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Banking Turmoil and Regulatory Reform

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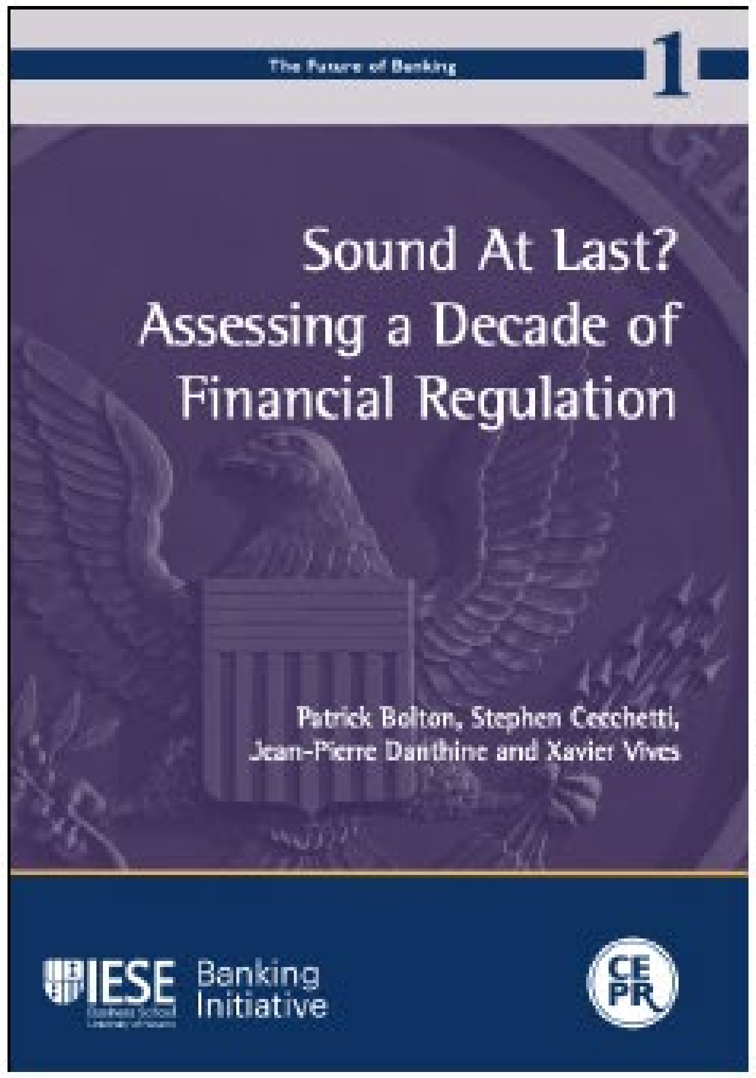
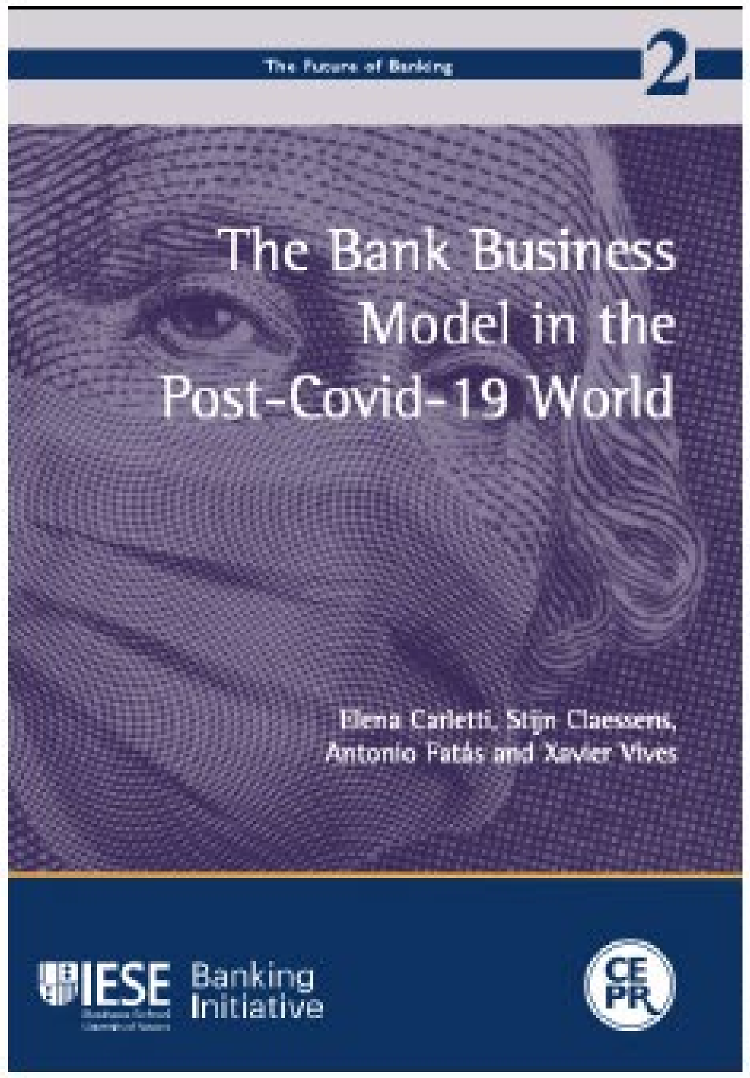
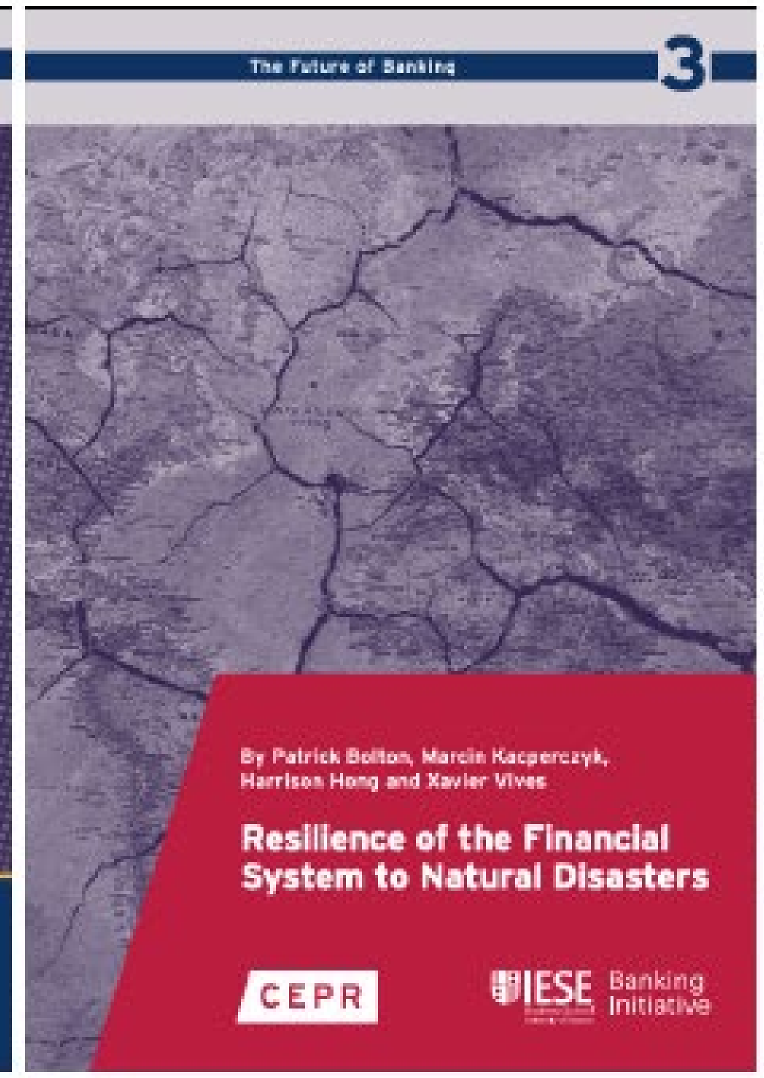
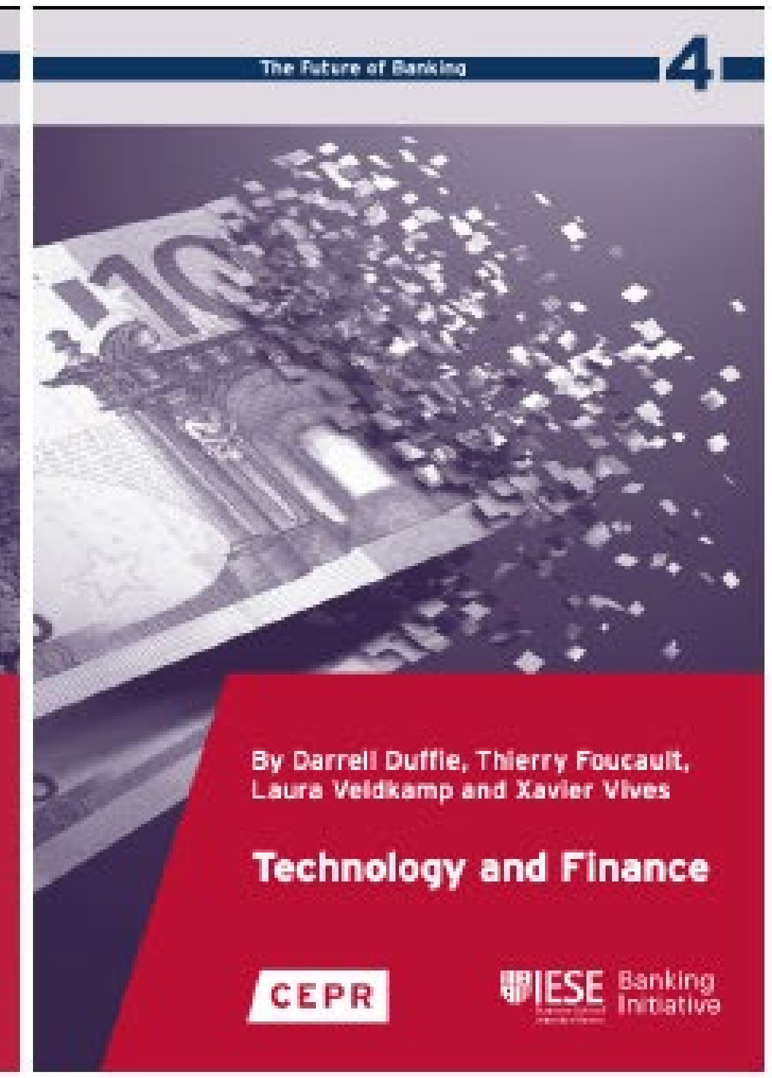
June, 2024

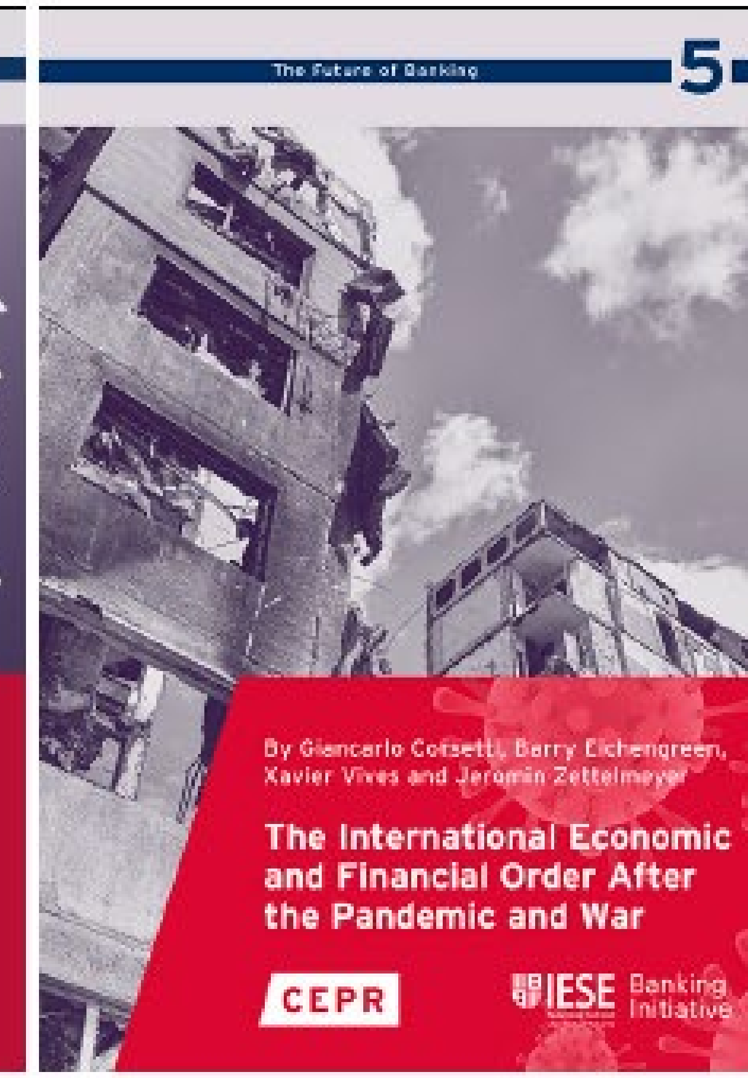
The Future of Banking Reports











Sound At Last? Assessing a Decade of Financial Regulation

By Patrick Bolton, Stephen Cecchetti, Jean-Pierre Danthine and Xavier Vives

The Bank Business Model in the Post-Covid-19 World

By Elena Carletti, Stijn Claessens, Antonio Fatás and Xavier Vives

Resilience of the Financial System to Natural Disasters

By Patrick Bolton, Marcin Kacperczyk, Harrison Hong and Xavier Vives

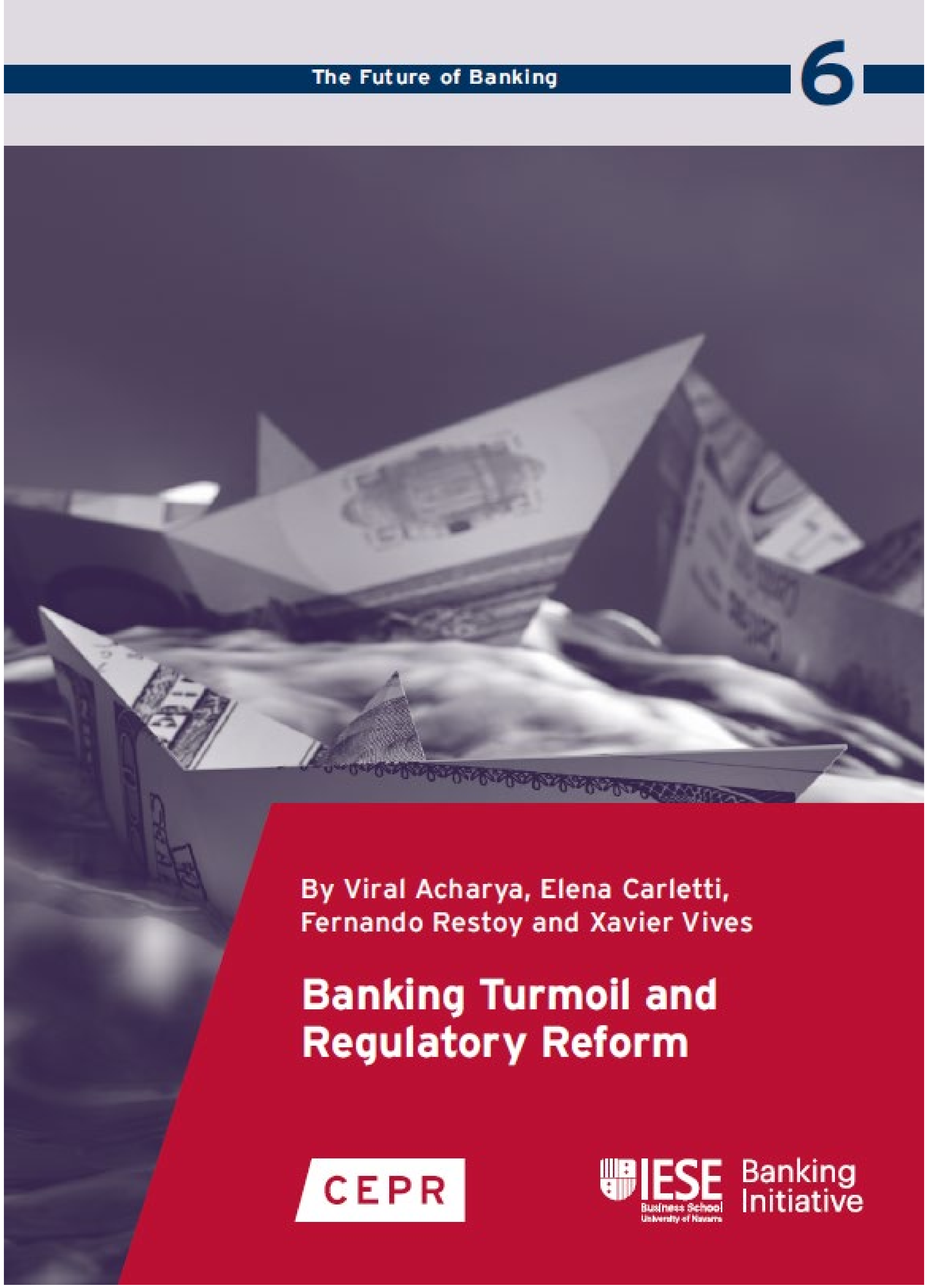
Technology and Finance

By Darrell Duffie, Thierry Foucault, Laura Veldkamp and Xavier Vives

The International Economic and Financial Order After the Pandemic and War

By Giancarlo Corsetti, Barry Eichengreen, Xavier Vives and Jeromin Zettelmeyer

The Future of Banking Reports



After the turmoil, crucial questions arise:

- What is new and old in these failures?
- Is it time to reassess the stickiness of deposits? Have digital banking and social media fundamentally altered the banking market and impacted financial stability?
- What has been the role of monetary policy?
- Was the failure of Silicon Valley Bank (SVB) in the US an exception or the canary in the mine?
- How could Credit Suisse be sound from a regulatory perspective and yet be on the brink of collapse?
- To what extent must we reform regulation again after the GFC? Which parts of the implemented reforms seem robust, and which need amendment?
- Were the US and Swiss authorities' responses adequate? Is the new resolution framework developed after the GFC fit for purpose? Can we trust that the crisis of systemic banks can generally be managed without public support?

6th Report: Banking Turmoil and Regulatory Reform

The report concentrates on three major aspects:

- Boom and Bust in Uninsured Bank Deposits and Police Response
- Prudential regulation, accounting and supervision
- Lessons for bank failure management

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Boom and Bust in Uninsured Deposits
and
Policy Response

Boom and Bust in Uninsured Deposits and Policy Response

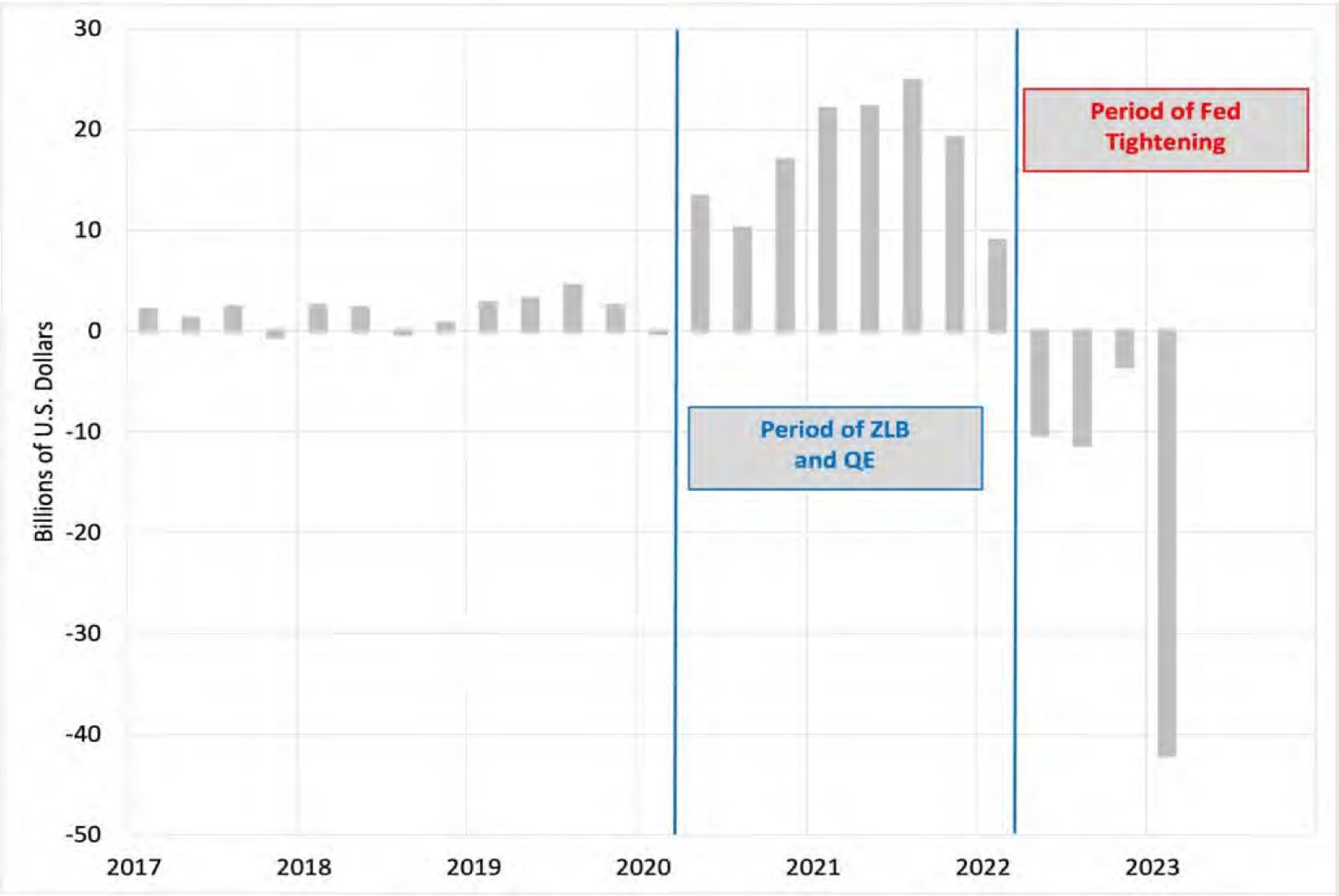
In the US uninsured bank deposits were a big part of deposits due to QE measures, which with interest rate hikes and reversal of QE triggered a liquidity crisis that became a solvency one

Illustrating:

- Side-effects of monetary policy actions
- Divergent vulnerabilities within the banking sector
- Amplifying effect of digital banking on speed and contagion risk
- The need to reassess regulatory frameworks, supervision tools and monetary policy

Quarterly changes in deposits in SVB

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.

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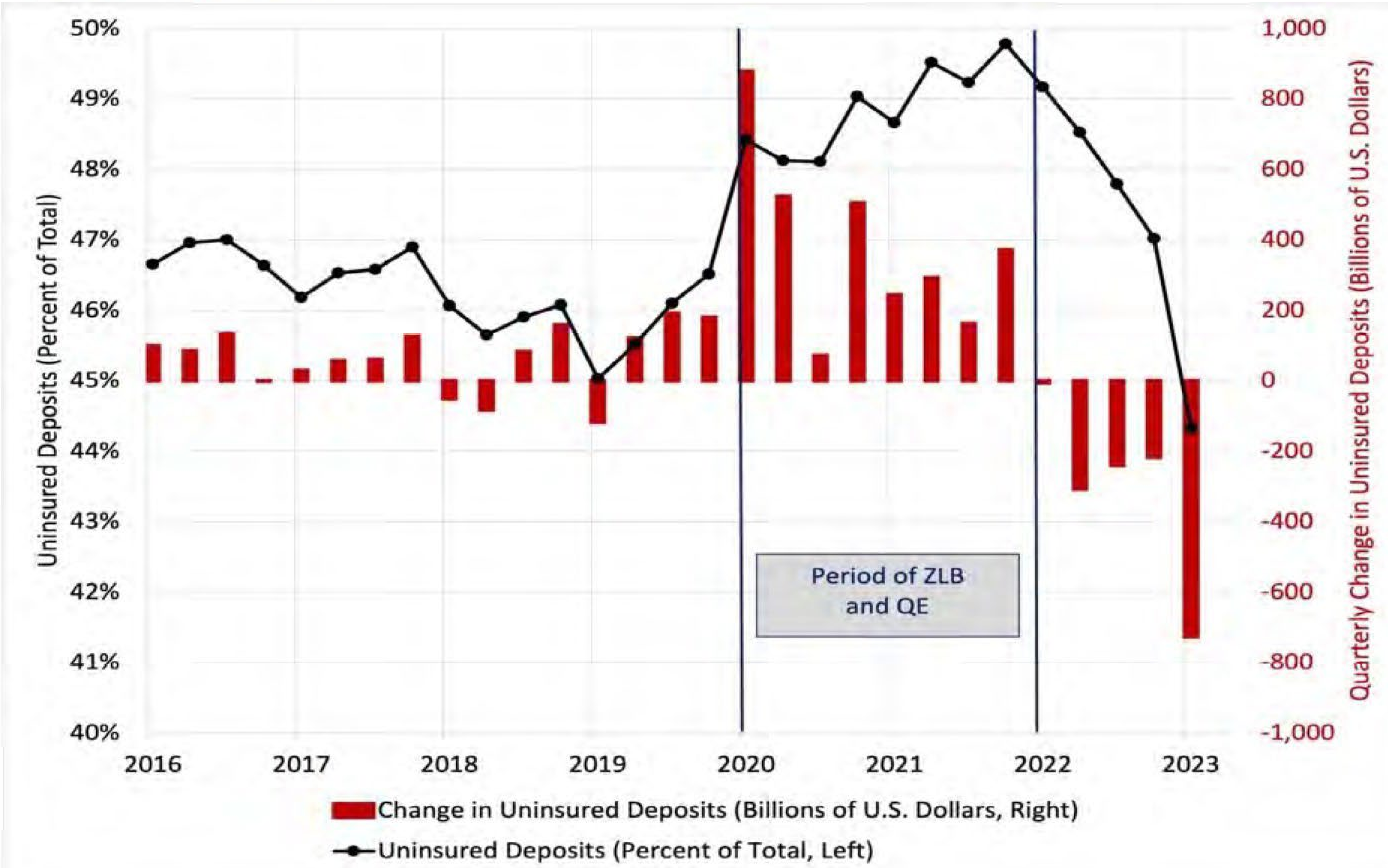
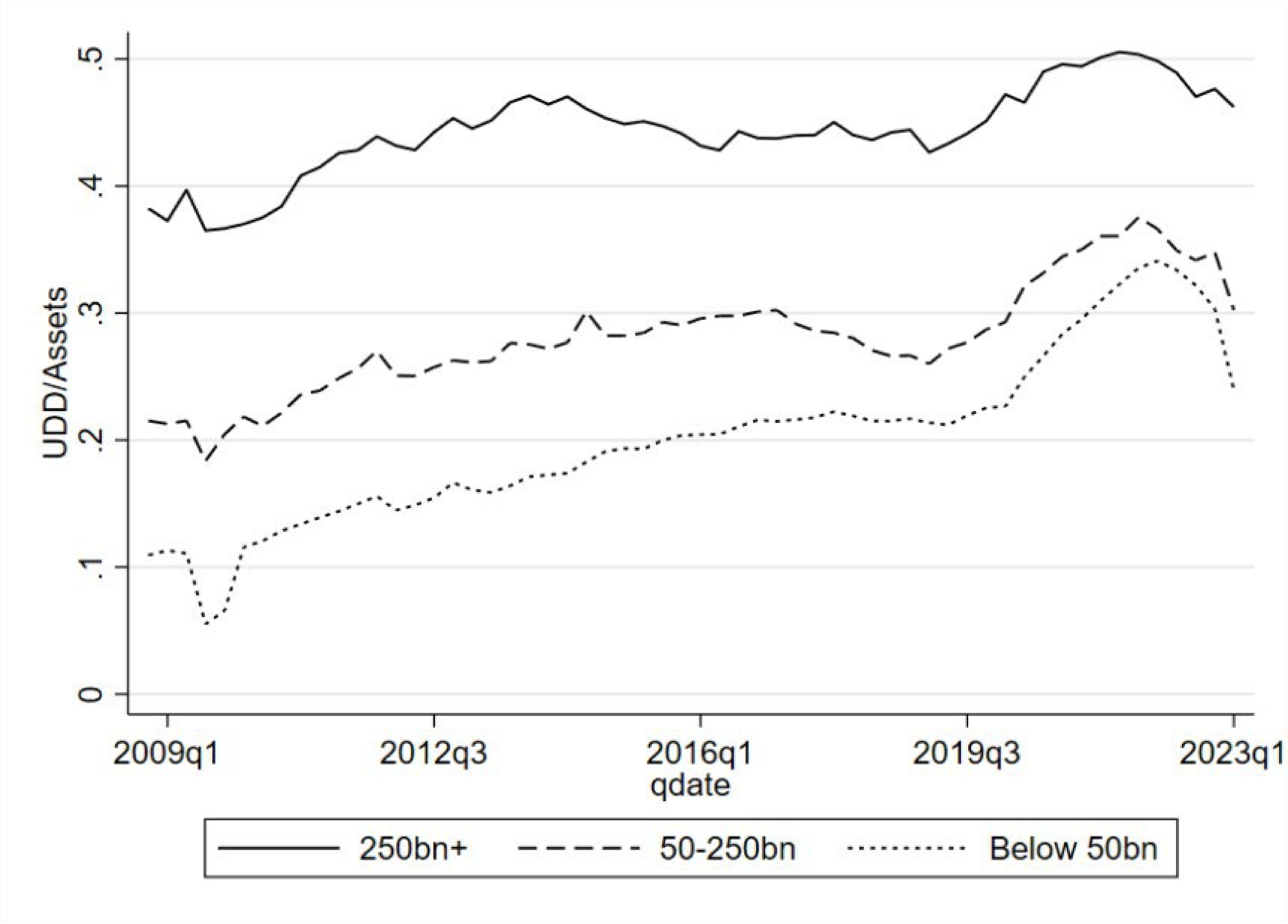
Quarterly changes in uninsured deposits in the US

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



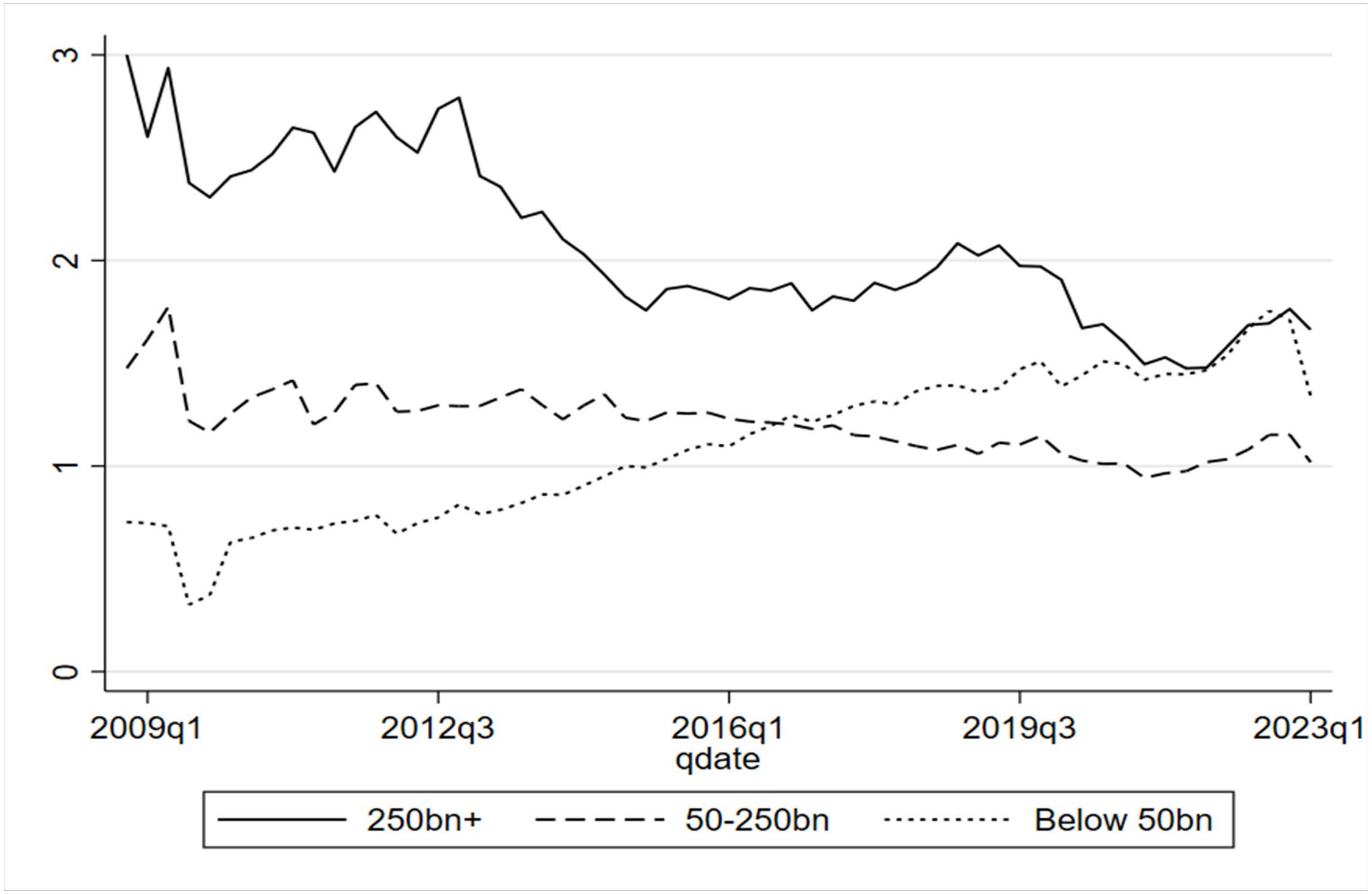
Notes: The line (left axis) shows the ratio of uninsured deposits to total deposits of FDIC-insured banks. The total includes foreign deposits, none of which are insured. The bars (right axis) show the changes in uninsured deposits in billions of U.S. dollars. Source: FDIC Quarterly Banking Profile.

Ratcheting-up of Uninsured Demand Deposits (US, by bank size)



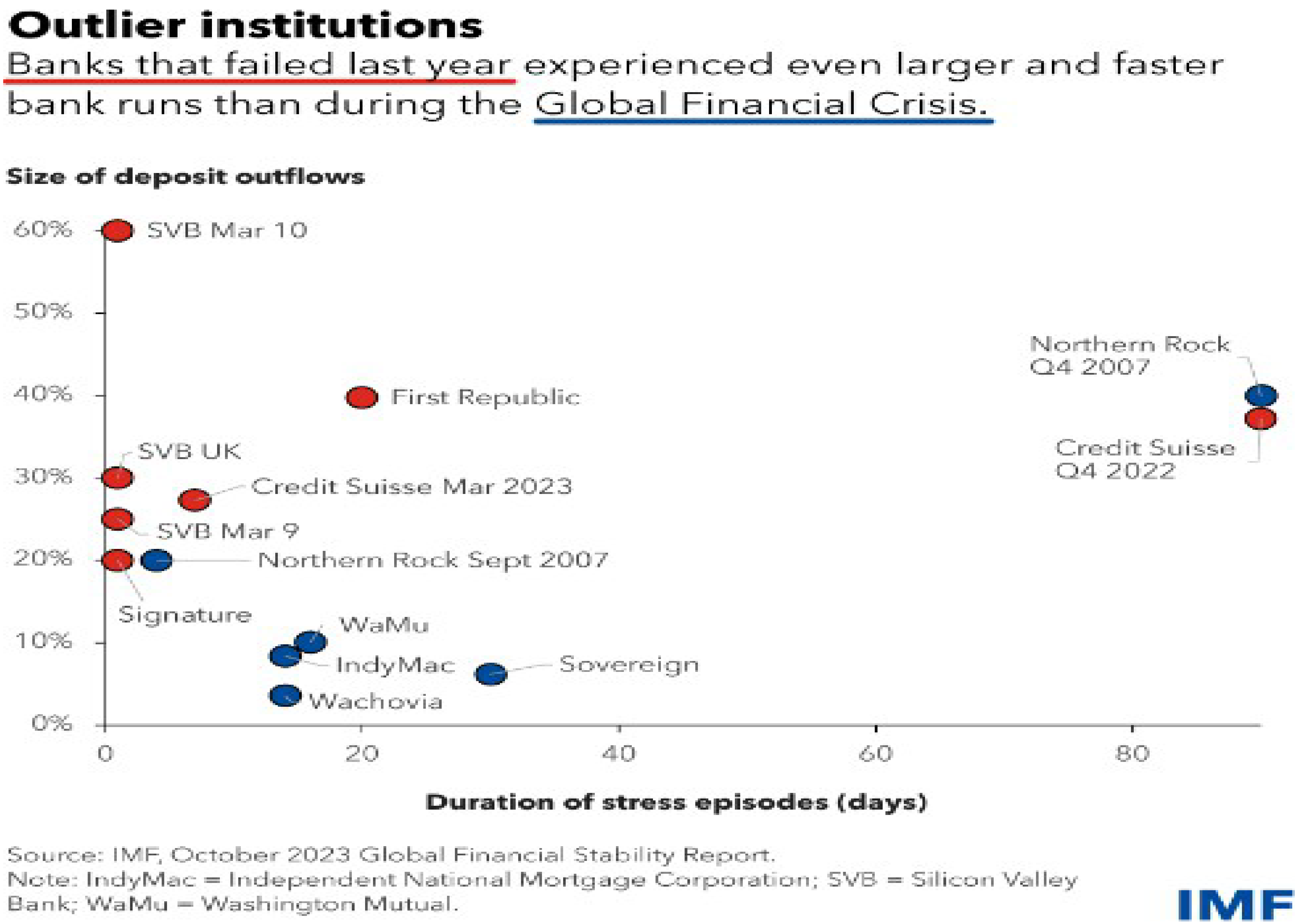
Bank Size and Ratcheting-up of Liquidity Risk (US)

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

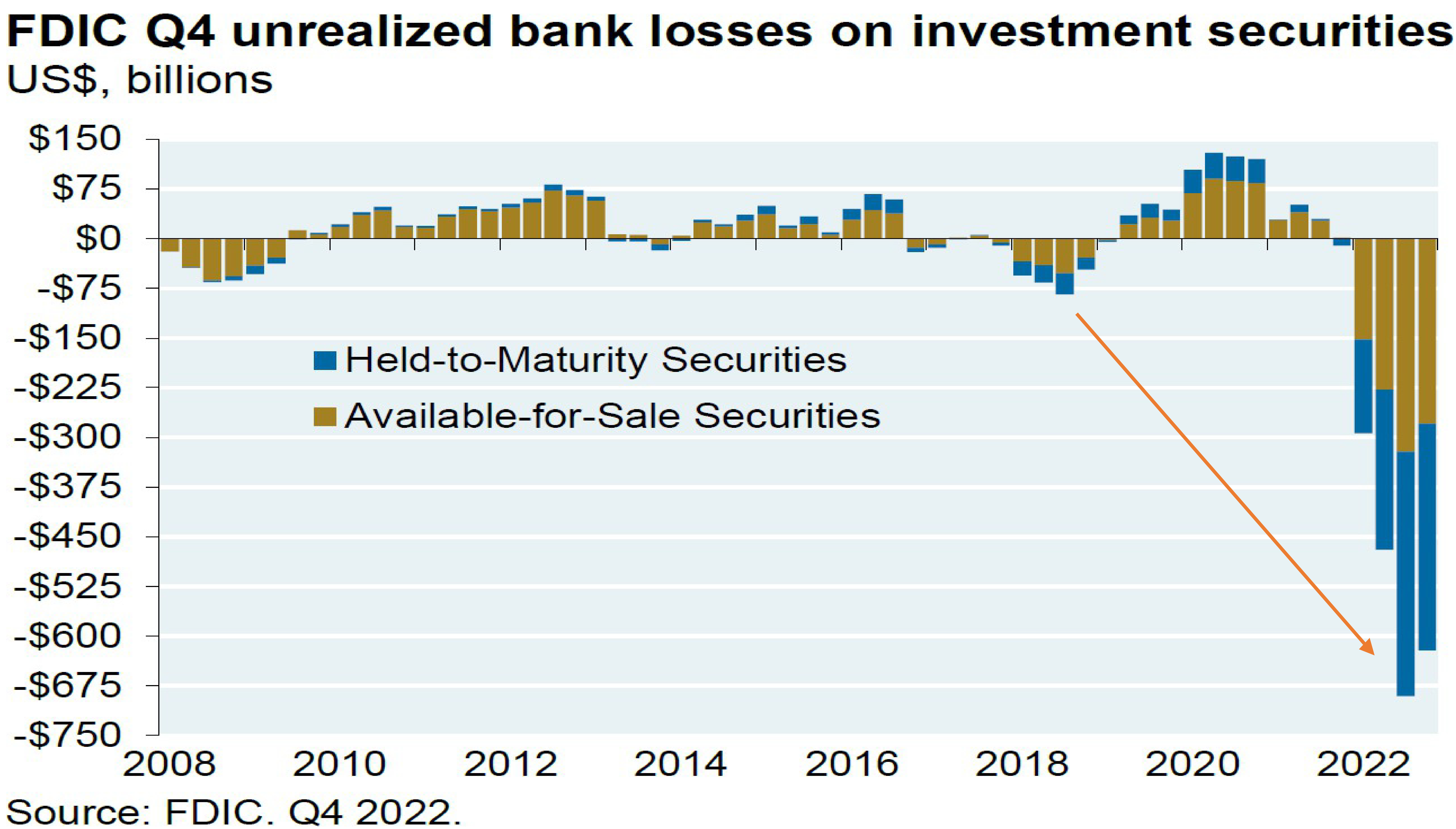


Largest banks becoming safer, smallest banks increasingly at risk of illiquidity

Deposit runs larger and faster – technology? QE-QT?

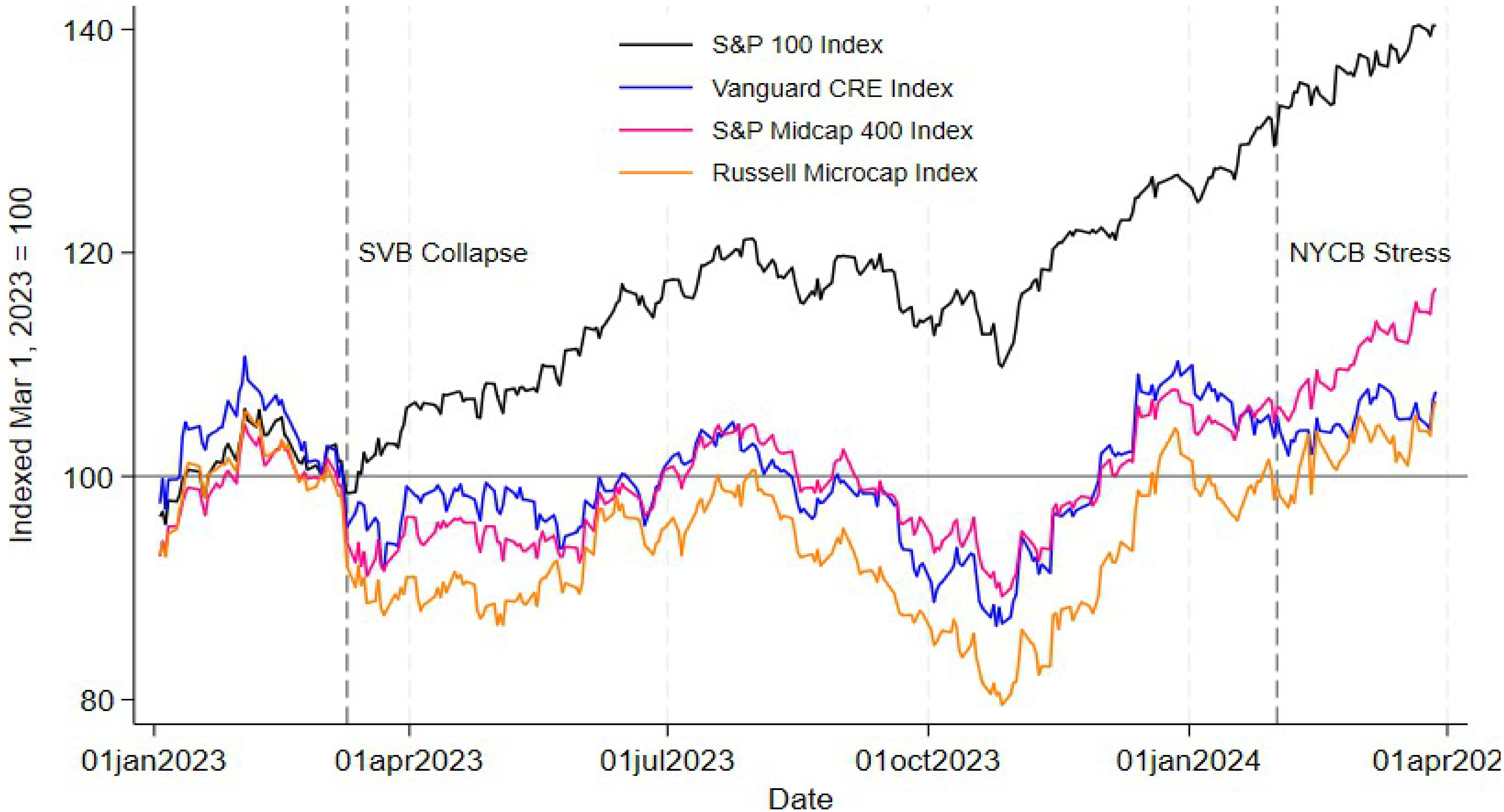


US Bank Losses



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

Small firm underperformance visible since SVB stress



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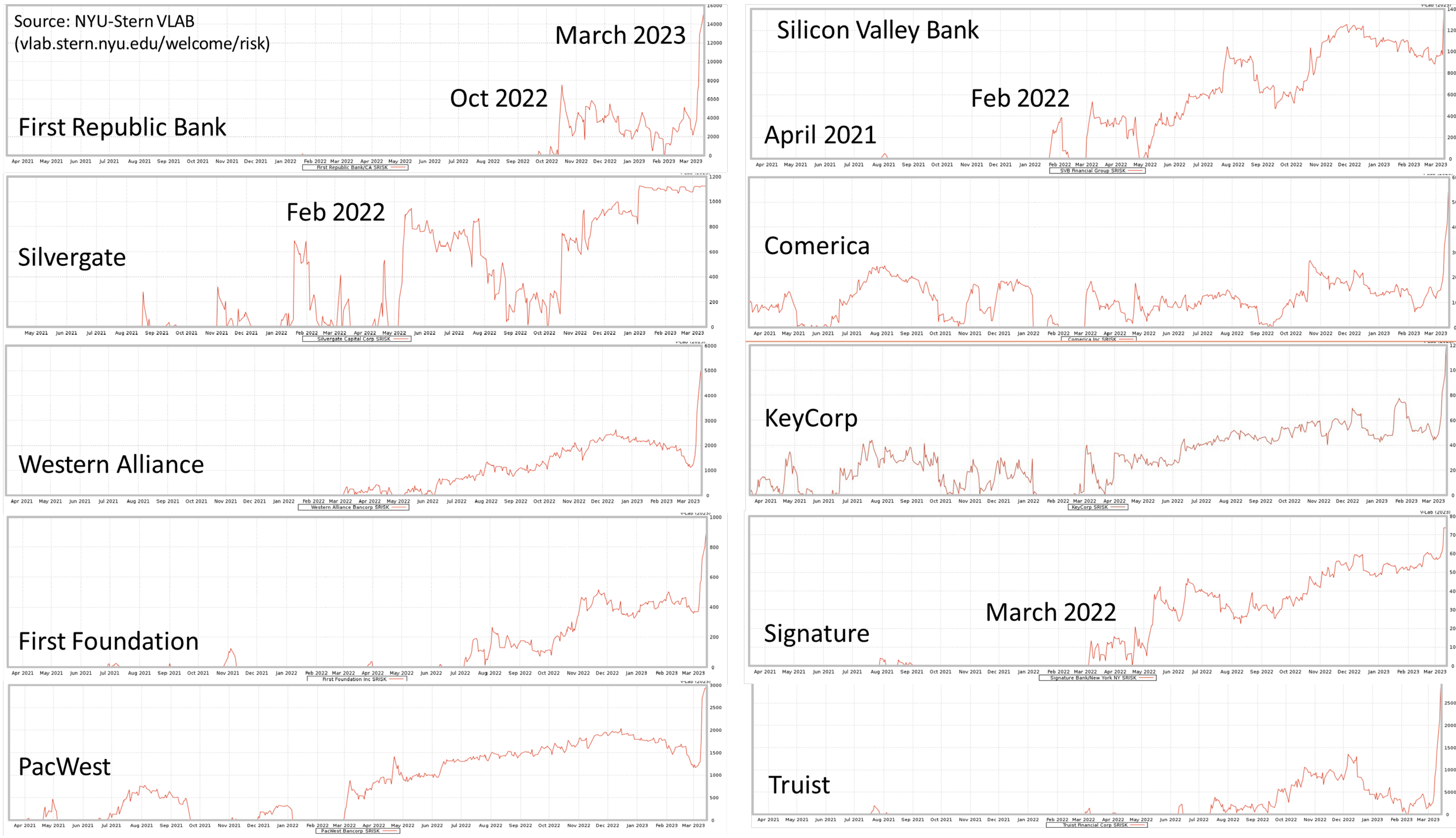
So what should be done with banks now?

- FDIC presents options to reform deposit insurance
- Ex-ante prudential measures, such as capital and liquidity requirements, must be reviewed to check whether they promptly account for interest rate risk, bank liability structure, and information from market values reflected in supervisory procedures.
- Stress tests must comprehensively incorporate interest rate risk and the effects of higher-than-usual interest rates, not just for large but also for mid-size and smaller banks.
    - Market signals (SRISK) suggest bank capital shortfalls in the US: case for AQR

Market signals (SRISK) suggest bank capital shortfalls



Novel options?

- Pawnbroker For All Seasons (PFAS, King 2016) promises to eliminate runs that are not solvency related
  - 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:
  - It represents a significant departure from the current policy that needs careful scrutiny since it will affect banks' ability to intermediate financial flows in the economy.
  - Fed as the effective deposit insurer: Political economy?
  - Determination of haircuts?
  - Greater liquidity hoarding and flight to quality?
- Insight: explore how to add collateral pre-positioning to the toolbox of liquidity regulation for banks to obtain liquidity support from the central bank (it also puts a price on liquidity insurance).

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Prudential regulation,

accounting,

and supervision

Prudential Regulation, Accounting, and Supervision

The recent turmoil was the first significant test of Basel III, and there is room for improvement

Failures were due to:

- Regulatory design flaws and weak implementation and supervision of global standards and accounting rules

For SVB and CS, capital was over-estimated due to:

- SVB: AOCI (Accumulated Other Comprehensive Income) filter allowing regulatory capital not to reflect losses on AFS (Available for Sale) securities
- CS: the filter used to evaluate subsidiaries
- Supervisors knew the problems but were slow to react

What went wrong in Silicon Valley Bank (SVB)?

- **Business model,** coupled with **poor risk management, risk culture, and governance**
  - **Excessive maturity transformation**: Uninsured deposits and long-term assets
  - **Undiversified** in assets and liabilities
    - Concentrated large uninsured deposits
    - Overinvestment in long-term securities with no hedge
  - Substantial **unrealized losses** from assets in AFS and HTM portfolios
- **"Exceptions"**
  - **Regulation** relaxed in **2019 – no liquidity** regulation applied
  - Accounting **AOCI filter** → **Overestimation of capital**
- **Were the problems known?**
  - **31 open supervisory findings by** March 2023!

What went wrong in Credit Suisse (CS)?

- Sound from a regulatory (capital, liquidity) perspective and on the brink of collapse
- Poor **risk management** and **internal control system**, **governance, accounting irregularities, repeated losses, etc.**

- **"Exception"**
  - Filter for **evaluation of subsidiaries** → **Overestimation of capital** (2022Q3, net impact of the filter more than one third of the reported CET1 capital, CHF 11.9 billion).

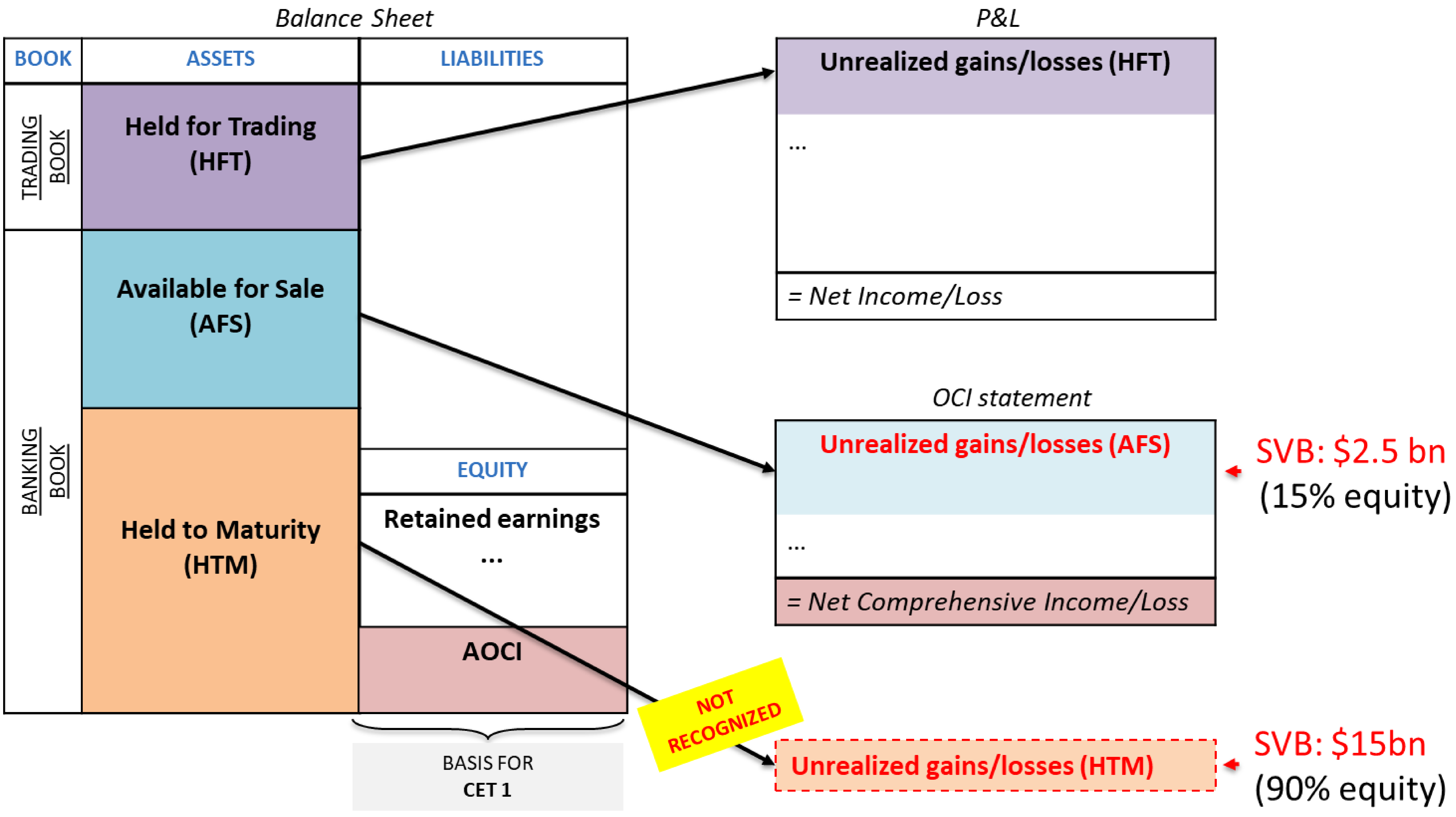
- **Where the problems known?**
  - **43 supervisory investigations** for enforcement proceedings, **9 reprimands, 16 criminal charges**, etc.

Classification and measurement of debt securities

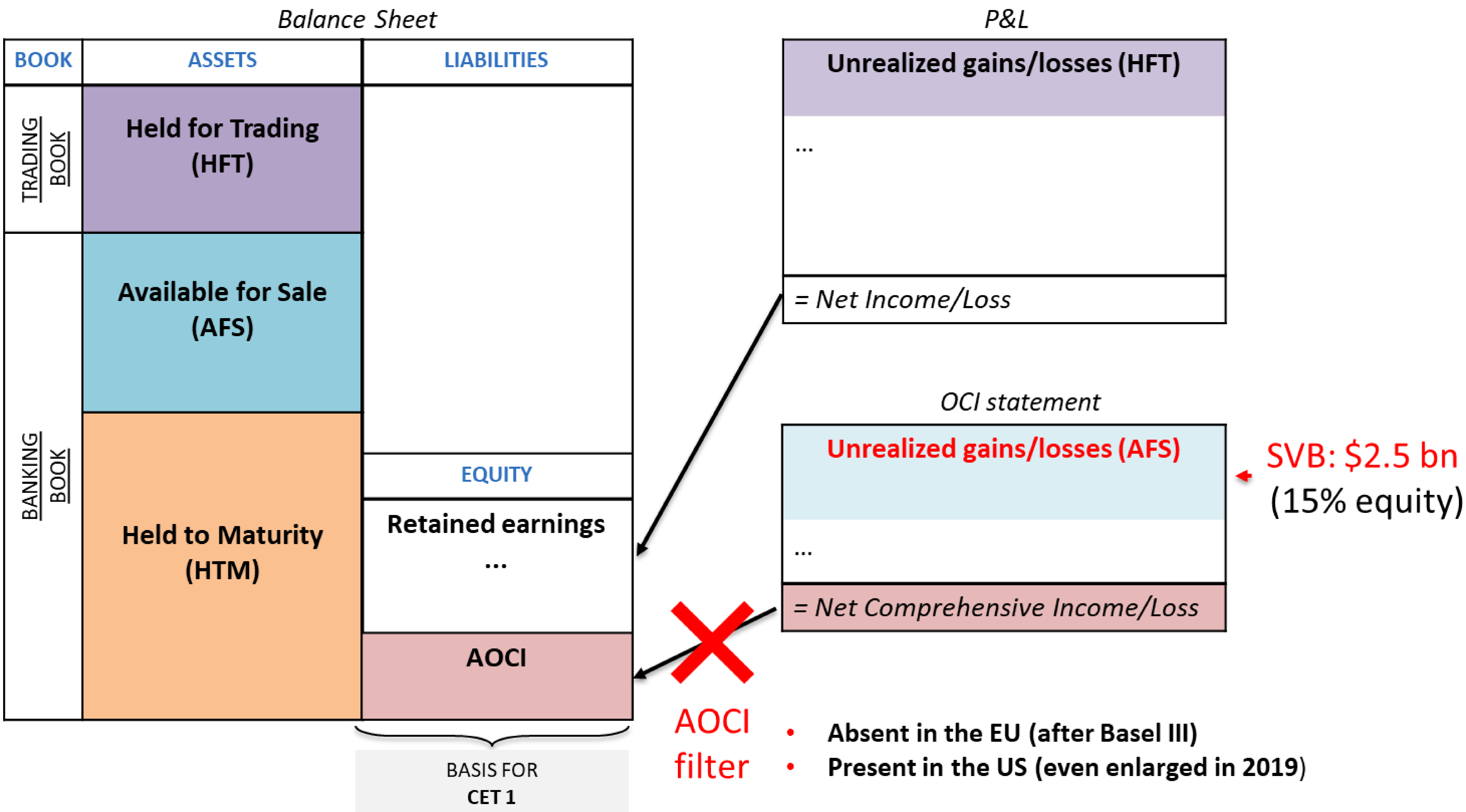
DEBT SECURITY

BOOK	ASSET CLASSIFICATION	ACCOUNTING MEASUREMENT
TRADING BOOK	**Held for Trading (HFT)**	**Fair Value through Profit and Loss (FVTPL)** - Realized + unrealized FV gains/losses → **P&L**
BANKING BOOK	**Available for Sale (AFS)**	**Fair Value through Other Comprehensive Income (FVOCI)** - Realized FV gains/losses → **P&L** - Unrealized FV gains/losses → **OCI**
	Held to Maturity (HTM)	**Amortized Cost (AC)** - FV gains/losses → **NOT recognized**

Debt securities and unrealized gains/losses



CET1 impact and AOCI filter



- **Absent in the EU (after Basel III)**
- **Present in the US (even enlarged in 2019)**

Policy proposals concerning accounting

HTM related

1. **Increase in disclosure** – **enough?**
2. **Cap** on the amount of assets classified as **HTM** – **how much?**
3. **Mark to maturity approach** (measurement of assets dependent on the duration of the funds used to acquire those assets)– **how feasible?**

Fair value related

4. **Removal of AOCI filter** – **feasible** and **plausible**
5. **Removal of FVOCI category** – **a reasonable compromise?**
6. **Full fair value measurement** – **excessive market volatility?**

Easiest best way forward: 1, 2, 4 – but enough?

What lessons for regulation?

1. **Interest rate risk on the banking book (IRRBB)** – currently considered in **Pillar 2** in the Basel framework

Pillar 1	Pillar 2	Pillar 3
Regulatory minimum requirements	**Regulatory supervisory review**	**Disclosure requirements**
• Credit risk • Market risk • Operational risk	• Overall assessment of risks • **Other type of risks (e.g., IRR)**	• Rules for disclosure

- **Policy implications**
  - **Strengthen** the **Pillar 2 approach**
  - **Include IRRBB** in **Pillar 1 ca requirement**
  - **Minimum Pillar 1 requirement + bank-specific Pillar 2 requirement**

What lessons for regulation? – cont.

2. Liquidity Coverage Ratio (LCR) – sufficient liquid assets to survive liquidity stress scenario lasting 30 days

$$\text{LCR} = \frac{\text{High quality liquid assets (HQLA)}}{\text{Net cash outflows expected over next 30 days}}$$

- **Policy implications**
  - **Increase** in the **deposit run-off rates** – **digital banking?**
  - **Rethinking the LCR time horizon of 30 days – much faster runs?**
  - **Include** a **Pillar 2 HQLAs add-on – depending on liability structure?**

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What lessons for regulation? – cont.

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Regardless, LCR is not meant to deal with bank runs

What lessons for regulation? – cont.

3. Global implementation of Basel framework

	Category I	**Category II**	**Category III**	**Category IV**	**Other Firms**
	US G-SIBs	*≥ \$700b Total Assets or ≥ \$75b in Cross Jurisdictional Activity*	*≥ \$250b Total Assets or ≥ \$75b in nonbank assets, wSTWF, or off-balance sheet exposure*	*Other firms with \$100b to \$250b of Total Assets*	*\$50b to \$100b Total Assets*
Risk-Based Capital	- GSIB surcharge - Advanced approaches - Countercyclical Buffer - AOCI filter not allowed	- Advanced approaches - Countercyclical Buffer - AOCI filter not allowed	- Countercyclical Buffer - AOCI filter allowed	- AOCI filter allowed	- AOCI filter allowed
Liquidity Coverage Ratio (LCR)	- Full daily LCR (100%)	- Full daily LCR (100%)	- If wSTWF < \$75b: Reduced daily LCR - If wSTWF ≥ \$75b: Full daily LCR	- If wSTWF < \$50b: No LCR - If wSTWF ≥ \$50b: Reduced monthly LCR	-

- **Policy implications**
  - **Increase harmonization of global standards across jurisdictions**
  - **Stringency of proportionality criteria**

What (main) lessons for supervision?

1. **Reinforce early intervention frameworks** – ability to **change management behavior** while bank is still sound
   - E.g. **PCA** in **US** relies **only** on capital and leverage triggers
   - E.g. **EIM** in **Europe** does **not** foresee **automatic actions**
2. **Consideration of market signals** (e.g., stock prices, analyst forecasts) **in supervision**

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Lessons for bank failure management

Introduction

- The post-GFC bank resolution framework (FSB Key Attributes) aims to mitigate expected costs of systemic bank failures. A key role for creditors' bail-in to minimise taxpayers' involvement. New resolution regimes coexist with pre-existing frameworks (typically applied to less-systemic banks).
- 2023 failures were addressed outside the new resolution regimes despite their systemic impact:
    - US: There are more (systemic) banks than the ones currently recognized as such. Excessive reliance on DIF resources (little contribution by unprotected creditors).
    - Switzerland: resolution book with open bank bail-in was not followed, considered too risky strategy, required Government support for the merger, writing-off of all AT1 instruments (CHF 16 bn), and preservation of a residual value for CS equity holders (CHF 3 bn).
- Those actions were successful to preserve/restore financial stability, but they were not fully in line with the procedures and objectives of the new resolution framework.

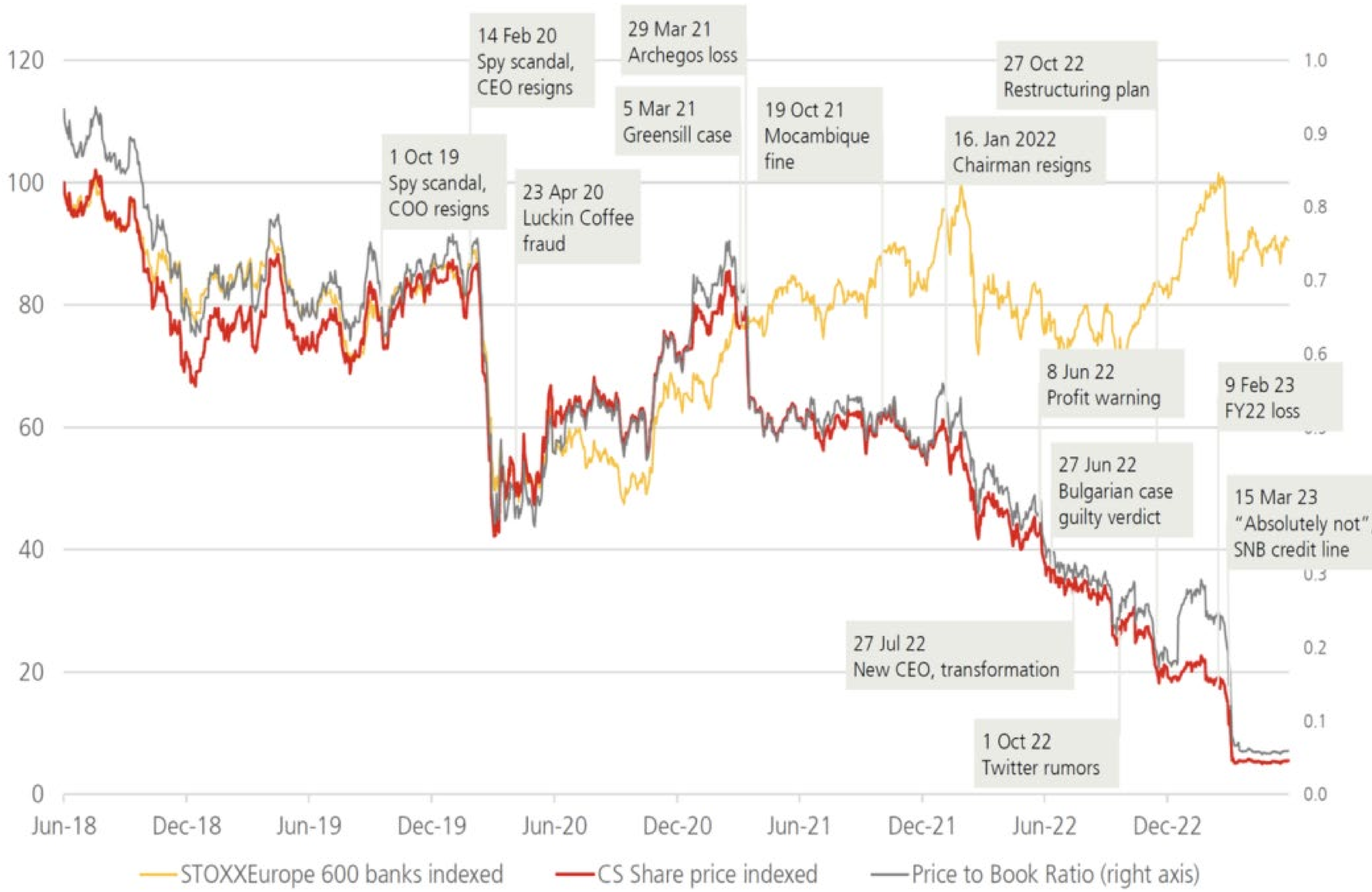
Strategy in the US (SVB, SB, FRB)

- Transfer strategies (deposits and most assets)…to bridge banks (SVB, SB) that were subsequently sold.
- Sale supported by a loss-sharing agreement offered by the FDIC (SVB).
- Systemic risk exception (for SVB and SB).
- Equity wiped out and unsecured creditors (except depositors) left in the residual entity to be liquidated.
- New liquidity facility (BTFP) with favorable conditions for all banks.

Strategy in Switzerland (CS)

- Rather than resolution a commercial transaction supported by some creditor’s bail-in and public guarantees.
- Activation of contractual clauses of AT1 instruments allowing the writing-off of all AT1 instruments (CHF 16 bn).
- Preservation of a residual value for CS equity holders (CHF 3 bn).
- Adoption of emergency legislation to waive requirements for shareholders’ approval of the transaction.
- Provision of a second-loss guarantee (up CHF 9 bn).
- Privileged liquidity facilities (partially guaranteed by the state) offered by SNB.

CS: Sound from a regulatory perspective and on the brink of collapse



Source: UBS

Role of AT1 instruments

- Instruments recognized as regulatory capital allow the bank to generate equity in stress situations through the conversion into equity or full/partial write-down.
- Triggers are quantitative (capital lying below a pre-specified threshold) or qualitative (conversion or write-off upon a decision by authorities or contractual clauses).
- In principle, AT1 instruments can generate equity after reaching the non-viability point (gone concern) or before a resolution is triggered (going concern) to facilitate recovery. Therefore, there should be no presumption that the write-off of AT1 instruments would necessarily be preceded by the wipe-out of equity.
- The EU case is unique: legislation requires the conversion or write-down of AT1 to be preceded by equity's wipeout. This implies that AT1 instruments could not effect tively absorb losses before resolution.
- More harmonization of AT1 regimes is needed, and AT1's role as regulatory capital should be reconsidered.

Public support

- There is no guarantee that failing banks' critical functions could always be preserved by bailing in creditors and/or finding a suitable acquirer.

- External support can be provided by the DIF -subject to least-cost constraints, other funds contributed by the industry or the national Treasury (normally guarantees):
  - In the US, moderately restrictive least-cost constraint and systemic exception for DIF support and OLF (contributed by the industry) for systemic financial holding companies.
  - In the EU, highly restrictive least-cost constraint and no systemic exception for DIF support, with demanding access conditions for the SRF. Government stabilisation tool only in EU countries outside the Banking Union.
  - In Switzerland, direct public support is possible, but no industry contributed resolution funds.

- An urgently required reform in many jurisdictions: liquidity in resolution.

General Lessons from the Report

- A *holistic* approach to regulatory policy is needed
  - Capital, liquidity, accounting, and disclosure requirements should be set together, and their interactions should be considered, including the effect of different monetary policy regimes and their interaction with financial stability.
- *Prudential regulation* should be applied *consistently* to institutions that pose systemic risk
- *Liquidity regulation* should adapt to changes induced by digital technology
- *Liquidity insurance* should be *priced* properly, be it with risk-based premiums for deposit insurance or with collateral pre-positioning for lender of last resort support
- Early *intervention* frameworks and *resolution* planning should be reinforced, extended to all banks that may affect the financial system, with credible and timely public backstops of liquidity
- More attention should be paid to *market-based signals* in supervision for possible early intervention or investigative escalation
- Consistent, timely and complete implementation of *global standards* across jurisdictions is necessary

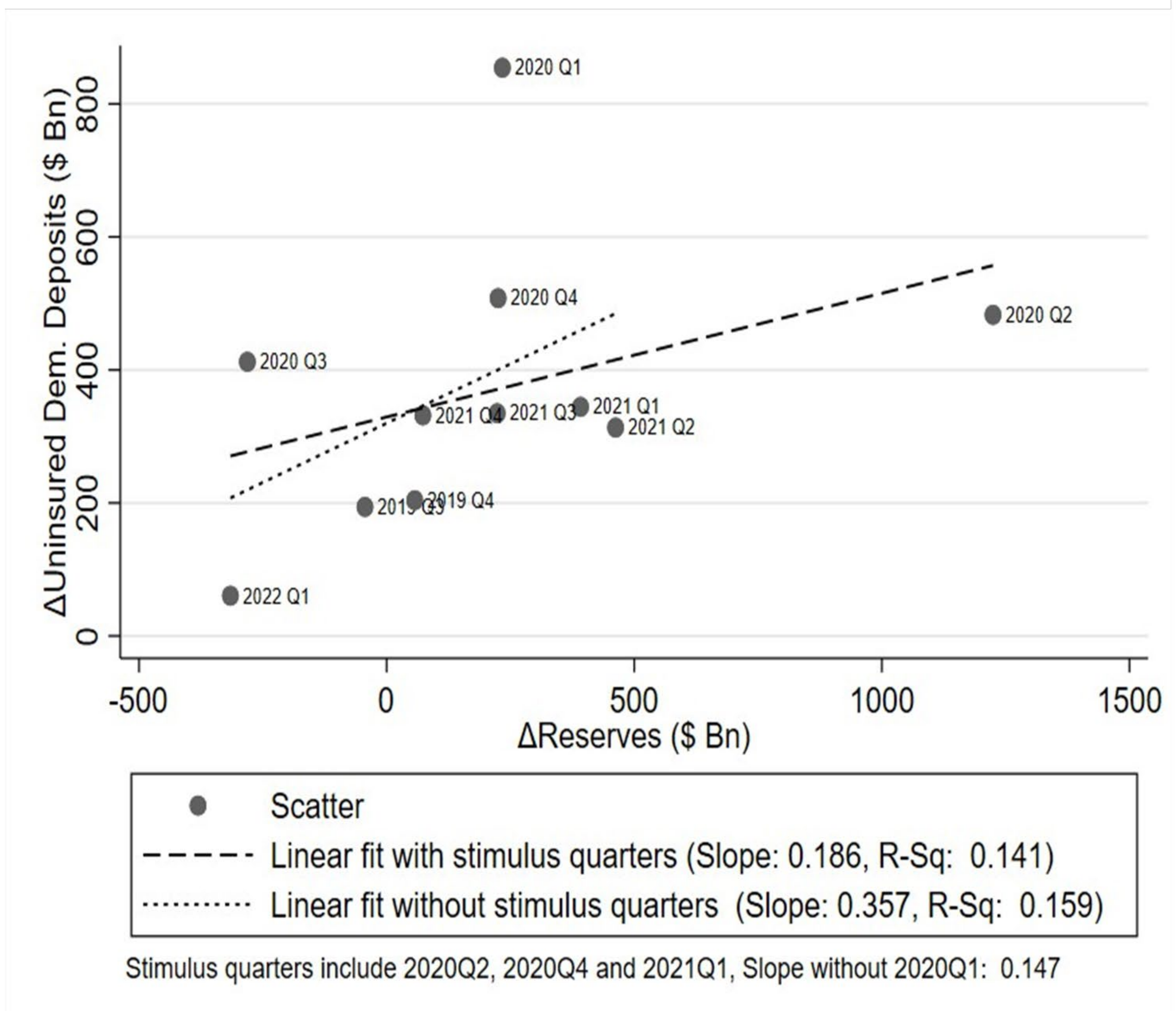
Specific recommendations

- Stress tests should consider scenarios where interest rates are "higher for longer" and inflation may be persistent for large, mid-size, and smaller banks
- Regulation
  - The AOCI filter should be removed and the FVOCI category reconsidered
  - Bank-specific pillar 2 should be more consistently applied and IRRBB could possibly be incorporated in the Pillar 1 minimum capital requirements
  - Deposit run-off rates should be increased due to the prevalence of digital banking
  - Rethink the LCR time horizon of 30 days and include Pillar 2 HQLAs add-on depending on the level of risk in the liability structure of the bank
- Resolution
  - The eligibility of AT1 instruments as regulatory capital should be reconsidered
  - In the EU, the CMDI (Crisis Management Deposit Insurance) proposals are a step forward but still:
    - There is room to improve the MREL calibration for sale-of-business strategies and the provision of external support and liquidity in resolution
    - The European Banking Union needs to be completed

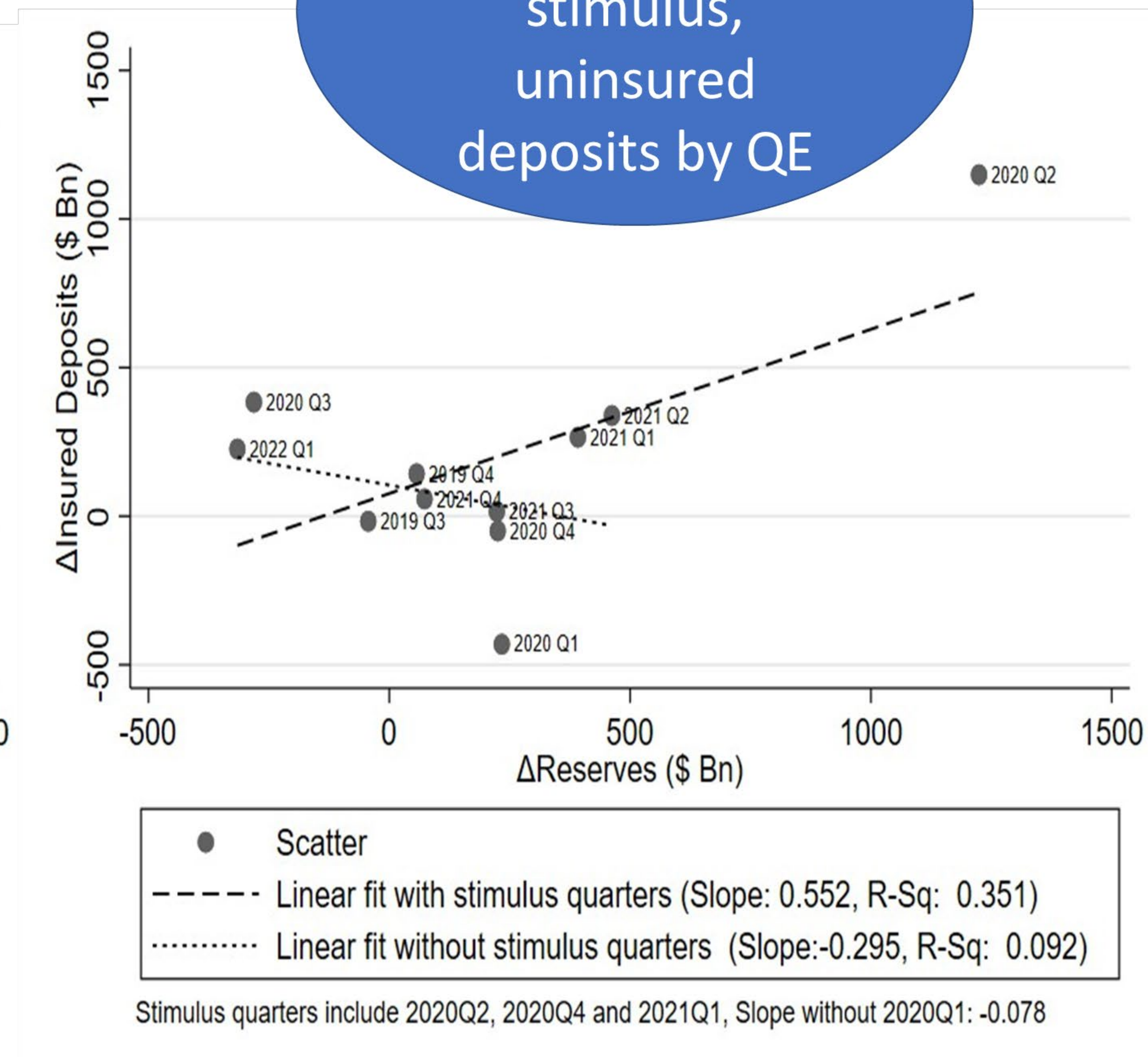
THANK YOU!

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

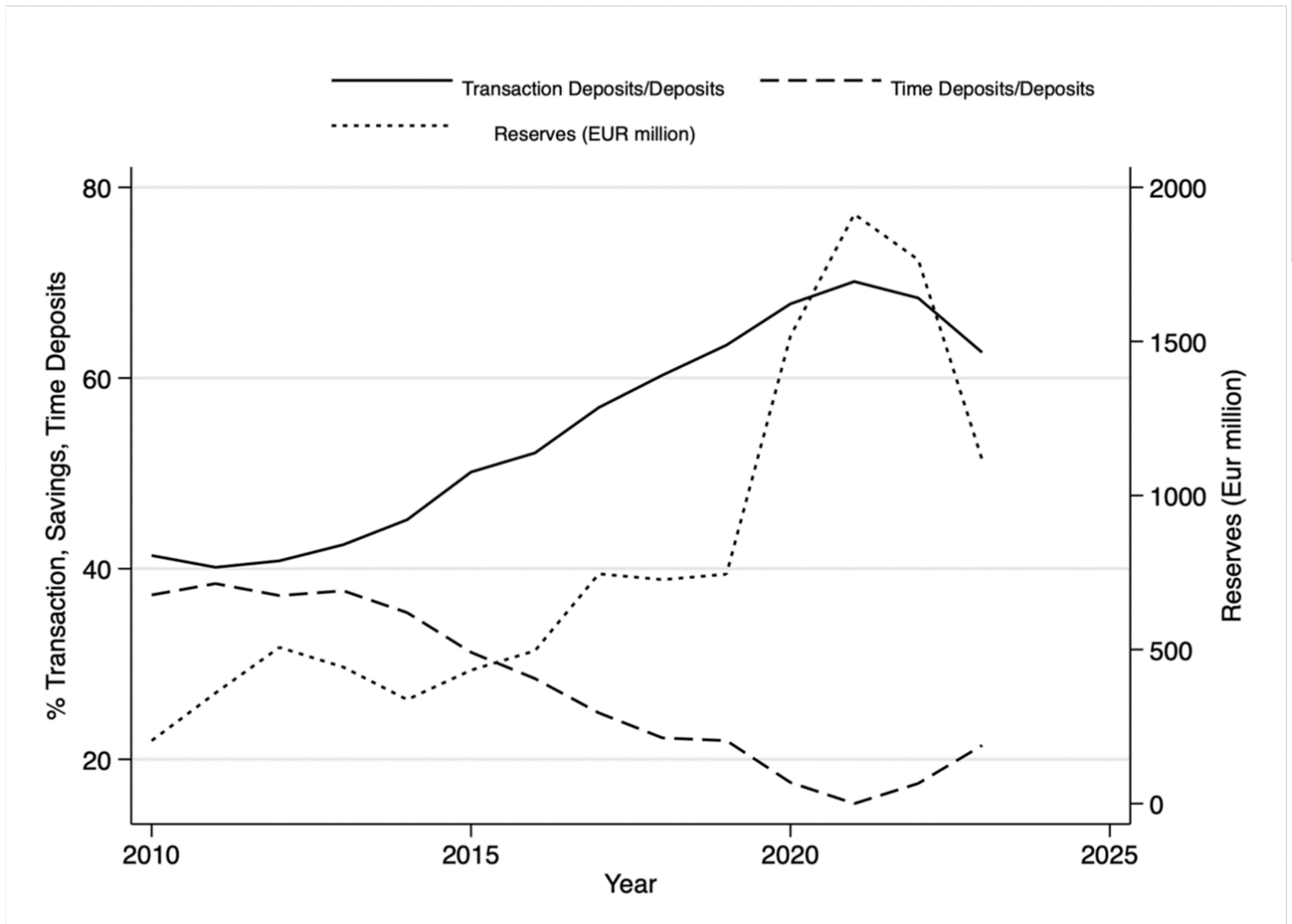
Europe

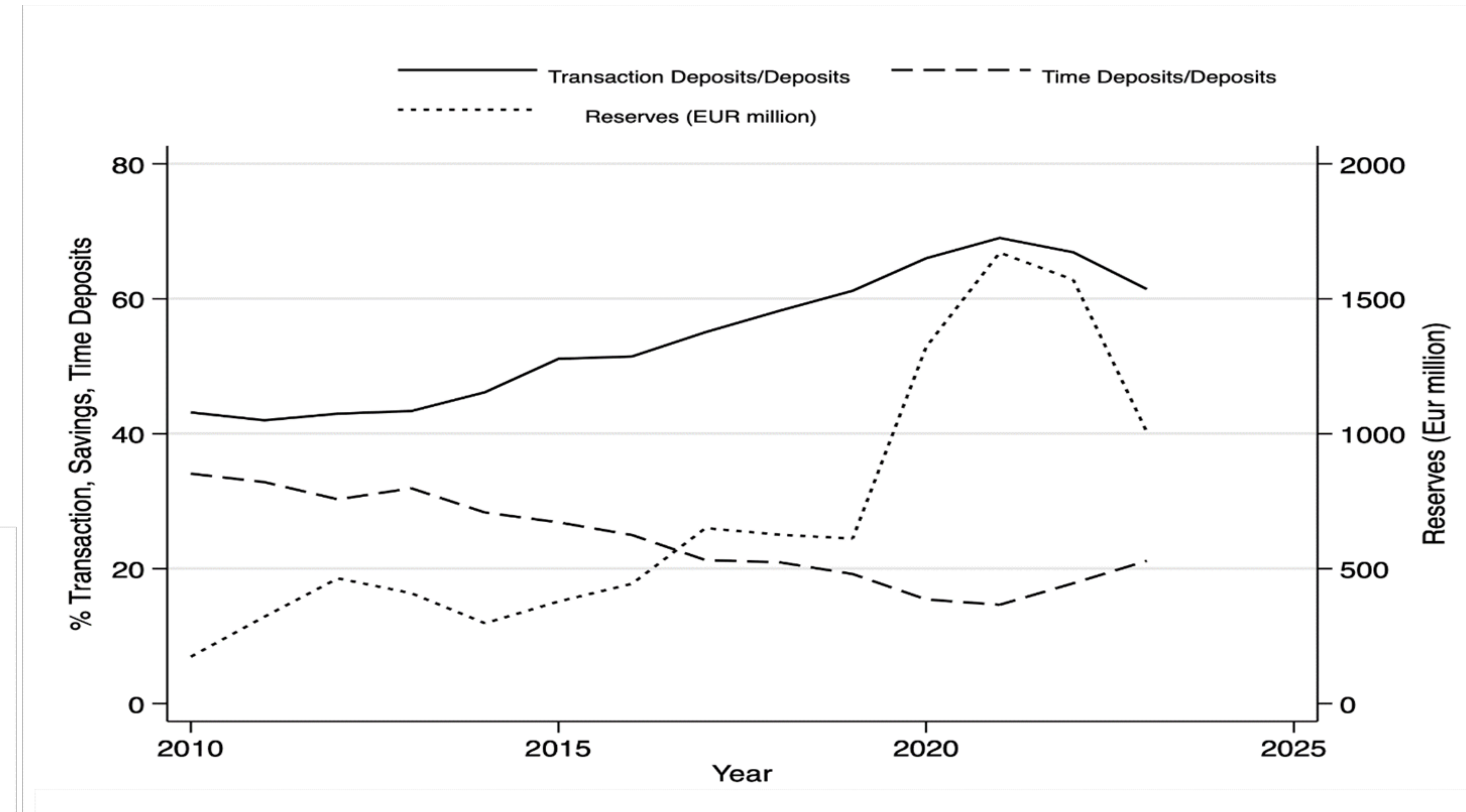
Boom in Europe

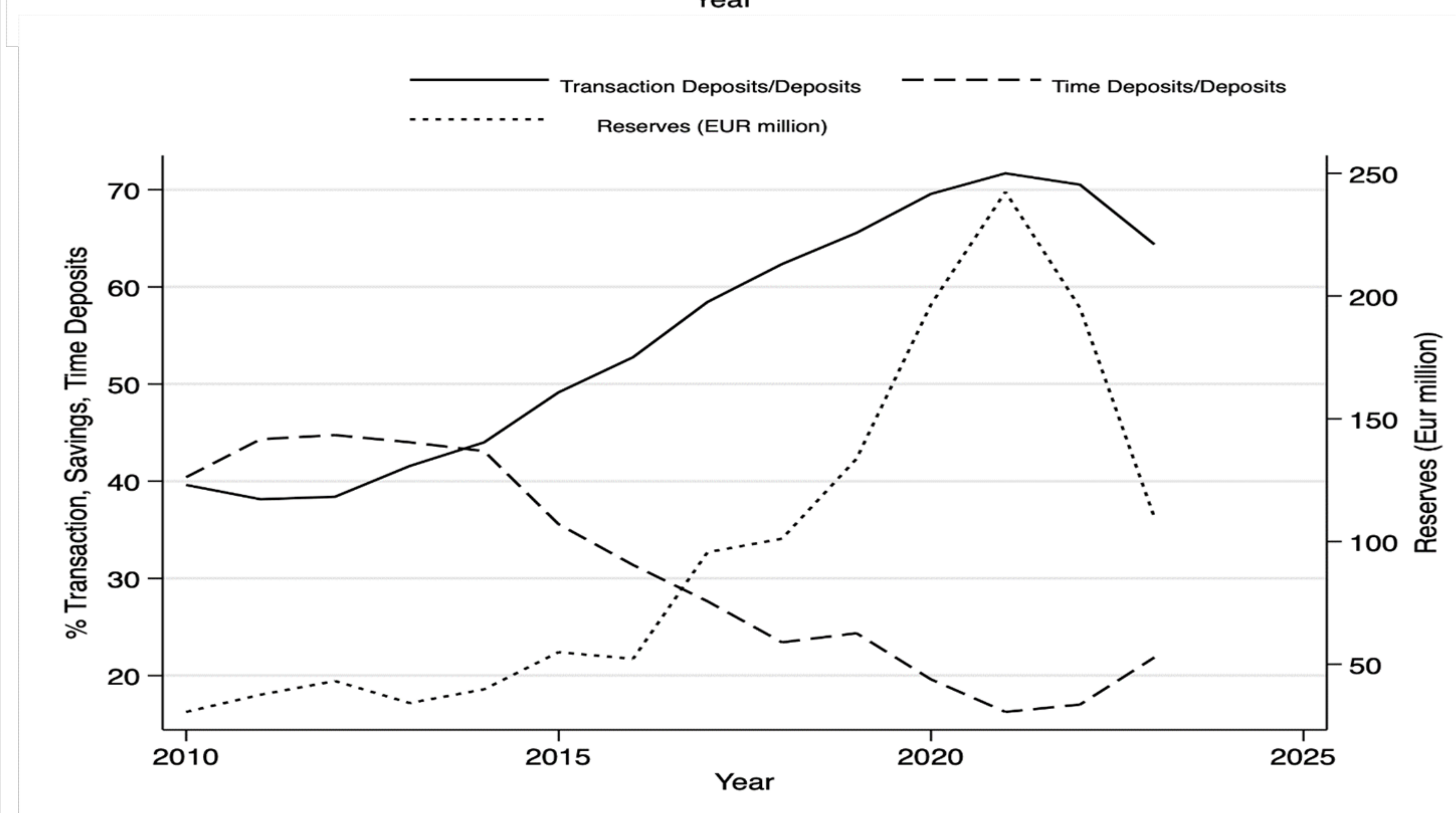
Overall: bottom left

Large banks: top right

Small banks: bottom right

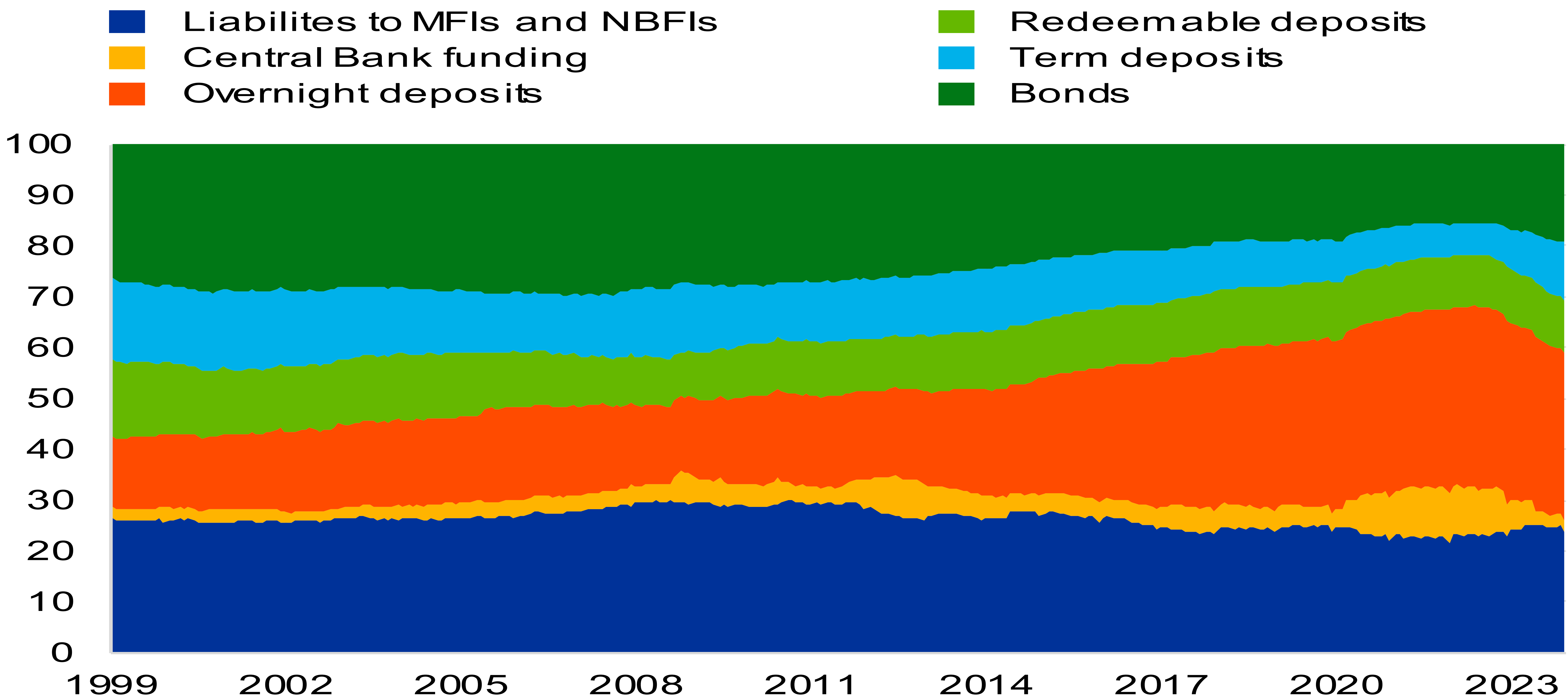






The sample consists all 75 European Banking Authority (EBA) 2023 stress test banks and adding the remaining 5 non-EU globally systemic institutions (G-SIBs), the latter being 3 from United Kingdom and 2 from Switzerland. US subsidiaries included in the stress tests are dropped due to a lack of balance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

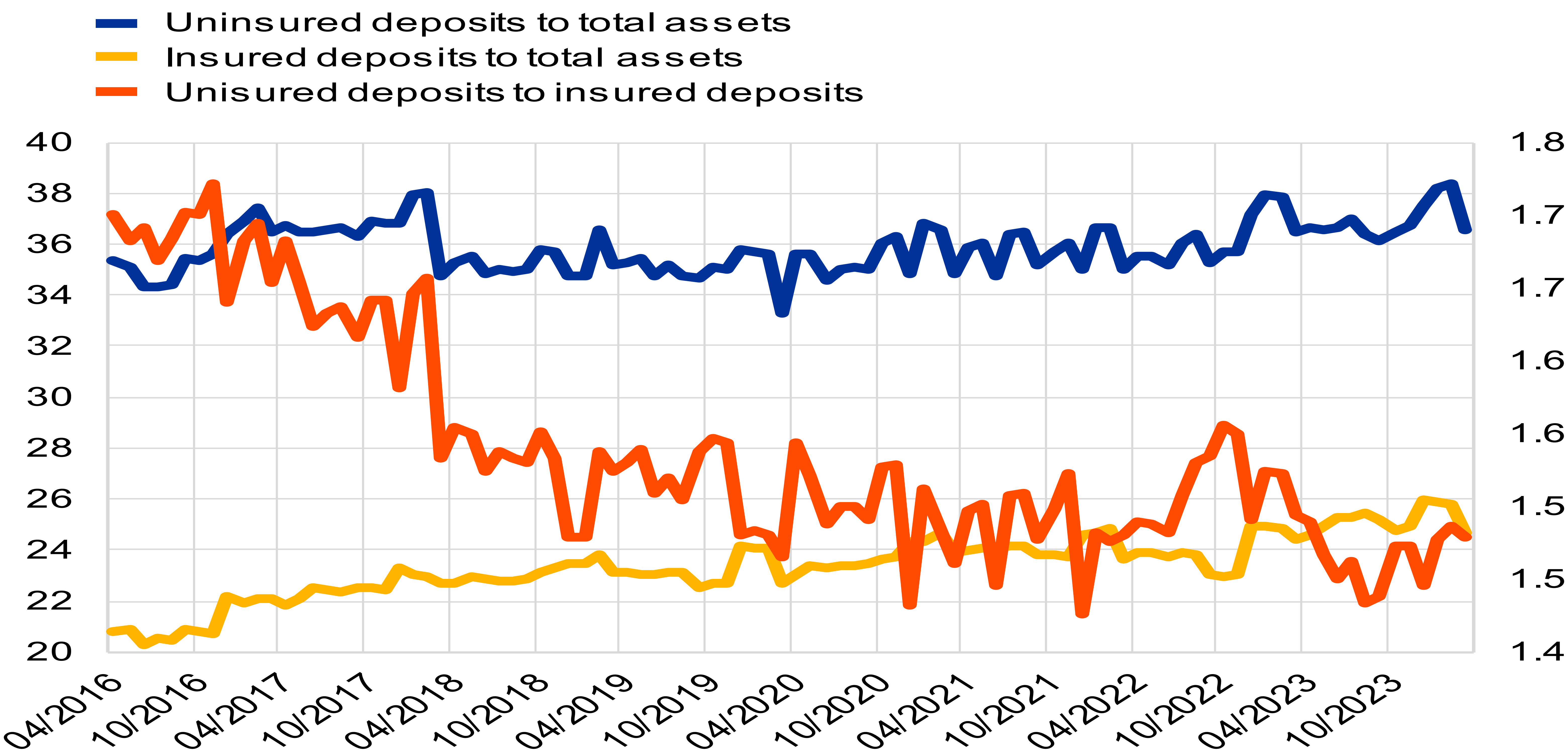
Composition of euro area bank funding structure (%)



Sources: ECB (BSI) and ECB calculations

From Cornelia Holthausen's Discussion of the Report

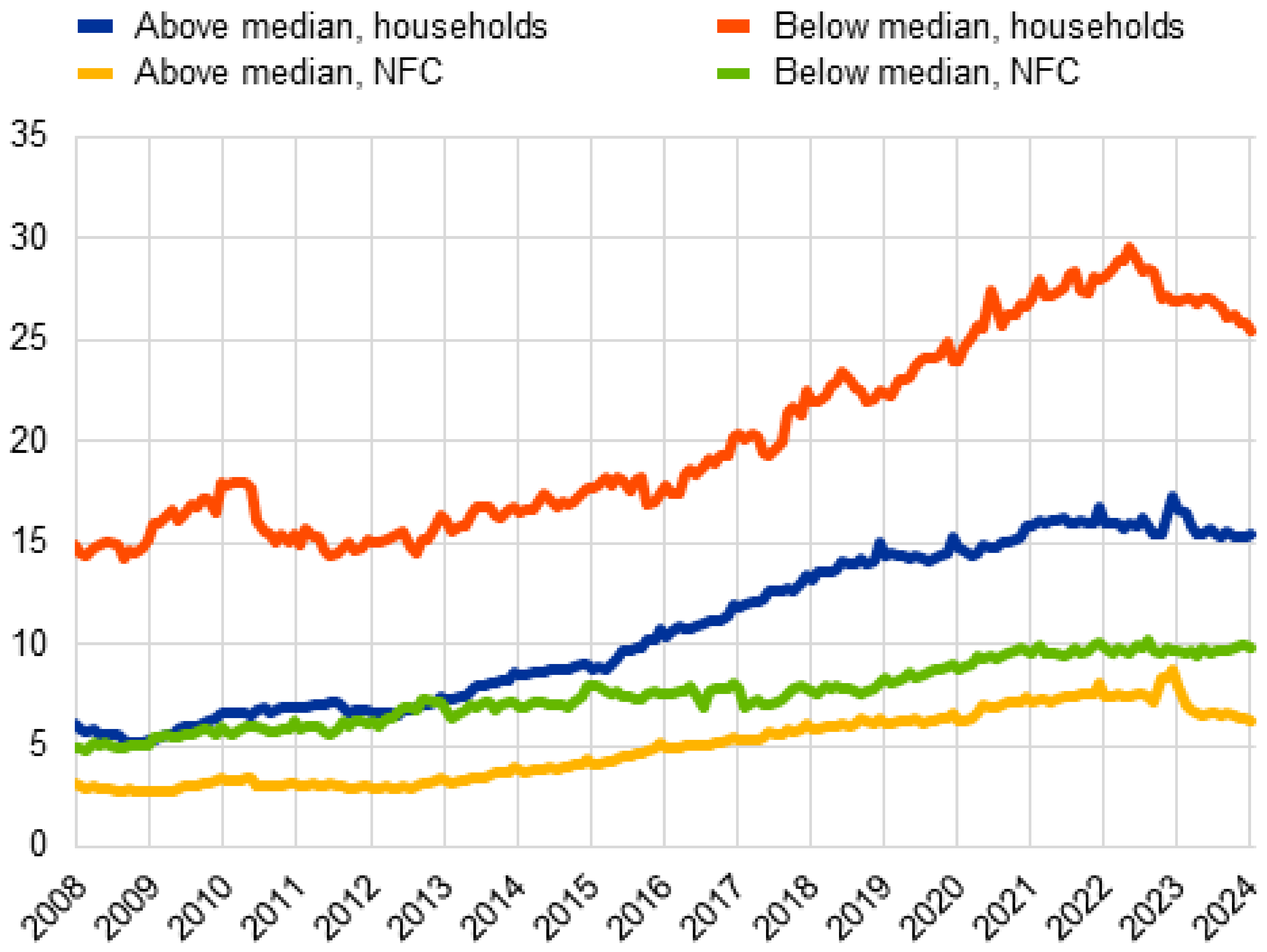
Composition of euro area significant institutions deposits, by insurance status (percentage, ratio)



Sources: ECB (Supervisory data) and ECB calculations

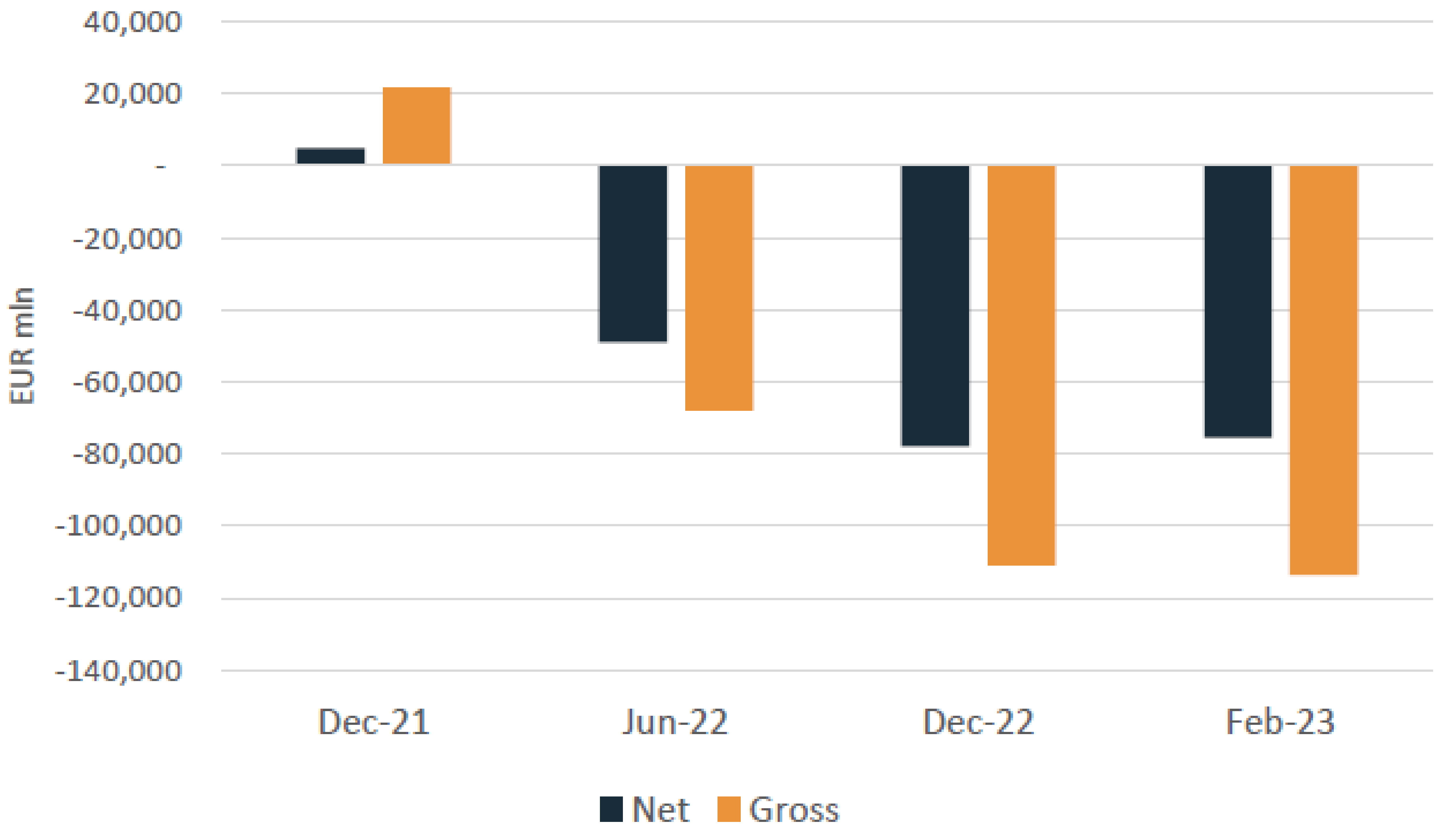
From Cornelia Holthausen's Discussion of the Report

Weighted average share of Non-Financial Corporate and Household overnight deposits to total assets by bank asset size



Source: ECB. Above/below median refers to banks with total assets above/below median

Evolution of gross and net unrealized losses on debt securities held at amortized cost by EU banks (Dec.2021 to Feb.2023)



Source: EBA