THE FUTURE OF BANKING: OPPORTUNITIES AND CHALLENGES IN A NEW ERA OF FINANCE

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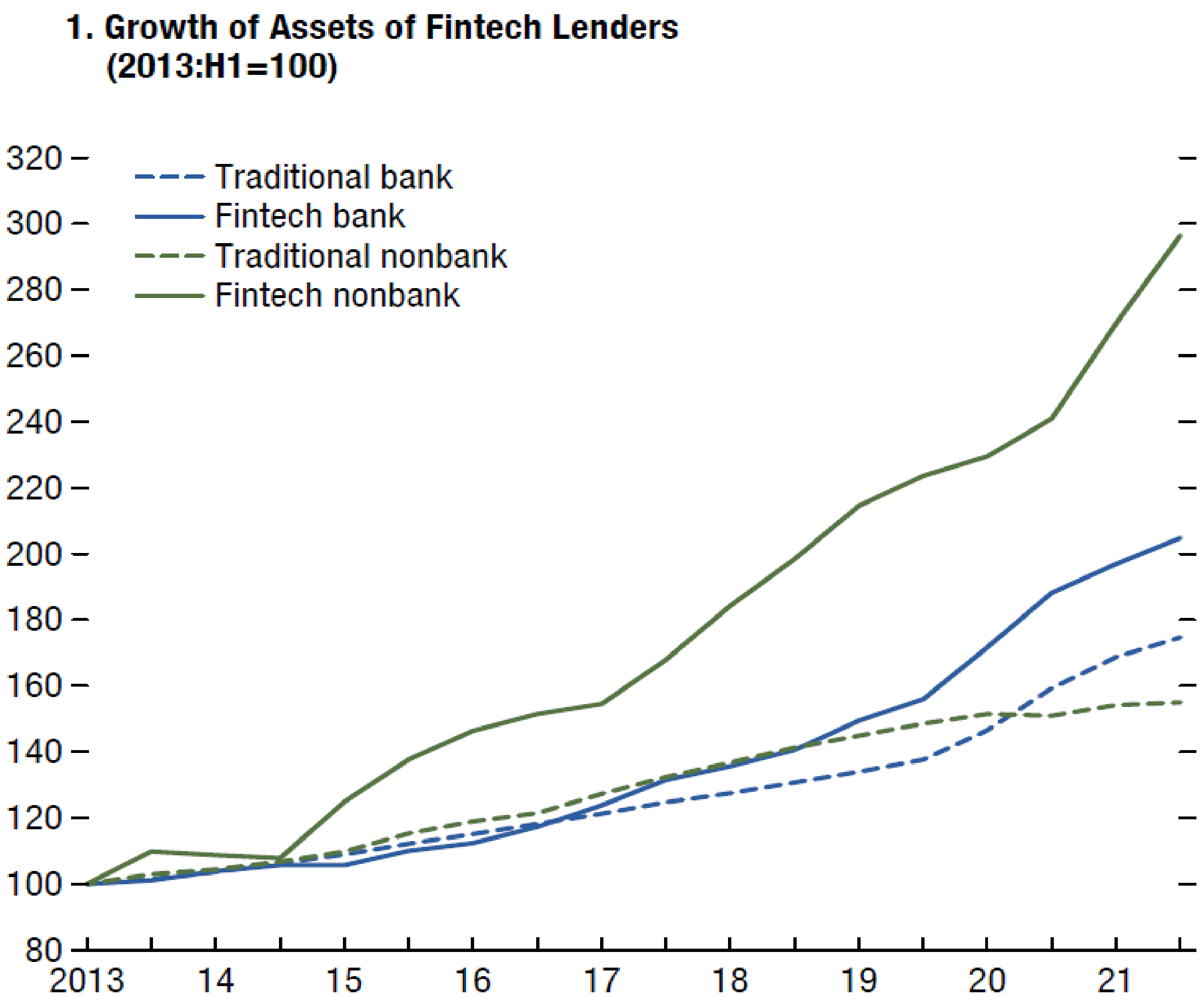
The impact of technology

- Impact of FinTech in lending markets: consequences for investment, bank stability and welfare
- Incumbents and FinTech entrants: competition or cooperation?
- Deposit fragility, technology and regulation: lessons for liquidity policy from the recent bank turmoil

Impact of FinTech in lending markets: consequences for investment, bank stability and welfare

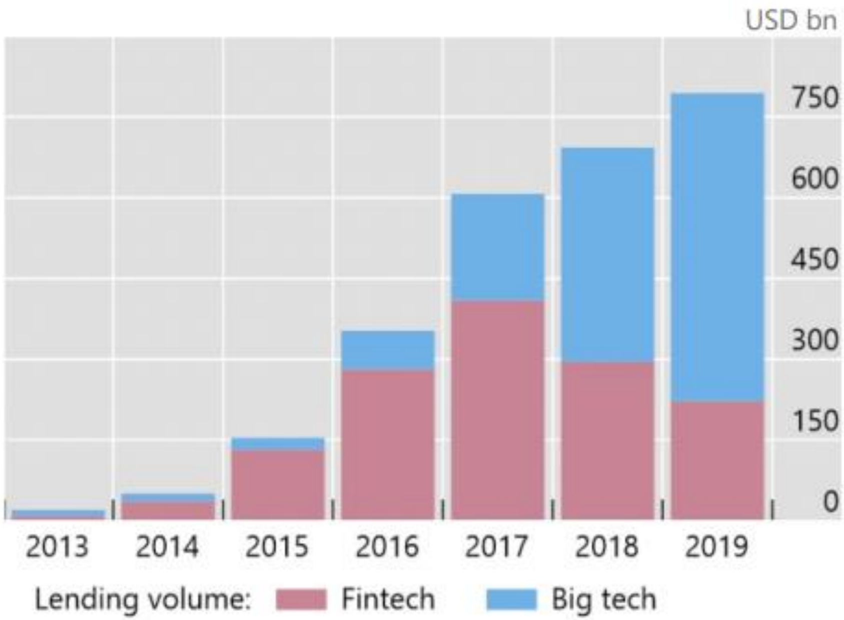
Fintech lenders' asset growth



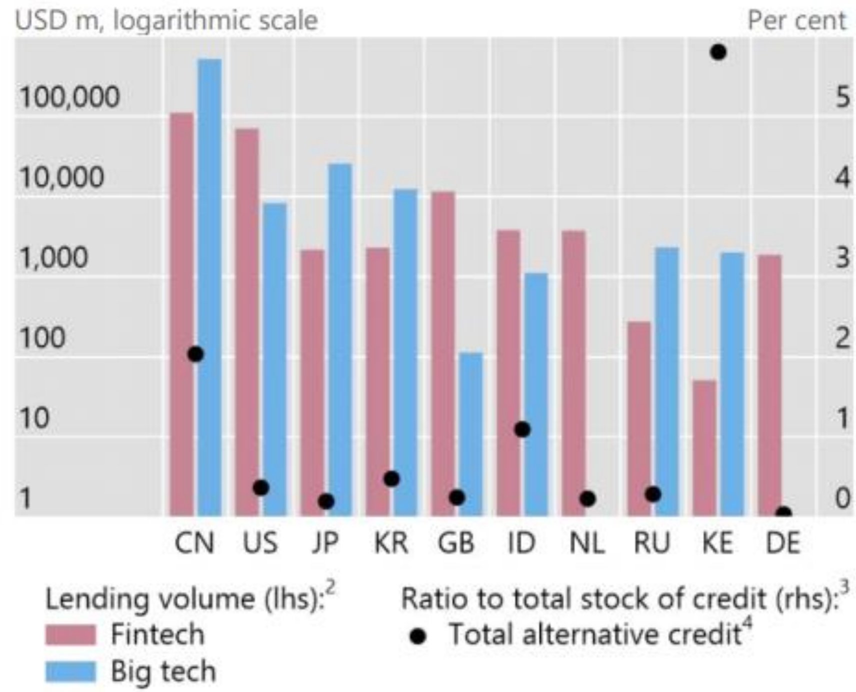
Source: IMF; Global Financial Stability Report, Chapter 3

Global big tech credit is booming, overtaking fintech credit

Big tech credit is overtaking fintech credit[1]



These alternative forms of lending are becoming a significant portion of total credit in a few economies

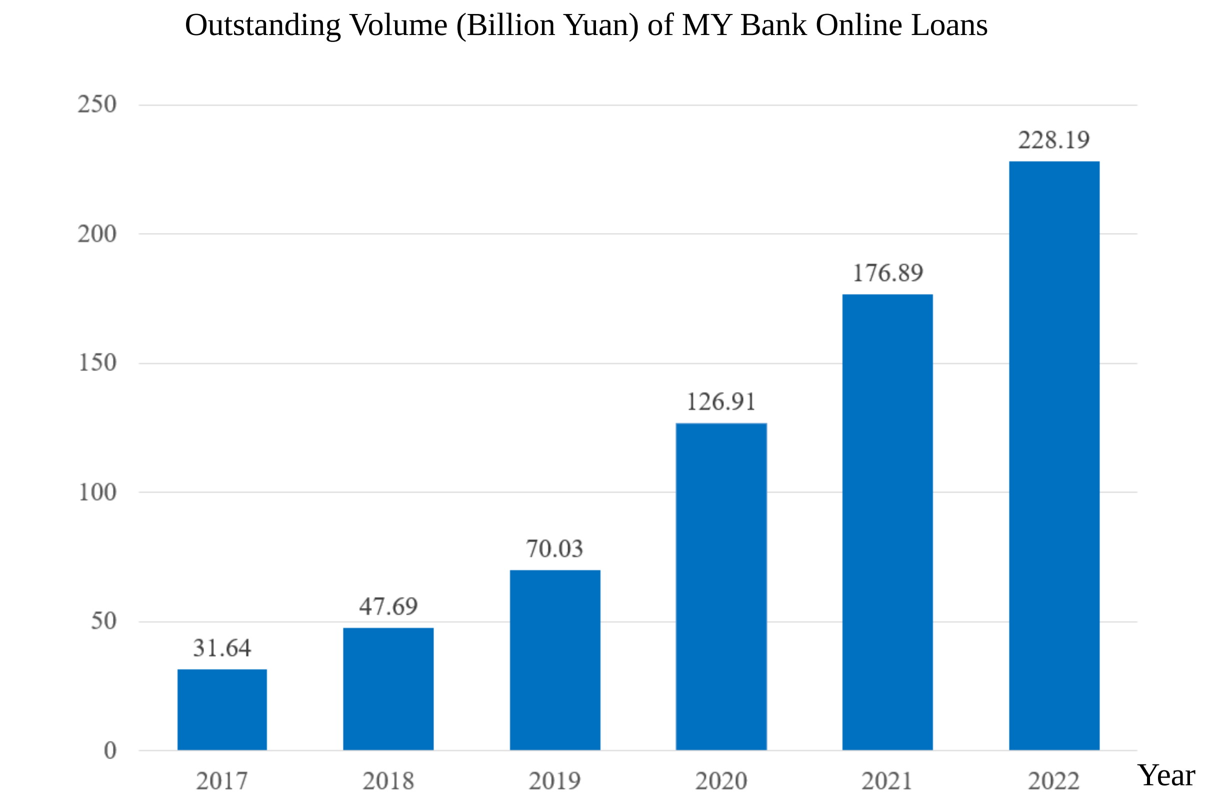


Figures include estimates. CN = China, US = United States, JP = Japan, KR = Korea, GB = United Kingdom, ID = Indonesia, NL = Netherlands, RU = Russia, KE = Kenya, DE = Germany.

[1] 2019 fintech lending volume figures are estimated on AU, CN, EU, GB, NZ and US. [2] Data for 2019. [3] Domestic credit provided by the financial sector. Data for 2018. [4] Total alternative credit is defined as the sum of fintech and big tech credit. Data for 2019.

Sources: IMF World Economic Outlook; World Bank; Brismo.com; Cambridge Centre for Alternative Finance and research partners; WDZJ.com; companies' reports; authors' calculations.

Loan Volume of MY Bank in China



Source: Annual reports of MY Bank 2017-2022

To what extent does the emergence of FinTech makes banking

more contestable?

more or less stable?

better or worse aligned with social welfare?

Lending markets (findings):

- If an intermediary adopts more advanced information technology (IT), then it can charge higher loan rates and is more stable (better monitoring)
- However, the impact of industry-adoption of IT depends on its type

Technology improvements in monitoring, impact on stability and welfare

Improvement in monitoring efficiency	Related technology
IT-basic: In collecting and processing information	ML with big/unconventional data, advances in cloud storage/computing, information management software
IT-distance: Improvement in communication (decreasing physical distance friction)	diffusion of internet, video conferencing, smart phone, mobile apps, social media
IT-distance: Hardening soft information (decreasing expertise distance friction)	ML with big/unconventional data, credit scoring, remote learning and AI

- IT-basic improvement improves bank stability
- IT-distance improvement decreases bank differentiation, increasing competitive pressure, making banks potentially less stable and reducing welfare if competition is already intense (welfare hump-shaped in IT-distance)
- Both types of IT improve welfare when they extend the market

The effects of entry of fintechs

- If banks have less flexibility in pricing than fintechs:
  - A fintech can penetrate the lending market with no advantage in monitoring efficiency or funding cost.
  - For entrepreneurs of the same characteristics, banks' monitoring effort is higher than the one of fintechs (and fintech borrowers are more likely to default).
  - Fintech entry may decrease entrepreneurs' investment if the competition among fintechs is not sufficiently intense.
- When banks can price as flexible as fintechs, fintech entry happens only if they have better efficiency or funding costs.
- Fintech entry can induce bank exit/restructuring, potentially reducing the intensity of lending competition and hurting investment.
- Fintech entry is unambiguously good when it extends the market to unserved customers.

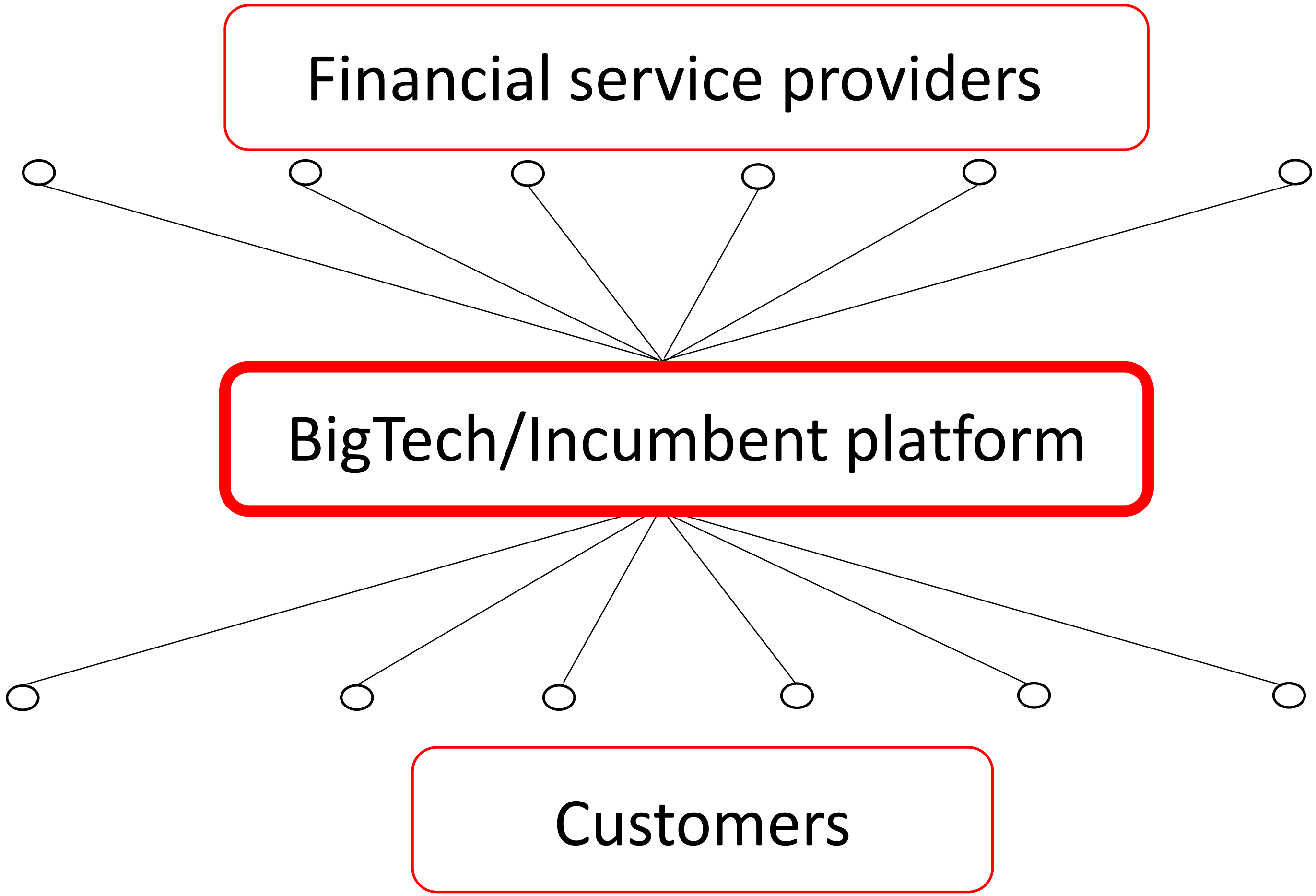
Strategies of incumbents and FinTech entrants

Strategies: incumbents and bigtechs

Incumbents	Bigtechs
Accommodate • Cooperate with partnerships • Provide specialized unique banking products and services	Accommodate • Partnerships

Fight/Compete head-to-head by becoming platform/marketplace
• Profit from superior trust from customers and data security
• Better regulatory navigation skills and similar lobby power than BigTech
• Cannot match bigtechs' bundling/cross-subsidization strategy with complementary financial and non-financial products (despite enjoying some network effects)
	Compete head-to-head
	• Become banks/intermediaries bundling their offerings and exploiting economies of scope
	  • Opt not to accept deposits to avoid regulation
	• Multi-sided platform (marketplace)
	  • Platform envelopment
	  • Aim to be gatekeeper: Monopolize interface with customers: battle for mobile payments

The future: A new platform-based oligopoly?



What is new in SVB and Credit Suisse crises?

Tweets fostering panic


@jason @Jason · Mar 12

YOU SHOULD BE ABSOLUTELY TERRIFIED RIGHT NOW — THAT IS THE PROPER REACTION TO A BANK RUN & CONTAGION

@POTUS & @SecYellen MUST GET ON TV TOMORROW AND GUARANTEE ALL DEPOSITS UP TO $10M OR THIS WILL SPIRAL INTO CHAOS

3,282 1,389 3,191 4.7M

Calacanis posted a series of panicked tweets all written in block capitals


@jason @Jason · Mar 12

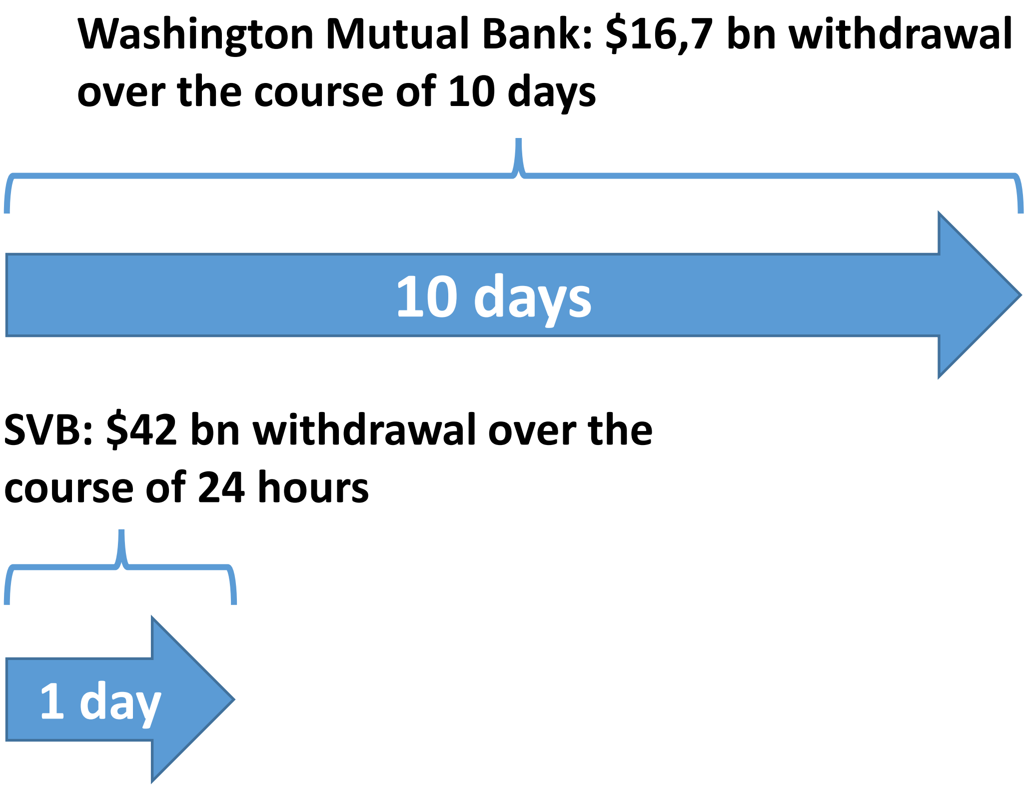
Replying to @ezmodest

THE FARMER IS THE SMALL BUSINESS OWNER WHO WONT BE ABLE TO MAKE PAYROLL NEXT

108 33 77 140K

- Jason Calacanis, a well-known venture capitalist and host of a popular tech podcast, caused a stir on Twitter by expressing concerns about SVB's collapse

The run in context....

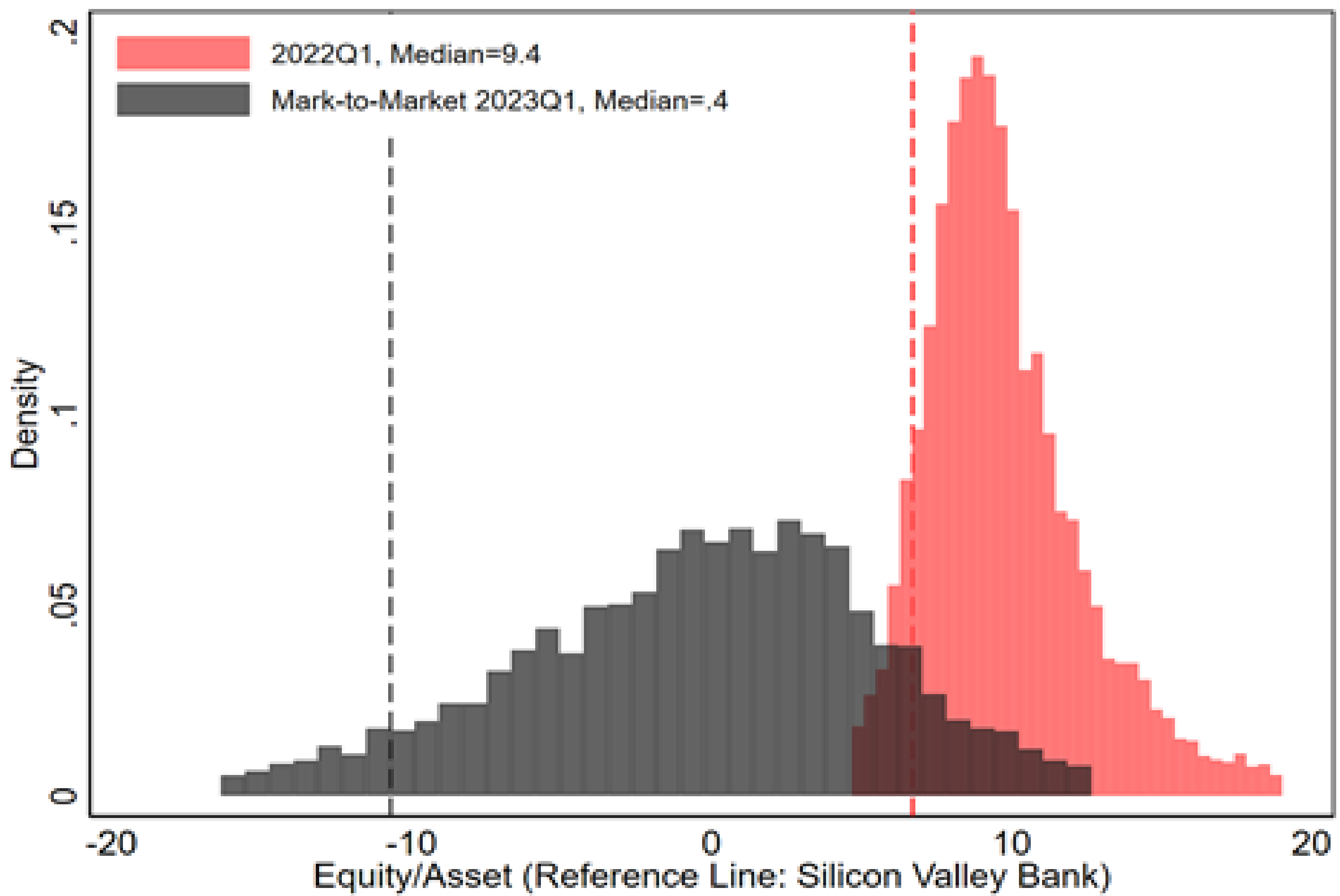


- Washington Mutual bank in 2008: previous largest bank run in modern U.S. history

Was SVB the canary in the mine?

- Run triggered by losses in bond portfolio.
- Undiversified in assets and in liabilities
  - Large and concentrated proportion of uninsured deposits
  - Overinvestment in LT securities with no hedge
- Mismanaged interest rate risk and risk (no CFO).
- Governance: unqualified Board of Directors.
- Relaxed prudential requirements and stress tests (under lobbying).
- Supervisory sluggishness.
- $2.2 trillion loss in the value of U.S. banks' assets because of market losses, and with hedging not large enough to offset a significant share of the loss (Jiang et al. 2023).

Equity/Asset ratio for US Banks
(mark to market)



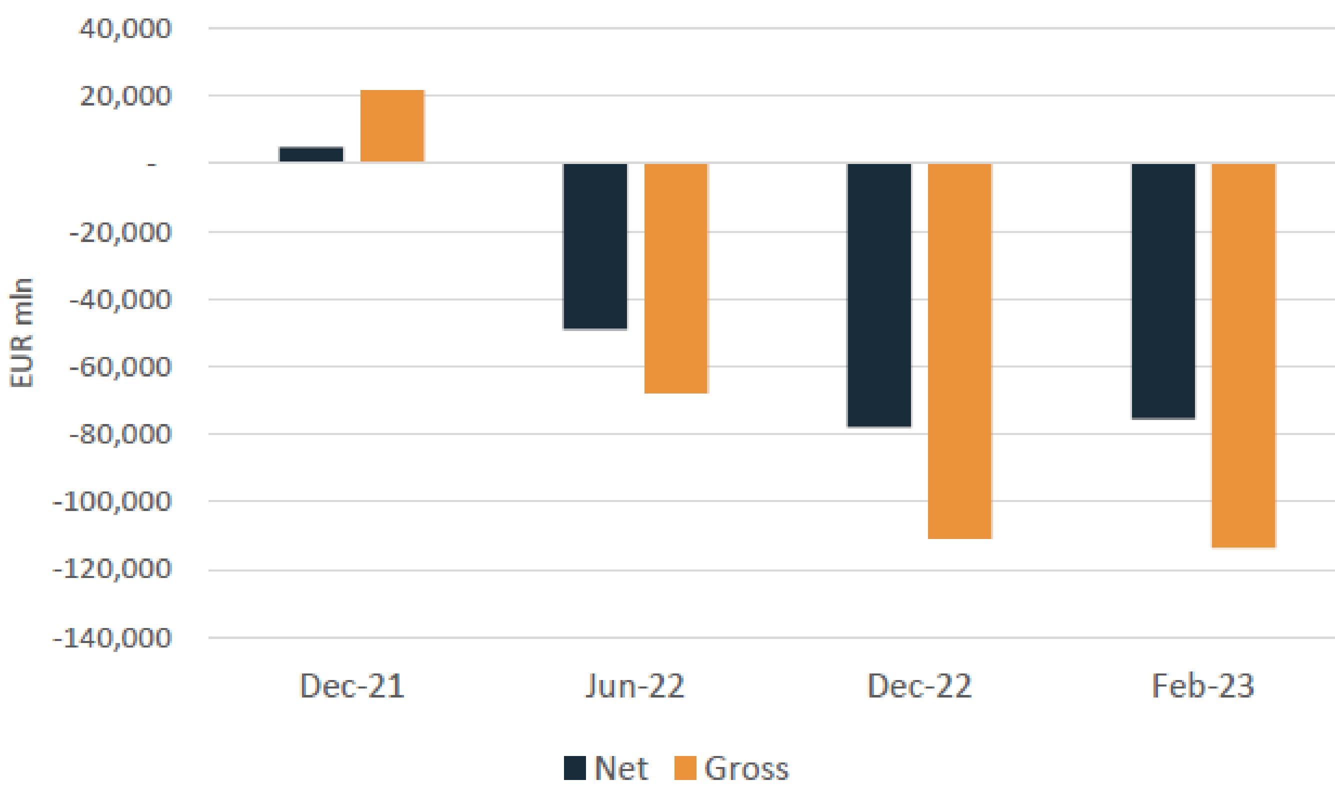
Source: DeMarzo et al. (2023)

Summary of the US recent bank turmoil

- Banking turbulence in regional banks in the US and the Credit Suisse demise has put the behavior of deposits at the center of concerns.
  - The deposit franchise (based on sticky deposits not very sensitive to interest rates but runnable) provides a hedge for long term investments.
- Electronic banking plus social media acting in tight communities have shown that uninsured bank deposits (in the US nearly 45% of the dollar value of domestic deposits on average in 2022) of not well diversified institutions (on both sides of the balance sheet) are *flighty*. Runs faster in more digital banks.
- Relaxed regulation and supervision of medium-sized institutions contributed to the crisis and will lead to higher *concentration*.
- The “too-many-to-fail” syndrome (together with vulnerability of SMEs to bank runs) triggered recourse to the “systemic risk exception” and blanket insurance followed for deposits in the US.
- The episode is reminiscent of the S&Ls crisis where rising interest rates and competition from mutual funds, together with mismanagement of interest rate risk, destroyed the deposit franchise and induced risk taking and go-for-broke strategies (and fraud).

Evolution of gross and net unrealized losses on debt securities held at amortized costs at EU banks

(Dec.2021 to Feb.2023).



Source: EBA

Liquidity policy with flighty deposits

- Reform LCR (adapt to revised outflow rates)
- Put sand/bumps in speed of deposit withdrawals (lags, swing pricing as in MMF)
- Increased insurance coverage for business deposits or MMF treatment?
- Price insurance:
  - Risk-based deposit premiums, eliminate pro-cyclicality
  - Higher prepositioning of CB collateral for banks with higher deposit concentration on uninsured interest rate sensitive customers
- EU: MREL/TLAC sufficient so that 8% bail-in rule does not affect short term deposits
- Continuous monitoring by CB of social media and banks' liquidity position (CBDC may help while also enticing runs)

References

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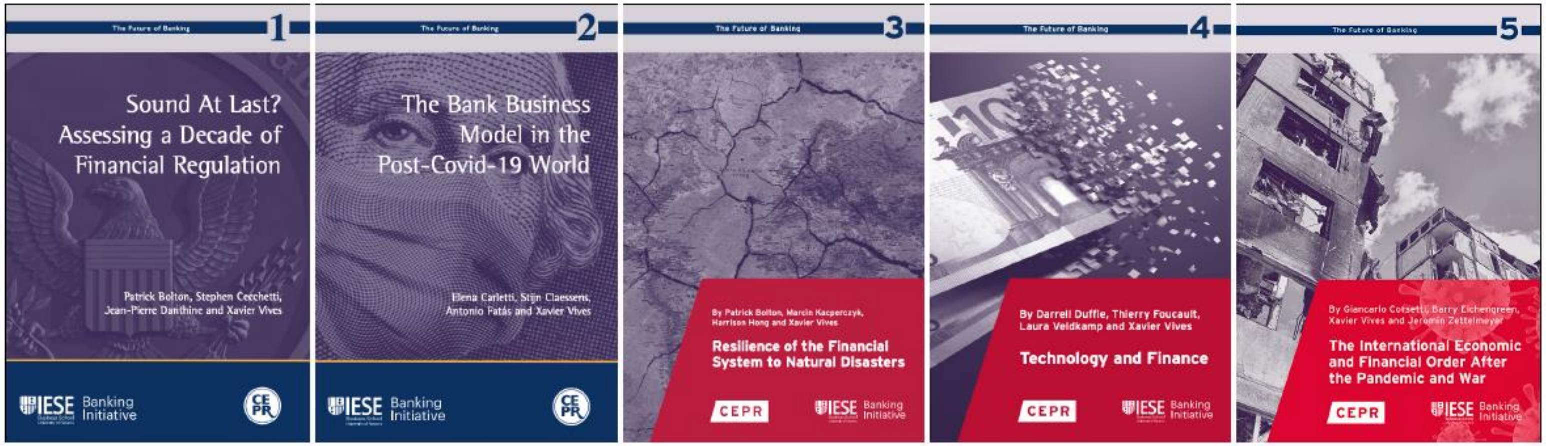
Future of Banking Reports



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