking Stress and Ways Forward

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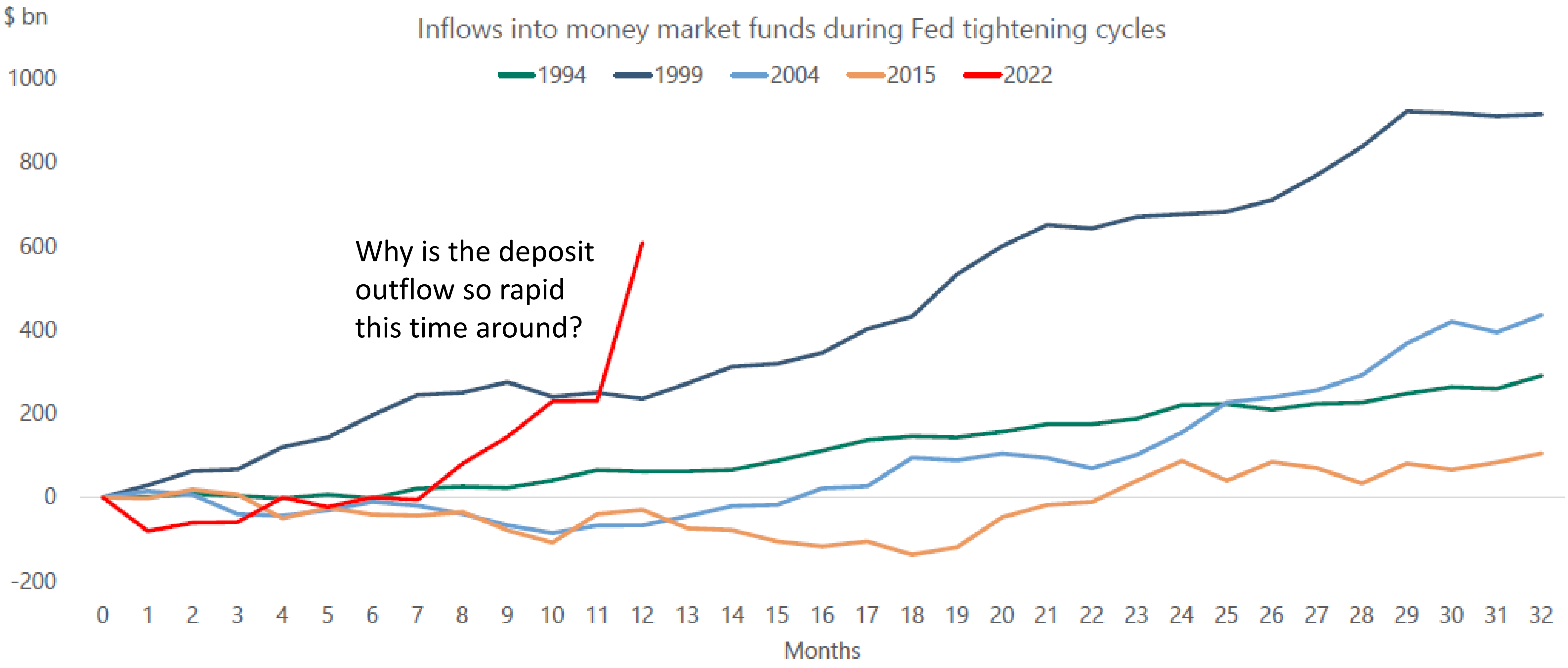
$600bn inflows into money market funds during this Fed hiking cycle



Source: FRB, ICI, Bloomberg, Apollo Chief Economist.

Growth of Uninsured Deposits and What Caused It?

- Extraordinary monetary stimulus and its likely unintended consequence

- Quantitative easing (Acharya, Chauhan, Rajan and Steffen, “*Liquidity Dependence and the Waxing and Waning of Central Bank Balance Sheets*”, based on presentation at Jackson Hole Economic Symposium, August 2022)

  - Not just an expansion of Fed balance-sheet but also of commercial banks
  - Flooded with uninsured deposits, backed by low-yielding reserves, search for yield
  - For a while it looks a profitable franchise, until the tail risk of runs materializes
  - As Fed starts QE all over again: “Hotel California”, no exit

- *This Time Isn’t Different, but It’s Magnified…*
  - Our research shows that uninsured bank deposits expand each time QE is undertaken

QE: Typically, a purchase from public/non-banks

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

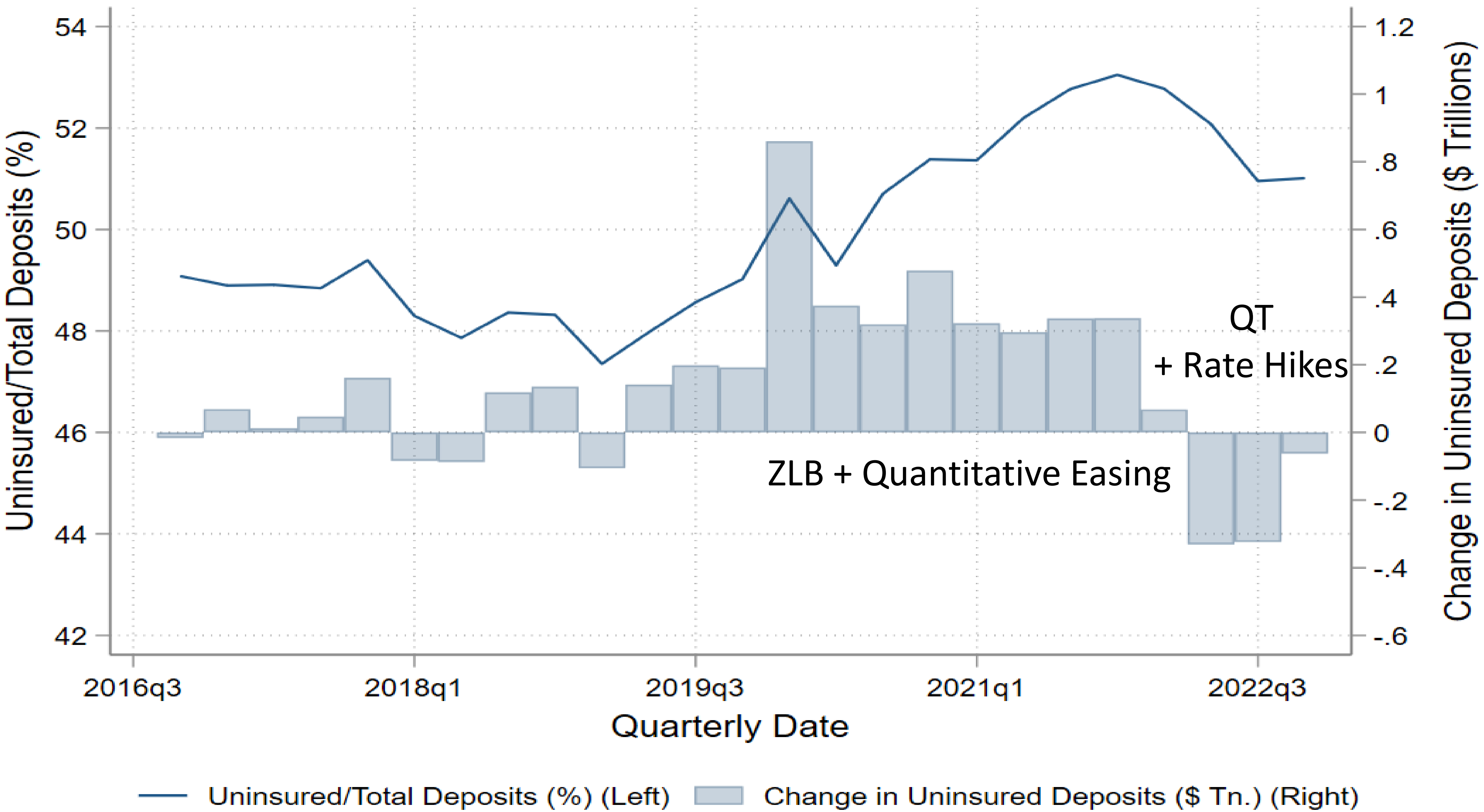
FEDERAL RESERVE	
Assets	**Liabilities**
Treasury securities +$1	Reserves held by banks +$1 Cash held by the Treasury

Bank balance sheets expand, financed with deposits

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

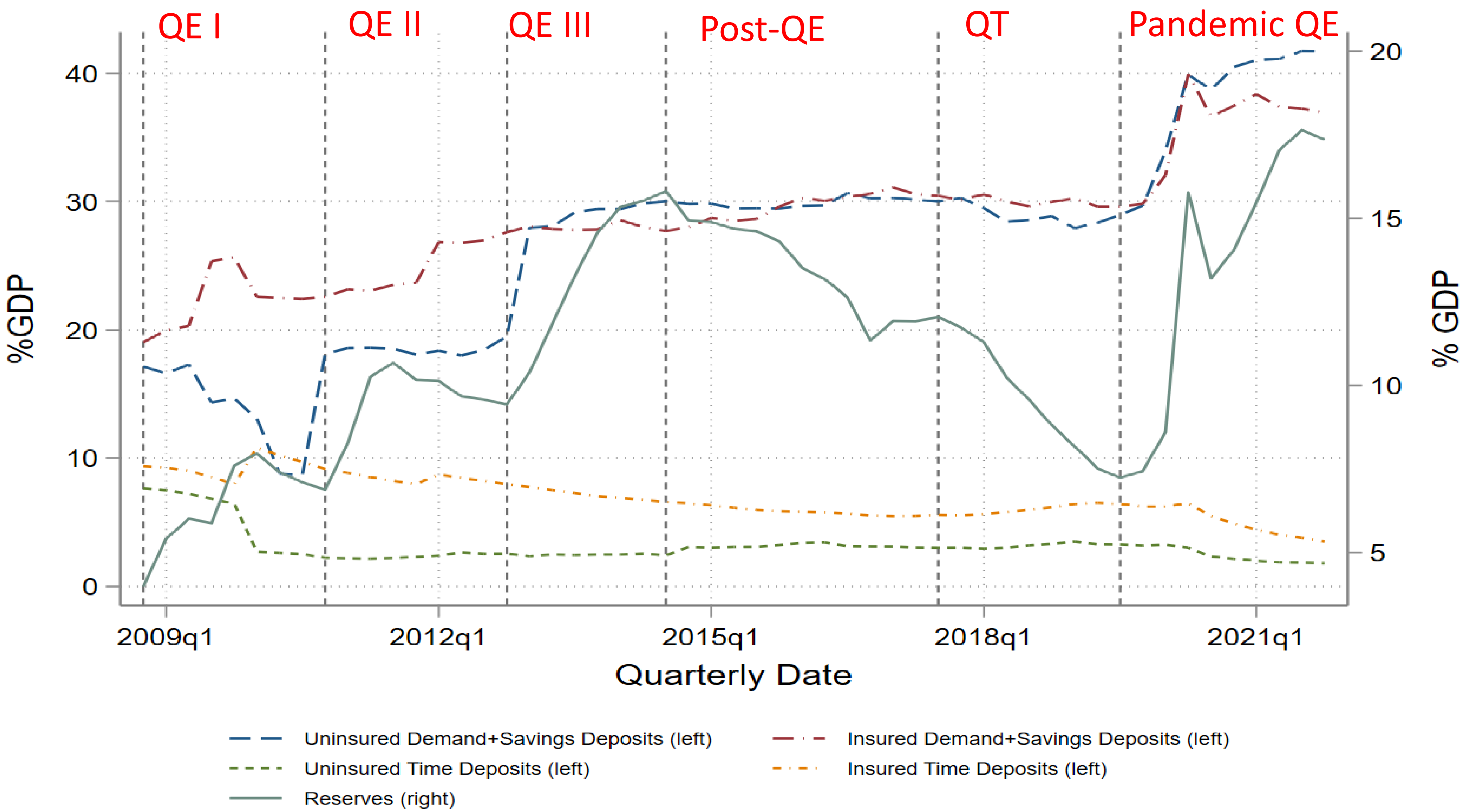
PUBLIC	
Assets	**Liabilities**
Deposits +$1 Treasury securities -$1	Net worth

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



Source: Federal Deposit Insurance Corporation (FDIC), Q1 2023

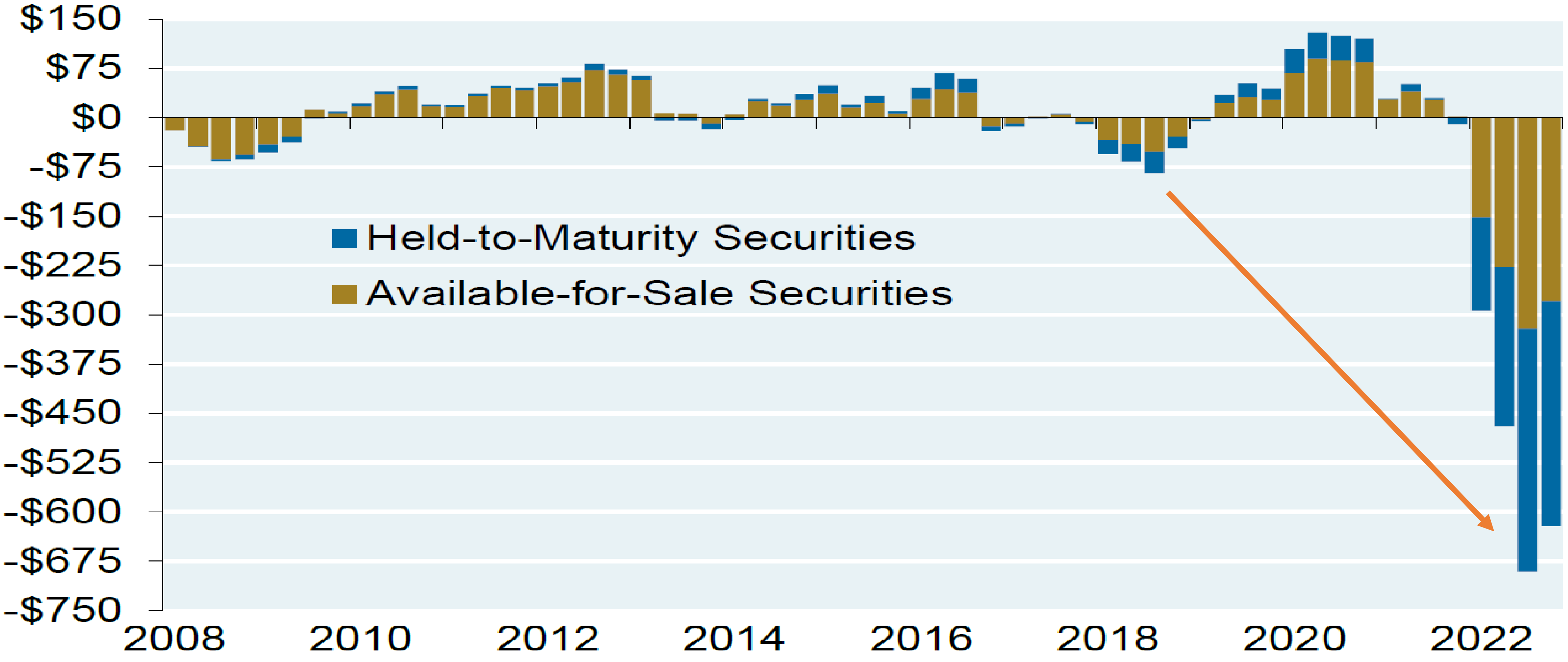
Uninsured/Insured Demandable/Time Deposits (% of GDP)



Source: [Acharya, Chauhan, Rajan and Steffen](2023), using FRED and FDIC data

FDIC Q4 unrealized bank losses on investment securities

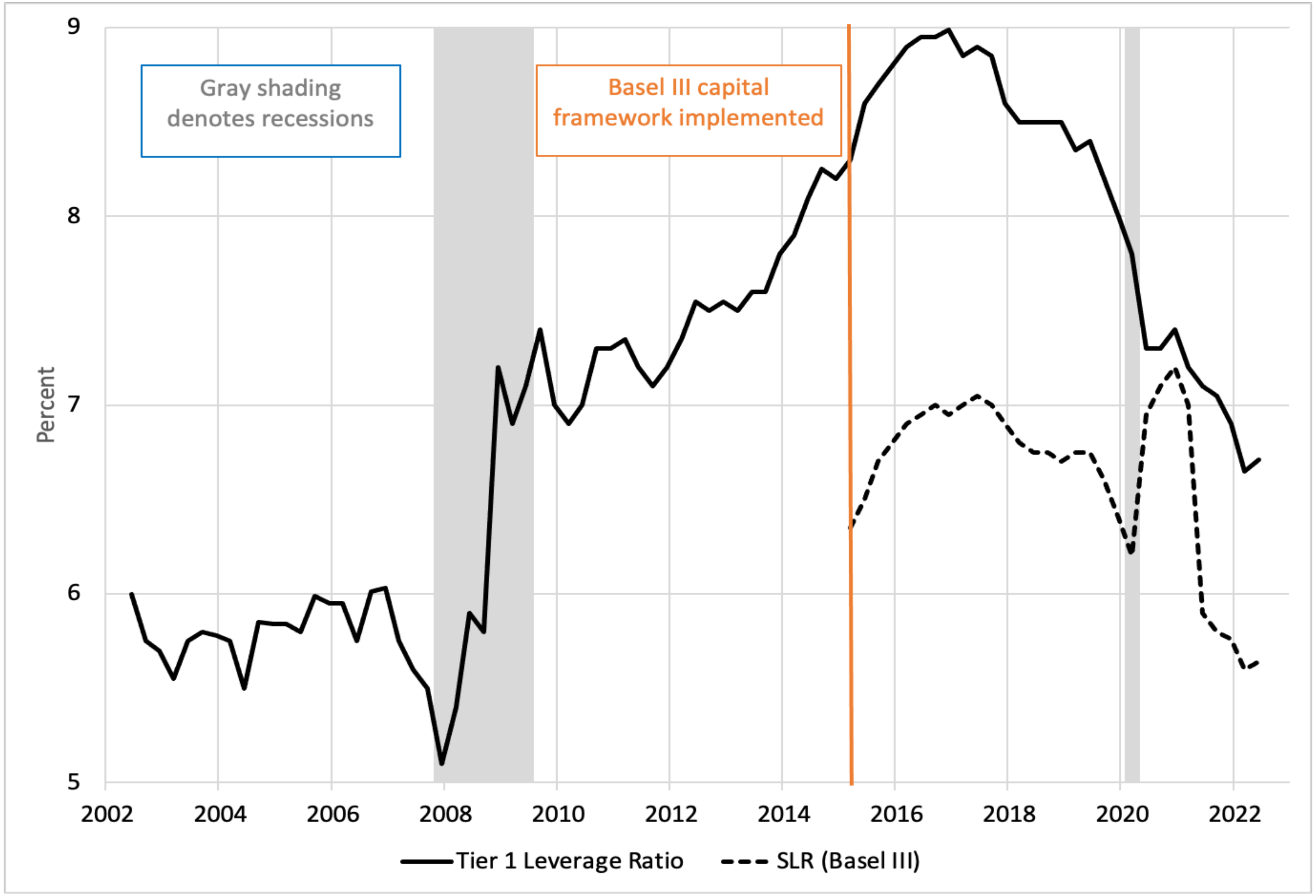
US$, billions



Source: FDIC. Q4 2022.

Total unrealized losses in this rate-hike cycle relative to the previous highlight saliently the “scale” of the bank balance sheets

G-SIB Capital Ratio: Crisis Regulatory Cycle



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

So what should be done with banks now?

- Backstop it all, provide guarantees?

    - This helps stem runs, but does not restore confidence or bring down the vol, as in 2007-09
    - Another variant of risk-seeking: Remaining under-capitalized. Healthier banks may skip too
    - The social problem is to produce the "optimal" quantity of deposits, so get risks internalized

- What worked in the past can provide some guidance…

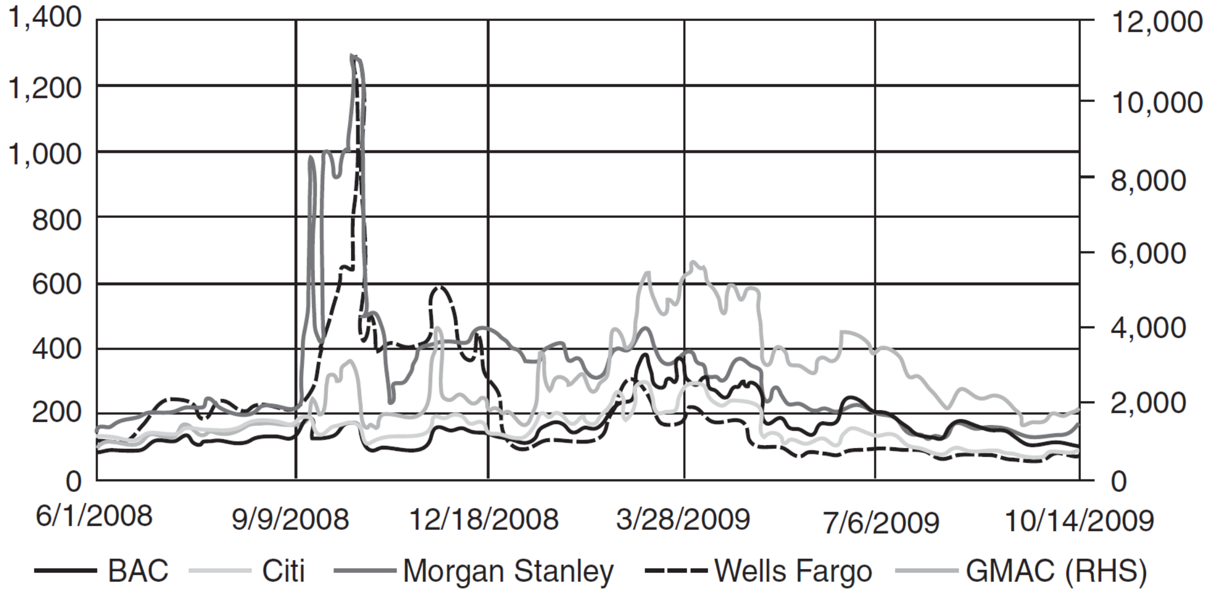


FIGURE 4.1 Five-Year Maturity Senior CDS Spreads, G1

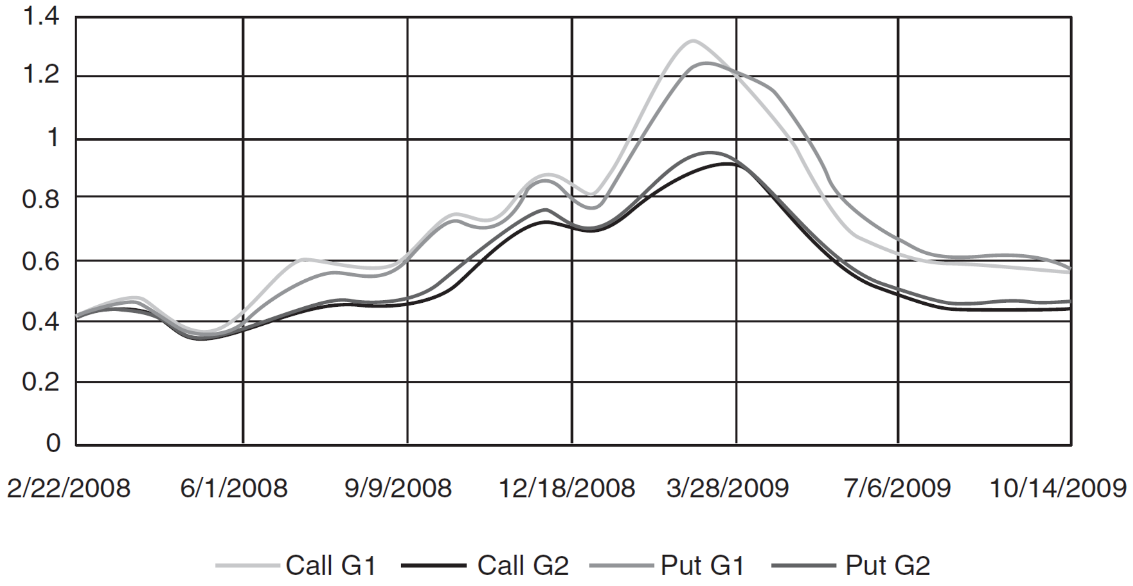


FIGURE 4.3 Average Groupwise Implied Volatilities

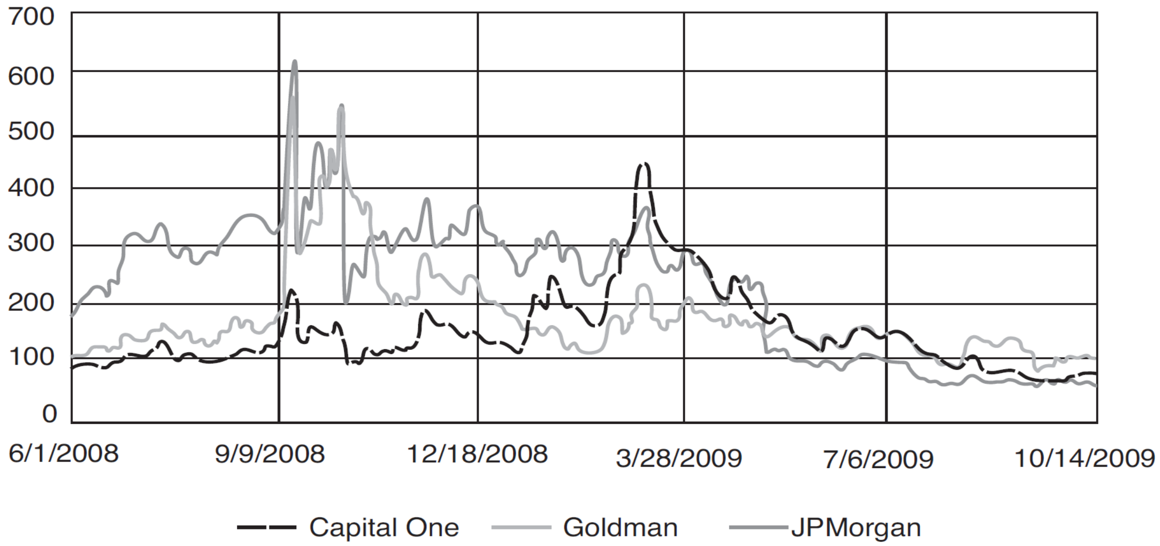
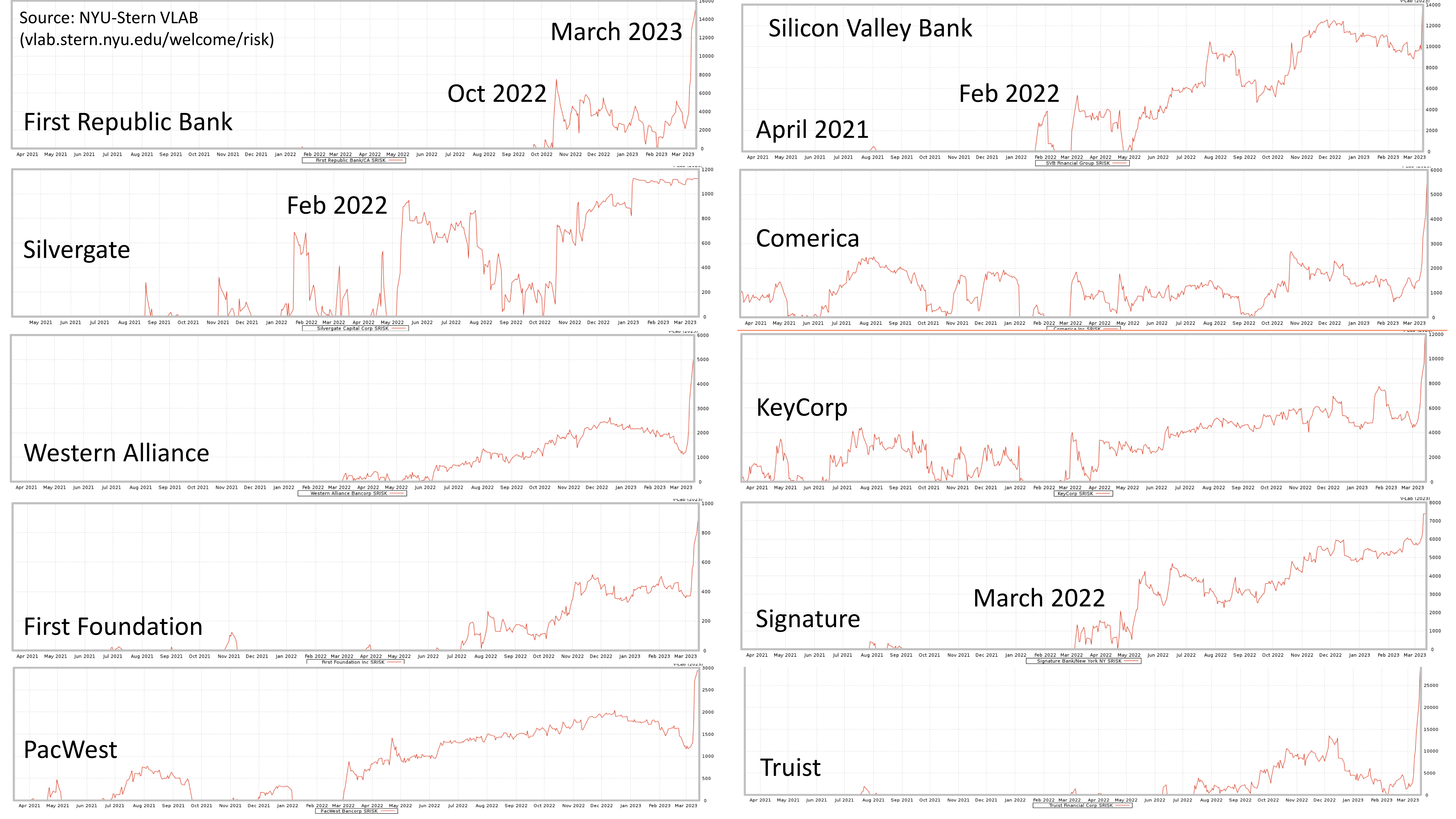


FIGURE 4.2 Five-Year Maturity Senior CDS Spreads, G2

G1: Required to raise capital after stress test of Feb-May 2009

G2: Not required to raise capital after stress test

Source: Chapter 4, "Measuring Systemic Risk", Viral V. Acharya, Christian Brownlees, Robert Engle, Farhang Farazmand, and Matthew Richardson, in *Regulating Wall Street: The Dodd-Frank Act and the New Architecture of Global Finance,* NYU Stern (Wiley), 2011.



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
Comerica Inc SRISK
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

The Case for a Stagflation Stress Test

- Stress test + capital-raising, as in Feb-July 2009, for stagflation (poly-crisis)
  - Mark capital honestly in Asset Quality Review for rate hike + recession + house-price declines + decline in commercial real estate (CRE)
    - 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
- It is best to assume remaining debts might be all due and payable
  - Diagnosis: (Fragile) Deposit franchise vs Manufacturing tail risk / Carry trades ?
  - Regardless of the diagnosis, safe to raise bank capital -> lower uninsured deposits
  - Recognize the fiscal limits on deposit insurance, guarantees, the size of Fed's put, etc.

Banks get run:
Slow at first, and then fast…

Is there a robust response?

Increase private deposit insurance

<u>Bank capital: Mark it, stress it, raise it</u>