Social Media and Financial Stability

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Agenda

1. Bank Runs
2. The case of Silicon Valley Bank
3. Social Media and Bank Runs

Bank Runns

What is the business of commercial banks?

- Commercial Banks are financial intermediaries that take deposits and make loans. By charging a higher interest rate on loans than they pay on deposits, they make a profit.
- Deposits are a very cheap source of funding for banks.
    - They are protected by deposit insurance up to 250,000 USD in the US and 100,000 EUR in the EU.
    - The Federal Deposit Insurance Corporation (FDIC) in the US and the European Central Bank (ECB), together with their affiliates, are the institutions that provide deposit insurance.

Bank Runs

Banks are highly leveraged institutions

- Since deposits are a very cheap source of funding, banks are highly leveraged institutions. (e.g. Modigliani and Miller, 1958)
- Moreover, banks can become too big to fail. (e.g. Bernanke, 1983) and be bailout by the government.
- This makes banks highly leveraged institutions.

Bank Runs

What if depositors lose confidence in the bank?

- If depositors lose confidence in the bank, they will withdraw their deposits.
- If the bank does not have enough cash to meet the demand for withdrawals, it will fail.
- It is impossible for a bank to have enough cash to meet the demand for **all** withdrawals since investments are not liquid. (e.g. Diamond and Dybvig, 1983)

Silicon Valley Bank

What was happening on March 2023?

Ironically

The Nobel Prize in economics in 2022 was awarded to Ben Bernanke, Douglas Diamond and Philip Dybvig for research on bank collapses.

1. "for research on banks and financial crises"
2. From the Nobel Prize website: *This year's laureates in the Economic Sciences, Ben Bernanke, Douglas Diamond and Philip Dybvig, have significantly improved our understanding of the role of banks in the economy, particularly during financial crises. An important finding in their research is why avoiding bank collapses is vital.*

Some references

Some references

- https://delano.lu/article/unhedged-interest-risk-high-un
- https://www.youtube.com/watch?v=QACGoKb48_0&ab_channel=WallStreetJournal
- https://johnhcochrane.blogspot.com/2023/03/how-many-banks-are-in-danger.html?spref=tw

What happened?

What happened? SVB Financial Group (SIVB -60.41% in 10/03/2023) bought some of the safest assets in the world of finance. How could it possibly have failed in two days?

How did we get here?

- SVB Financial is the parent company of Silicon Valley Bank
- Silicon Valley Bank has many startups and venture-capital firms as clients
- During the pandemic, those clients generated a ton of cash that led to a surge in deposits
- SVB ended the first quarter of 2020 with just over $60 billion in total deposits
- That skyrocketed to just shy of $200 billion by the end of the first quarter of 2022
- It was the 16th biggest bank in the US, and the second largest in history to fail

What did the bank do?

- SVB Financial bought tens of billions of dollars of seemingly safe assets
  - Primarily longer-term U.S. Treasurys and government-backed mortgage securities
- SVB's securities portfolio rose from about $27 billion in the first quarter of 2020 to around $128 billion by the end of 2021

Why is that a problem?

- These securities are at virtually no risk of defaulting
    - But they pay fixed interest rates for many years
- That isn’t necessarily a problem, unless the bank suddenly needs to sell the securities
- Because market interest rates have moved so much higher, those securities are suddenly worth less on the open market than they are valued at on the bank’s books
    - As a result, they could only be sold at a loss
- SVB’s unrealized losses on its securities portfolio at the end of 2022 jumped to more than $17 billion

What else went wrong?

- SVB’s deposit inflows turned to outflows as its clients burned cash and stopped getting new funds from public offerings or fundraisings
  - Attracting new deposits also became far more expensive, with the rates demanded by savers increasing along with the Fed’s hikes
- Deposits fell from nearly $200 billion at the end of March 2022 to $173 billion at year-end 2022
- As of Jan. 19 - 2023, SVB was forecasting its deposits would decline by a midsingle-digit percentage in 2023
  - But their expectation as of March 8 was for a low-double-digit percentage decline.

How did this come to a head?

- On Wednesday (8/3/2023), SVB sold a large chunk of its securities worth $21 billion at the time of sale
  - At a loss of about $1.8 billion after tax
- The bank’s aim was to help it reset its interest earnings at today’s higher yields
  - And provide it with the balance-sheet flexibility to meet potential outflows and still fund new lending
- SVB also set out to raise about $2.25 billion in capital

Why didn't it work?

- Following the announcement, things seemed to get even worse for the bank
    - The share-sale announcement led the stock to crater in price, making it harder to raise capital
    - Venture-capital firms reportedly advised their portfolio companies to withdraw deposits from SVB
- Customers tried to withdraw $42 billion of deposits–about a quarter of the bank's total
    - According to a filing by California regulators
    - The bank ran out of cash

SVB Financial: From Boom to Bust

What we though was going to happen to deposits? (12/03/2023)

- Many of the bank's deposits didn't carry FDIC protection. SVB estimates that at the end of 2022, deposits in its U.S. offices that exceed the FDIC insurance limit were $151.5 billion.
- The FDIC stated that customers will have full access to their insured deposits no later than Monday morning.
- The FDIC did not announce the current amount of uninsured deposits, but uninsured depositors were going to get an advance dividend within the next week.
- For the remaining amounts of uninsured funds, depositors will get something called a "receivership certificate," and as the FDIC sells off the assets of SVB, they may get future dividend payments.

What happened in the end?

- On March 13 the FDIC determined that All of SVB depositors will get their money back. (Signal to depositors in other banks)

Unhedged Interest Risk

- SVB had assets that were very sensitive to interest risk.
- The first thing you teach students who are going to work in a bank is how to hedge interest rate risks.
- SVB’s chief risk office, Laura Izuriet, stopped serving as risk officer in April 2022.
- Kim Olson was appointed CRO in January 2023.
- Why they didnt hedge? : Incompetence?
- Turns out they couldn’t. FASB rule ASC 815-20-25-43(c)(2) interest rate risk may not be hedged in a fair value hedge of held-to-maturity debt

Large amount of uninsured deposits, concentrated in one industry and one region

- Banks mostly fund themselves with deposits, but “typically we have a lot of small retail deposits in the bank.
- Most of these retail deposits, because they are small amounts, they’re insured by the government–by the FDIC [Federal Deposit Insurance Corporation] up to 250K
- In the case of Silicon Valley Bank, however, “the business model was to attract very large deposits from the tech industry,” and, in particular, tech startups with a lot of cash from venture capital funding.
- Time Bomb: A large uninsured deposit base, all concentrated in one region, Silicon Valley

What happened next?

- Silvergate, a crypto related bank failed, together with First Republic Bank, and Signature Bank.
- Market commentators were surprised by the **speed** of these bank runs, suggesting that social media had played a role.
- Great opportunity to *test* if this was true.