Major Project Dissertation Report on

U.S. BANK STRESS -CHALLENGES AND WAY FORWARD: A CASE FOR SILICON VALLEY BANK

Submitted By

Sanchai Murti

Roll No: 2K21/EMBA/39

Under the Guidance of

Dr. Vikas Gupta

Assistant Professor

DELHI SCHOOL OF MANAGEMENT

Delhi Technological University

Bawana Road Delhi 110042

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U.S. BANK STRESS -CHALLENGES AND WAY FORWARD: A CASE FOR SILICON VALLEY BANK

CERTIFICATE

This is to certify that Ms./Mr. Sanchai Murti, have completed the project titled “US Bank Stress -Challenges and Way Forward: A Case for Silicon Valley Bank” under the guidance of Dr. Vikas Gupta as a part of Master of Business Administration (MBA) curriculum of Delhi School of Management, New Delhi. This is an original piece of work and has not been submitted elsewhere.

DR. VIKAS GUPTA

Head of Department	
Delhi School of Management	**Delhi School of Management**
Delhi School of Management	**Delhi School of Management**

Declaration

I hereby declare that the Project Report Entitled in the Partial Fulfilment of Course Curriculum of the Degree of Executive MBA from Delhi Technology University, Bawana, New Delhi

The Work Done by Me is my Own Piece of Work and Authentic to the Best of my Knowledge under the supervision of Assistant Professor Dr. Vikas Gupta

Name: Sanchai Murti
Enrolment No. 2K21/EMBA/39

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The mentioned project was done under the supervision of Dr Vikas Gupta. I thank all participants for their positive support and guidance. I feel thankful to the faculties staff for giving me such a big opportunity. I believe I will enrol in more such events in the coming future.

Date: 18-May-23

Name: Sanchai Murti
Enrolment No. 2K21/EMBA/39

Executive summary

Stable financial system can be regarded as a backbone of an economy. A financial system is considered stable market when its participants banks are particularly aims to provide access to capital to the business and retail. The objective of study is to understand the recent bank stress faced in US Financial system by the way of Silicon Valley bank and signature bank making the depositors of the bank to raise concern over the security of deposits with the banking. Such a case of Bank run where depositors are in panic to get their own money back raises question over the credibility of such institutions.

The study tries to define the vulnerabilities of the financial system into four: valuation pressure, Excessive borrowing by businesses and households,Excessive leverage within the financial sector and Funding risks.Further,elaborating Funding risk refers to When banks in this particular case- faced with such withdrawals, financial institutions would be forced to sell assets fast at "fire sale" prices, suffering losses and possibly going bankrupt in the process. Additionally, this could result in further price reductions that could cause stress throughout markets and at other institutions. This Run on the Bank case faced recently had a spill over effect on other financial participants.

The study's objective is by using the secondary research methodology to study the Case of Silicon Valley Bank failure. Understanding the Banking stress that existed in March 2023.Finding out the reasons for such a crisis. Studying the parameters into Economic and regulatory domain.

In economic: the stress was due to factors like interest rate hike highest after so many years as it was due to pandemic ending. Followed by inflationary pressure making Fed to opt for monetary tightening.

The impact of interest rate rise caused bond market portfolio losses and credit risk as ratings of Silicon Valley bank were turned negative that further aggravated sentiments of depositors and caused withdrawal of funds till FDIC and Fed took over to normalise the situation.

Other regulatory factors Like Dodd Frank Act and stress test are studied in detail. These came in effect post the learnings from the US 2008 crises. Easing regulation for mid-size bank also acted as a factor for the run on the bank situation.

US financial market stability parameters have also been considered to understand the spill over effects of the crises.

Adding to inflation and interest rate overall looks recessionary conditions are evident US and in Global economy.

TABLE INDEX

INTRODUCTION

A stable financial system is one in which there is interaction between financial intermediaries. When banks, other lenders, and other market participants can provide the capital that people, communities, and businesses need to invest in, grow, and participate in a thriving economy—and can even carry out the same process in the face of adverse conditions, or "shocks"

While vulnerabilities, or the features of the financial system that might make stress worse, may be watched as they increase or decrease over time, shocks are intrinsically difficult to foresee.

As a result, the framework's main emphasis is on identifying vulnerabilities, with special attention paid to four major categories and how those categories may interact to increase financial system stress.

Valuation-Pressure

When asset valuations are high in comparison to economic fundamentals or historical standards, valuation pressures develop. These changes are frequently sparked by investors' improved risk tolerance. Therefore, there may be a greater chance of a sudden drop in asset values if there are significant pricing pressures.

Excessive- borrowing by businesses and households.

Exposes the borrowers to distress if their sources of income decrease or the value of the assets, they possess decrease. Due to these circumstances, households and firms with high debt burdens could need to cut back on their spending, which would have an effect on the economy and cost investors' money.

Excessive leverage within the financial sector

Raises the possibility that financial institutions won't be able to absorb losses when faced with negative shocks without causing interruptions to their regular business operations. Institutions will be obliged to reduce lending, dispose off their assets, or possibly close down in certain circumstances. Such actions may limit consumers' and enterprises' access to credit, further depressing economic activity.

Funding -risks

If investors abruptly withdraw their capital from a particular institution or industry, funding risks expose the financial system to pressure on other markets or institutions. Many financial organisations assure investors that money they invest will be returned to them right away, but instead they invest a large amount of that money in assets that are difficult to sell quickly or have a protracted maturity. Investors may be influenced to withdraw money quickly in difficult situations by this change in liquidity and maturity. Financial institutions would be obliged to sell assets quickly at "fire sale" prices in response to such withdrawals, incurring losses and possibly going out of business in the process. Additionally, this can lead to additional price cuts that might be stressful all around.

Here, we study the case of US Bank-Silicon Valley Bank in respect of Funding risk and vulnerabilities of US financial system that triggered such incident. Other economic and regulatory factors responsible for the SVB Crises and US Financial system post SVB Crises and the way forward.
In contrast to what their book value of assets, which takes into account loan portfolios that are held to maturity, would imply, the estimated market value of the assets of the US banking system is almost $2 trillion less.

A tightening of monetary policy by central banks could have a detrimental effect on the value of mortgages and government bonds. As a result, the bank that was using short-term liabilities—deposits—to finance long-term assets suffered losses.The value of a bank's assets may decrease as interest rates increase, which could result in bank failure through two distinct but connected processes. First, a bank may become bankrupt if its obligations are greater than its assets. For banks, who must raise deposit rates when interest rates rise, this is especially plausible. Second, uninsured depositors might withdraw their money out of fear of possible losses, sparking a bank run.

More recently, the largest bank failure since the great recession occurred on March 10, 2023, when Silicon Valley Bank (SVB) was taken into FDIC receivership. 92.5% of its deposits were uninsured, leading to significant withdrawals that ultimately resulted in the bank's collapse within two days.

PROBLEM STATEMENT

We provide a simple analysis of all U.S. Financial system vulnerabilities that caused SVB crises including regulatory factors contributing to SVB crises and its implication on US financial system and key learnings from SVB crises.

To Begin with ,what triggered SVB crises -The market value of long-term assets significantly decreased because of the Federal Reserve Bank's decision to raise interest rates in response to excessive inflation. The federal funds rate increased significantly from 0.08% to 4.57% between March 7, 2022, and March 6, 2023. This increase was accompanied by quantitative tightening. As a result, during the same period, the value of long-dated assets comparable to those held on bank balance sheets significantly decreased. The Bank stress explained further-

The Bank Stresses since March 2023

The week of March 6, 2023, came to an end with the banking system experiencing significant stress. A Federal Reserve-supervised company with $11 billion in assets at the end of 2022, Silvergate Bank, said on March 8 that it will voluntarily wind down operations and return all depositors in full.

SVB, a Federal Reserve-regulated institution with USD 209 billion in assets projected for the FY 2022, announced on that Wednesday that it had sold $21 billion from its portfolio of AFS securities at an after-tax loss of roughly USD 1.8 billion, had decided to raise from $15 billion to $30 billion, and had begun an IPO to raise $2.25 billion in capital.The bank also disclosed that it had communicated with a rating agency that was considering lowering its rating, with the possibility that another agency would do the same. Later that day, the outlook for the bank's ratings was changed from stable to negative, and its rating was reduced by one notch. These statements brought about a loss.

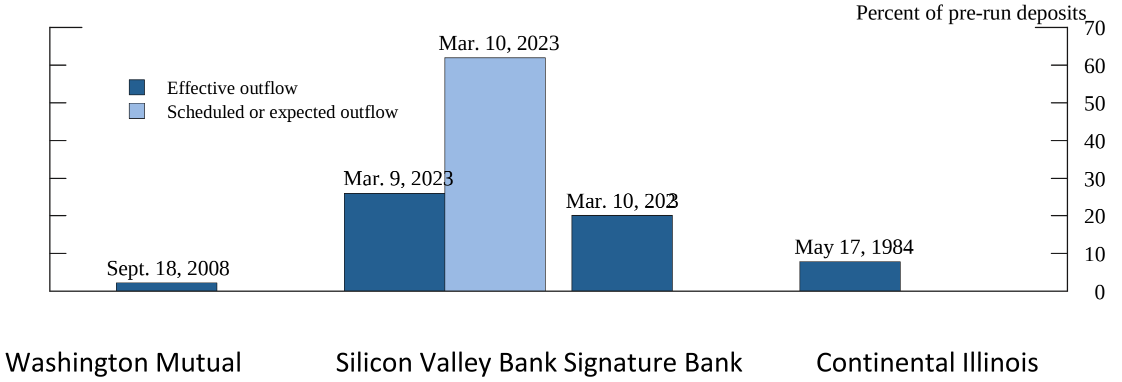
It seemed possible for the collapse of SVB to spread far and harm the larger banking sector. Concerns regarding the risk of destabilising runs at other U.S. commercial banks appeared to be raised by the idea of uninsured depositors not being able to retrieve their money.

On March 10, depositors withdrew 20% of bank balances during a run on Signature Bank, an FDIC-supervised organisation with assets projected to reach $110 billion by the end of 2022. The stock price of Signature Bank continued to fall.

No other runs could equal the pace of the SVB and Signature Bank runs. During the run on Washington Mutual in 2008, which resulted in the greatest failure of an insured depository institution to date by inflation-adjusted total assets, depositors withdrew nearly $17 billion over the course of eight working days. Just over 2 percent of pre-run deposits were the subject of the greatest deposit withdrawal that took place in a single day. SVB and

Signature Bank had the greatest one-day withdrawal rate of more than 20%, despite being the second- and third-largest depository institutions by inflation-adjusted total assets, respectively, and failing as a result of a bank run.

Figure B. Peak 1-day withdrawal rates for runs on the largest banks, by inflation-adjusted total assets



Sources: For Washington Mutual, Jonathan D Rose (2015), “Old-Fashioned Deposit Runs,” Finance and

Economics Discussion Series 2015-111 (Washington: Board of Governors of the Federal Reserve System, December) . For Silicon Valley Bank, Financial Institutions Examination Council, Consolidated Reports of Condition and Income; California Department of Financial Protection and Innovation (2023), “Order Taking Possession of Property and Business” (San Francisco: DFPI, March 10); and Board of Governors of the Federal Reserve System (2023), Review of the Federal Reserve’s Supervision and Regulation of Silicon Valley Bank (Washington: Board of Governors, April) . For Signature Bank, Federal Deposit Insurance Corporation (2023), FDIC’s Supervision of Signature Bank, (Washington: FDIC, April) . For Continental Illinois, Mark Carlson and Jonathan Rose (2019), “The Incentives of Large Sophisticated Creditors to Run on a Too Big to Fail Financial Institution,” Journal of Financial Stability, vol . 41 (April), pp . 91–104 .

Exhibit1: Sources: For Washington Mutual, Jonathan D Rose (2015)

Such, Bank on run incident added stress to the US financial system.Here,the study is attempted to understand the economic and regulatory factors contributing to Such a crisis situation in US financial Markets with specific case of SVB Bank and learnings for future better risk management.

OBJECTIVE OF STUDY

- US financial system stress-Institution-Banking
- The case to be studied Silicon valley bank-Bank Run case
- Economic and regulatory framework contributing to such crises
- US financial market parameters post SVB Crises
- Learnings from SVB Crises

SCOPE OF STUDY

- SVB Bank crises-chronology of events
- Economic factors contributing to such crises
- Regulatory factors
- US Financial system-stability parameter’s performance Post SVB Crises
- Key Learnings

LITERATURE REVIEW

The study of SVB and subsequent Signature bank failure needs to be understood from the five points First How the current economic factors resulted to such crises Second, from point of view of regulatory framework.Third,what it meant for investor (Run on the Bank)and what sentiments were triggered during the Crises in US Financial system.Fourth,US financial market parameters post SVB Crises and Fifth, key takeaway's from SVB Crises.

CEO of Arcana Rich Falk-Wallace posted a very instructive article on what transpired with Silicon Valley Bank (SVB) on LinkedIn. Based on that research and pieces from the New York Times, Financial Times, and Bloomberg, it appears to be a contemporary take on a bank run. The issue was that SVB was a specialised bank that competently but essentially exclusively serviced to digital start-ups and the ecosystem around it, including venture capital firms and private equity funds, which partially cost some pain and surprise and caused a panicky run on the bank. and their investors, managers, and limited partners. First, they stated that in addition to their mark-to-market losses, they also incurred $15 billion in unrealized losses in their hold to maturity book in a footnote to their year-end results. As SVB had $212 billion in assets, $200 billion in liabilities, and $12 billion in equity, this concerned observers. Their entire equity buffer was eliminated as a result of the probable loss in their hold to maturity, resulting in a net deficit for the bank. This was made worse by their announcement on March 8 of last year that they had liquidated $21 billion worth of liquid assets at a loss of $1.8 billion from their hold to maturity book to offset those losses. Due to the larger loss than anticipated and the bleak forecast for the net interest margin the next day, March 9, investors became alarmed. Of the $42 billion in withdrawal requests made by depositors, $16 billion was actually carried out. The bank had negative cash of $1 billion as a result, and the FDIC seized over on Friday.

The identified problem: Bank on the Run case was triggered by series of factor:

1)**Economic Factors**-- Monetary tightening of fed, Interest rate rise, Asset prices fall, Mark to market losses booked by Silicon Valley bank, being special type of bank to fund to IT Tech start up.

2)**Regulatory Factors**-Loosening of Volcker rule, Ease in Dodd frank act, Mid-size bank being outside the purview of stress test.

SVB did not develop practical methods, models, or metrics for monitoring interest rate risk, nor did it effectively manage the interest rate risk associated with the assets it owned. Due to its narrowly focused business strategy, SVB also failed to manage the liquidity risks of liabilities that were mostly comprised of uninsured deposits from venture capital companies and the IT sector. The markets started to turn against it. The

Federal Deposit Insurance Corporation (FDIC) relaxed the Volcker Rule's restrictions in 2020. Bank capital requirements were reduced under the amended rule, and banks were allowed to engage in venture capital firms.

These long-term securities lost value when inflation and interest rates increased. Even worse, a liquidity mismatch was produced. The bank had significant long-term assets in the form of long-dated securities that would not mature for some time, but also significant short-term liabilities to quickly recover depositors' money. To close the deficit, it sought short-term cash through a capital raising. Then a classic "bank run" was what eventually put an end to them. Panic

Bank supervisors here Fed in this case expect banks to hold sufficient capital so it never runs out of liquidity and to cover losses under adverse economic conditions. It is crucial to take into account the impact of stress testing on the stock and CDS markets because it has evolved into a crucial tool for bank supervisors to accomplish that purpose. By taking into account their effects on stock returns, CDS spreads, systematic risk, and "systemic risk," we have assessed the market responses to U.S. stress tests conducted after the commencement of the financial crisis.
case reference: Banking stress test effects on returns and risks Cenkhan Sahin, Jakob de Haan, Ekaterina Neretina
It is appropriate to use a number of quantitative indicators and combine different approaches to evaluate the stability of the financial system and its most significant component, the banking sector, including the calculation of financial soundness indicators, stress testing, and some aggregate views of the development of the financial or banking sector based on a simple aggregate indicator.
case reference - Benefits and Drawbacks of Financial Stability Indicators in the Evaluation of Financial System Stability Jaroslav Hemánek and Adam Gerl, CNB
Unrealized losses, the distribution of investment securities, and the withdrawal of deposits all reflect the performance of U.S. banks. We demonstrate how a sharp increase in interest rates might cause enormous losses and perhaps wipe out the market value of a bank's equity capital. We further demonstrate that in order to lower realised losses, American banks have swapped more readily available-for-sale assets to securities held to maturity. Furthermore, a rise in interest rates like that would lead some depositors to remove their money, especially those with uninsured accounts. As illustrated by the recent sudden collapses in the U.S. banking industry, these characteristics pose serious dangers to institutions.

The instability of the American banking sector and the increase in interest rates Northeastern Illinois University Huong T.T. Le h-le9@neiu.edu Western Connecticut State University Lai Van Vo vol@wcsu.edu Date of this version: April 12, 2023

Case reference- Global Financial System Tested by Higher Inflation and Interest Rates

Rapid monetary policy tightening after years of low rates is exposing fault lines: IMF BLOG

The most recent Global Financial Stability Report reveals that while interest rates have been swiftly increased to control inflation, risks to bank and nonbank financial intermediaries have grown. In the past, central banks' abrupt rate rises have frequently been followed by stressors that reveal financial system flaws. Increasing rates and financial strain

Financial difficulties have often come after periods of high inflation and rapid rate increases.

RESEARCH METHODOLOGY

The research methodology adopted is Secondary research.

Data sources-The economic journals for US financial markets, websites of Fed and research papers referring to earlier research. Done on Bank stresses and financial system stability.

Purpose-To study the factors responsible for the Bank stresses-specifically Silicon bank case in light of economic and regulatory factors.

Method adopted-Case study method followed. Here the US bank stressed Case of Silicon Valley Bank has been selected. Along, with these various economic theories pertaining to inflation, interest rate, Bond market dynamics and other parameters have been studied to support the study for Silicon Valley Bank Crises.

Data gathered-From website of Fed, Financial stability report issued by Fed from March onwards, US treasury interest rates from (March 22- March 23). Inflation data for last 1 year.

Objective:

The objective of research has been to answers below questions to outside world of finance where uncertainty is on peak:

1)what were the parameters for study on financial stability

2)what were the Reasons for bank on run emergence: Economic and regulatory

3)what was the impact on economic variables post SVB Crises

4)whether economic conditions emerged globally like interest rate hike, monetary tightening, mark to market bond losses were reasons acting like primary factors for such a crisis?

5)The loosening out of Dodd frank act and ease to mid-size banks were also factors lead to crises?

The existing research conducted had studied the available resource or already published research over the same research objectives.

The various secondary sources referred as financial stability report was analysed with respect to parameters responsible post the SVB crises to contribute to financial market condition. Another research paper on Banking stresses and quantitative factors such as stress test to check the financial resilience capacity of banks. Interest rate hike followed by mark to market losses another factor contributing to Bank on the run case.

Some findings in Earlier research-

1)Regulatory framework loosening adds stress signals for financial markets

2)Interest rate and inflation hike adds pressure on financial market participant

3)Investor panic triggered causing liquidity crunch.

4)If mid-size banks are part of such stress test the SVB kind of failures can be avoided

Brief about case:

Interest rate hike followed by inflation causing recessionary pressures. Adding to this sudden rise in interest rate in last 1 year contributed to liquidity risk of earlier bonds in market and credit risk due to debt servicing cost turned higher.The Financial stability of a country refers to the smooth flow of credit to be transferred from depositor to borrower via Bank.Due to economic conditions turning negative added stress to bank making the withdrawal panic by depositor and turned to be Bank Run.

The Silicon valley bank already being Mid size bank was not considered for stress test which is required to check the preparedness of any unprecedent circumstance.Also, silicon valley bank being unique to lender to Tech startup was a specialised one. Due to less risk management it was collapsed.The study conduct referred to the earlier reaserches ti study financial parameters of Financial market and Bank stressed.The case analysis the events triggered the collapse,broadly into economic and regulatory and analysis to have a key take aways for future .

Introduction To Case

The second-largest bank failure in US history occurred on March 10, 2023, at Silicon Valley Bank of US, a lender to tech companies.The identical queue of bank runs, which refer to numerous consumers simultaneously demanding their deposits, is drawn by the Santa Clara-based company.

Sequence of Events: As inflation soared in recent months, the value of the bank's holding of long-term US Treasury bonds and mortgage-backed securities declined. The cost of borrowing for venture capitalists grew when inflation-controlling interest rates increased, which in turn decreased the amount of new deposits.

The value of the bank's stock of long-term U.S. Treasury bonds and mortgage-backed securities decreased in recent months as inflation increased. Inflation-controlling interest rate increases increased the cost of borrowing for venture capitalists, which in turn reduced the flow of new deposits.

As a result, billions were invested in securities with a falling value by Silicon Valley Bank. Additionally, the bank received fewer deposits. Bank officials sold worthless securities worth tens of billions of dollars in an effort to reduce their losses and help offset the declining deposits.
The bank was having problems, so depositors rushed to withdraw their money in large quantities. Silicon Valley Bank lacked the funds necessary to fulfil its obligations as the run continued.

"Deposits disappeared slowly at first and then all at once, the basic maths is simple enough to understand."

The consequences of the Silicon Valley Bank bankruptcy are still being felt. The good news is that there haven't been any significant runs on other small banks as of yet. However, there was collateral harm. Start-up businesses struggled to make payroll. An affordable housing project in San Francisco has been put on hold.

The main bad news for the world is that the instability caused by the collapse of the tech bank has left banking giant Credit Suisse, which was already reeling from recent scandals and poor management, perilously close to bankruptcy. Competitor UBS purchased Credit Suisse on March 19 for just $3 billion in a sale that was compelled by Swiss regulators.
the problems facing the bank and made a mass withdrawal of their funds. Run was in full swing, and Silicon Valley

Why Bank Run situation

On March 8, Silicon Valley Bank disclosed that it was raising $2.25 billion through a public offering of its shares while selling nearly $21 billion in securities at a $1.8 billion loss. At this point, news of the bank's problems began to circulate in the media.Customers were disturbed by these actions and inquired as to why

bank management believed they need such large amounts of cash. The clients didn't wait to ask questions before demanding their money.
On March 9, customers began making withdrawals totaling $42 billion, leaving Silicon Valley Bank with a $1 billion shortfall. The Federal Deposit Insurance Corporation took control of the bank on March 10. By federally guaranteeing bank deposits, this government organisation was created to maintain public trust in the banking sector.

Notably, both for people and businesses, the FDIC covers deposits up to $250,000 per account holder. This statutory cap was exceeded by about 94% of Silicon Valley Bank's deposits, making the institution extremely runnable.

According to statistics from S&P Global Market Intelligence, Citibank has the highest percentage of uninsured deposits among the main U.S.-based banks at 74%, while Bank of America has the lowest percentage at 46%. According to S&P, 46% of domestic deposits held by large U.S. banks, totaling close to $8 trillion, are not FDIC insured.

According to Erik Stafford, a finance professor at Harvard Business School, "the bank run was devastating for SVB, but the real problems that triggered this event were the underlying **interest rate exposure** and the slow withdrawal of deposits."

"SVB was compelled to issue a significant amount of equity, which raised awareness of their predicament. The problem at all banks is currently receiving a lot of attention.
The bank received deposits from IT companies for a variety of uses, including operational requirements like payroll. The bank was similar to other corporate banks in many ways, but technology leaders viewed it as "their kind of bank," as economist Paul Krugman characterised it in a recent New York Times article

Later series of Events

On March 11, tech CEOs sent a petition to Treasury Secretary Janet Yellen and other government officials requesting assistance.
According to the more than 5,000 CEOs who signed the petition, what is at risk is not a bank but rather American economic innovation. They reasoned existentially, "We are not asking for a bailout for the bank equity holders or its management; we are asking you to save innovation in the American economy."

Then, New York City-based Signature Bank, which catered to bitcoin investors, failed. It was the third-largest bank to collapse in American history as of March 12.The FDIC also acquired Signature Bank.
The launch of two bridge banks, which would take deposits totalling $89 billion at Signature Bank and $175 billion at Silicon Valley Bank, was announced by the FDIC on March 12. Around half of Signature Bank's assets were bought by Flagstar Bank, a subsidiary of New York Community Bancorp, on March 19. However, the FDIC's bridge bank continues to have custody of $60 billion in loans.

Additionally, a consortium of the biggest banks in the country stated on March 16 that they would invest $30 billion into the ailing (but not yet insolvent) First Republic Bank, situated in San Francisco. These institutions included Bank of America, Citigroup, and JPMorgan Chase.

This initiative is similar to one that banker J.P. Morgan orchestrated over a century ago, following the chaos of the Panic of 1907, which was also sparked by a bank run, and which resulted in tens of millions of dollars being spread throughout Wall Street. This private rescue had a direct impact on the Federal Reserve System, a public organisation that may help resolve future financial crises.

FDIC ROLE

A legal provision known as a "systemic risk exception" enables the federal government to take control of private banks and oversee their operations. In 2008, the law establishing this exception was first applied. The exception must be recommended by the FDIC and Federal Reserve officials, and it must be implemented with the president's approval following consultation with the Treasury secretary.
It was a bank run for the Internet era, despite the photos of customers assembling outside Silicon Valley Bank's Santa Clara offices. Patrick McHenry, the chairman of the House Financial Services Committee, referred to the frantic social media posts the day before the bank failed and the government intervened, pundits and venture capitalists referred to it as the "first Twitter-fueled bank run."
Toward the end of 2008, for example, Wachovia and Washington Mutual banks “experienced heavy deposit outflows and other important liquidity pressures,” Federal Reserve historian Jonathan Rose recounts in a 2015 discussion paper, “Old-Fashioned Deposit Runs.”

Responsibilty setting

One of the major issues that journalists and others are debating is this. Through the news media, federal politicians are mostly expressing the following narratives:

Regulators had the legal authority to adequately regulate banks, especially at the Federal Reserve Bank of San Francisco, which is in charge of banking on the west coast, but they failed to carry out their duties.

Together with other deregulatory actions, a 2018 bill that loosened rules for smaller banks caused Silicon Valley Bank to fail.
Regarding the final argument, finance professor Stafford writes in HBS Working Knowledge, "We actually do not know much about SVB's exposures, since they fell below the Fed's threshold for annual collection of Form FR Y-14A Capital Assessments and Stress Testing."

The Federal Reserve uses regular stress tests to determine whether banks have enough cash on hand or easy access to cash to make it through financial challenges, such as a swarm of depositors demanding their money. Silicon Valley Bank did not have to submit to these tests because it had less than $250 billion in assets.
The central bank utilises fictitious, economically disastrous scenarios as the backbone of the stress tests to see how the balance sheets of banks would fair. The Federal Reserve will evaluate how banks would fare in the event of a 10% unemployment peak and market volatility for the 2023 stress tests.
Prior to the 2018 law, banks with more than $50 billion in assets were required to undergo periodical stress tests, however the Federal Reserve had the authority to impose stricter regulation on specific financial corporations with assets between $100 billion and $250 billion.

According to recent research by Jeanna Smialek of The New York Times, supervisors at the San Francisco Fed have repeatedly warned Silicon Valley Bank about the bank's vulnerabilities since 2021. Smialek says, "But the bank did not patch its vulnerabilities." Silicon Valley Bank was given a more thorough examination by July 2022 and was finally given a governance and controls rating of inadequate.

What happened with risk at midsize banks?

After the deregulation package was enacted into law in May 2018, the Federal Reserve began loosening the Volcker Rule's restrictions. The Volcker Rule prohibited banks from taking part in some potentially risky transactions, such as those involving hedge funds. It was named after former Federal Reserve head Paul Volcker. Small banks, which make up the bulk of FDIC-insured institutions and have assets of less than $10 billion, were condemned by the banking industry for the regulation as being an onerous regulatory burden for

them.as noted by Matthew Richardson, Kermit Schoenholtz, and Lawrence White, professors of business at New York University, in their article "Deregulating Wall Street," which appeared in the October 2018 issue of Annual Review of Financial Economics.
According to a September 2022 study by Arkansas State University professor Dwayne Powell in the Journal of Accounting and Finance, deregulation decreased the costs of complying with regulation for small banks, those with less than $10 billion in assets.

Following the 2018 deregulation, midsize banks—those with $50 billion to $250 billion in assets—also benefited from lower regulatory expenses and better profitability.

However, according to a report published in January 2023 in the Journal of Financial Stability by economists Dimitris Chronopoulosa, John Wilson, and Muhammed Yilmaz, they faced a higher chance of failure as indicated by, among other measures, the amount of cash available to satisfy demand.

But even if the Volcker Rule had remained in effect, it doesn't seem as though it would have stopped the Silicon Valley Bank run in its tracks. As Richardson, Shoenholtz, and White demonstrate in their study, the restriction did not prevent banks from investing in government bonds. One form of instrument that Silicon Valley Bank suffered significant losses on when inflation rose were Treasury bonds.

Future considerations-
Whether the bankruptcy of numerous medium-sized banks would pose a lower danger to the overall economic system than the failure of one giant bank is a topic of interest among academic academics that would be taken into account by federal legislators deciding whether to tighten restrictions. Few dozen institutions are considered "systemically important," or "too big to fail," in the banking industry.
The question at hand is whether the bankruptcy of numerous midsize banks would have fewer detrimental effects on the economy than the failure of a single too-large-to-fail bank. Richardson, Shoenholtz, and White state that "if the answer is no, then it is doubtful that medium-sized banks as a whole should be subject to lower capital requirements or less stringent prudential regulation."
In other words, the authors contend that midsize banks should be governed similarly to large banks if a handful of them are as significant to the economy as a single large bank. In addition, the authors argue that regulatory actions like as requiring stress testing should be laser-focused on lowering systemic risk.

Stress testing must be modified, nevertheless, to reflect current political and economic conditions. In a March 15 Wall Street Journal article, Kris James Mitchener of Santa Clara University and Joseph Mason of Louisiana

State University write that even though Silicon Valley Bank had undergone routine stress tests, the Federal Reserve's most recent stress tests for larger banks did not take interest rate increases into account.

Operational risk is a possible issue for both large and midsize banks, as evidenced by Silicon Valley Bank's officials' disregard for Federal Reserve warnings.

Parameters:

Economic Parameter-

Interest Rate Risk and Mark to market losses-

How rising interest rates impact the bond market.

Investors are still changing their holdings in response to unusual bond market features. To get a sense of how unpredictable the market is, consider what has happened with the typical 10-year U.S. Treasury note since the end of 2021. At the time, it had a yield of just 1.5 percent, which was consistent with a long-term decline in interest rates. Later, in 2022, the yield rose quickly, peaking at over 4% in October, the highest level since April 2010.1 Significant change has occurred since then. After peaking at 4% again in early March 2023, the 10-year Treasury yield most recently dropped significantly in a matter of days as markets responded to news of bank failures.

Changing environment for bond investors

Although short-term events may briefly affect the bond market, interest rates normally follow long-term economic and inflation patterns. Increased inflation typically leads to increased interest rates. The climate for bond investors altered in 2022 as a result of the inflation rate continuing to be high. Permanent supply restrictions, the Fed's big monetary policy shift, and Russia's invasion of Ukraine were all influences in the bond market.

As a result, from early 2021 to mid-2022, inflation spiked. The Consumer Price Index (CPI) reached its highest level since 1981 during the 12-month period ending in June, peaking at a value of 9.1%.2 Since then, it has decreased and was 6.0% for the year that ended in February 2023.

Due to the inverse relationship between bond yields and prices, rising bond prices are detrimental to current bond holders. Current bond prices decrease when yields increase. The law of supply and demand governs this. Bonds with lower yields already on the market lose value when demand for bonds drops because issuers of new bonds are forced to provide greater yields to attract purchasers. Bondholders were severely impacted by this environment in 2022 and early 2023.

Early in March 2023, U.S. Treasury bond yields were at or very close to their highest levels in a long time. But as problems with weak banks became apparent, investor opinion quickly altered. Many investors sought refuge in the more secure world of Treasury bonds. Bond yields significantly decreased as a result.

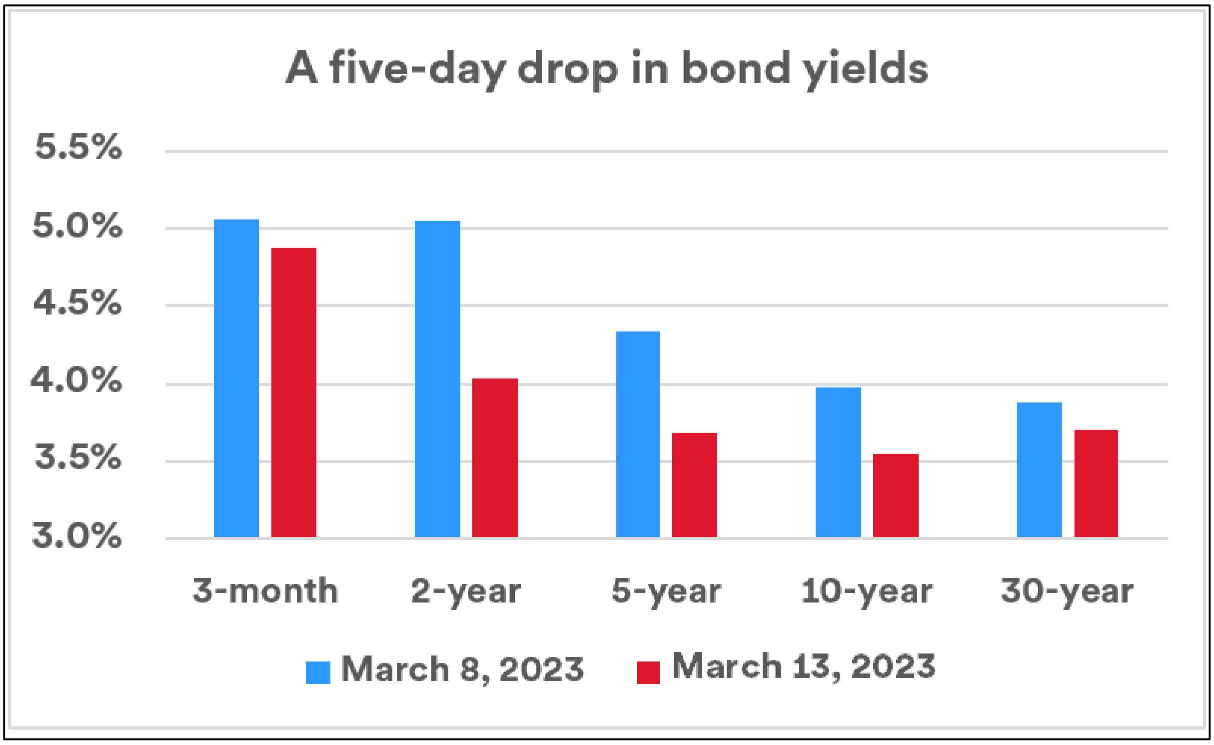


Exhibit2:www.bloomberg.com

Inverted yield curve persists

The peculiar shape of the yield curve, which represents various bond maturities, persists despite recent changes in the interest rate environment. Bonds with longer maturities typically have higher yields, as shown by an upward-sloping yield curve. It logically represents the idea that investors should get a higher return in exchange for the increased risk involved in making loans over a longer length of time. The yields along the maturity spectrum currently reflect an inverted curve, which is unique in the current climate.

U.S. Treasury Yield Curve Comparison

Dec. 31, 2021 and Mar. 13, 2023

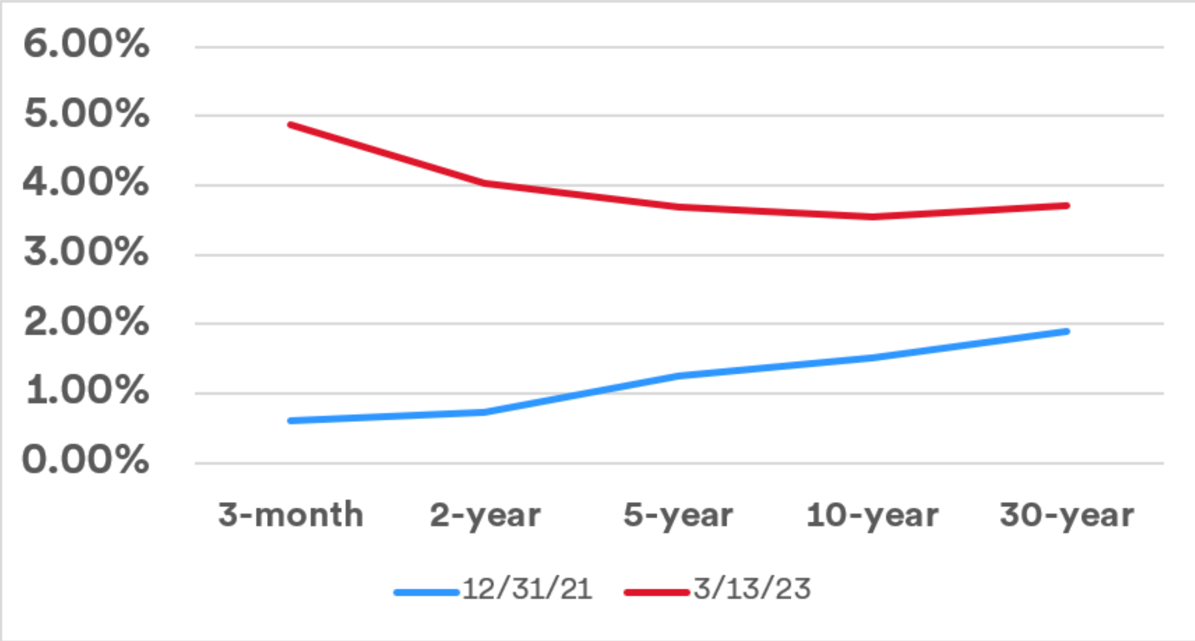


Exhibit 3-www.bloomberg.com

The curve is generally downward sloping today, compared to the normal upward sloping curve. Most notable is the inversion between 3-month and 10-year Treasury yields, which became more pronounced in recent months. A common view of many analysts is that such a yield curve inversion signals increased odds of a recession in the future. "The deeper inversion lately may be a sign that the markets anticipate a more prolonged slowdown in the economy," says Haworth. "For corporate borrowers, the cost of capital is going up, increasing the required rate of return for successful projects or investments."

KEY TAKEAWAYS

These are the risks of holding bonds:

- Risk #1: When interest rates fall, bond prices rise.
- Risk #2: Having to reinvest proceeds at a lower rate than what the funds were previously earning.
- Risk #3: When inflation increases dramatically, bonds can have a negative rate of return.
- Risk #4: Corporate bonds depend on the issuer's ability to repay the debt, so there is always the possibility of default of payment.
- Risk #5: A low corporate credit rating may cause higher interest rates on loans and therefore impact bondholders.
- Risk #6: Low liquidity in some bonds can cause price volatility.

SVB's government bond holdings were chosen to be categorised as long-term assets since they would be kept until maturity and could be recorded at face value. So long as the bonds did not have to be put into the market at current cash value to pay depositors who wanted their money back, billions in U.S. government bonds looked excellent on SVB's books.

Regulatory Parameter

The Dodd-Frank Act:

Act of Dodd-Frank In response to the acts of the financial sector that contributed to the financial crisis of 2007–2008, the U.S. Congress approved the Wall Street Reform and Consumer Protection Act. It attempted to increase the safety of the American financial system for consumers and taxpayers.

KEY TAKEAWAYS

- Prior to 2007, there were little restrictions, which led to lending practises that were extremely risky. The Dodd-Frank Act focused on financial system sectors that were thought to have contributed to the 2007–2008 financial crisis. Eventually, this housing market bubble burst, triggering the world financial crisis, the need for government bailouts of financial institutions, and the recession.
- Banks, insurance companies, investment banking businesses, mortgage lenders, and credit rating agencies were among the organisations blamed for the financial crisis of 2007–2008.
- Critics of the bill contend that the regulatory constraints it imposes may reduce American businesses' ability to compete with those of other countries.
- A new law that Congress passed in 2018 relaxed some of Dodd-Frank's regulations.

Dodd-Frank Act A significant piece of financial reform legislation, the Wall Street Reform and Consumer Protection Act, was passed in 2010 by the Obama administration.

The Dodd-Frank Act, also referred to as Dodd-Frank, created a number of new government organisations tasked with monitoring the law's many provisions and, consequently, various facets of the financial sector.

The financial crisis of 2007–2008 is arguably the biggest economic disaster to hit the nation (and the world) since the 1929 Wall Street crash. In general, it was brought on by actions motivated by greed and insufficient regulation of financial institutions.

Due to the loosening of regulations controlling the financial sector before to 2007, banking institutions in the United States were free to lend money in ways that were riskier than ever before. Particularly, the housing sector saw enormous, unsustainable expansion.

The banking industry and international stock markets collapsed as a result of the bubble bust. It led to the worst global slump in decades.

Dodd-Frank was created to ensure that similar situations never happen again.

Dodd-Frank Act a repetition of the financial crisis that occurred in 2007–2008 was prevented by the Wall Street Reform and Consumer Protection Act.
Dodd-Frank Act components The following are some of the law's most important clauses and how they operate:

Financial stability-

According to the Dodd-Frank Act, the Financial soundness Oversight Council and the Orderly Liquidation Authority are in charge of monitoring the financial soundness of major financial institutions. The failure of these companies, which are seen as being "too big to fail," might have a significant negative impact on the American economy. The law also provides for liquidations and restructurings through the Orderly Liquidation Fund.
In order to avoid using tax funds to support financial firms that have been placed under receivership, this fund was established to assist with their liquidation. The council has the authority to dissolve banks that it determines pose a systemic danger and are regarded to be overly large. It may also force banks to increase their reserve requirements. The new Federal Insurance Office was charged, like the previous one, with locating and

Consumer Financial Protection Bureau

The Consumer Financial Protection Bureau (CFPB), which was established by the Dodd-Frank Act, was entrusted with preventing predatory mortgage lending and supporting customers in comprehending a mortgage's terms before signing. This was in line with the commonly held perception that the subprime mortgage industry was the main cause of the crisis in 2007–2008. The CFPB discourages mortgage brokers from obtaining bigger commissions when completing loans with more expensive fees and/or interest rates.

Volcker Rule

It restricts how banks can invest and discourages speculative trading as well as proprietary trading. Working with banks is not permitted for hedge funds and private equity companies due to their reputation as being too hazardous. To avoid conflicts of interest, financial institutions are not permitted to trade proprietarily without having enough "skin in the game." The Volcker Rule is obviously opposing the Glass-Steagall Act of 1933, which was the first to recognise the hazards involved in financial institutions providing both commercial and investment banking services at the same time. A regulation of derivatives, particularly credit default swaps, which were mainly attributed to the financial crisis of 2007–2008, is also included in the legislation.
Regulatory body for securities and exchanges
Credit Ratings Office
Dodd-Frank established the SEC Office of Credit Ratings in response to claims that credit rating agencies had given deceptively favourable investment ratings in the years before the financial crisis. The office's duty is to

ensure that the organisations it examines provide accurate and reliable credit ratings for businesses, governments, and other bodies.

Whistleblower Program

Dodd-Frank improved and enlarged the whistleblower programme established by the Sarbanes-Oxley Act (SOX) of 2002. It established a mandatory bounty programme under which whistleblowers can receive 10% to 30% of the proceeds from a litigation settlement, expanded the definition of a covered employee to include employees of a company's subsidiaries and affiliates, and extended the statute of limitations for whistleblowers to file a claim against their employer from 90 to 180 days after the discovery of a violation.

Consumer Protection, Regulatory Relief, and Economic Growth Act

Donald Trump promised to abolish Dodd-Frank when he was elected president in 2016. The Economic Growth, Regulatory Relief, and Consumer Protection Act, which substantially scaled back the Dodd-Frank Act, was passed by the US Congress on the side of detractors.

It was made a law on May 24, 2018, by then-President Trump.

Here are some of the laws' provisions and some of the areas where earlier rules were reduced as a result of them:

1. The new law relaxed the Dodd-Frank restrictions for small and regional banks by increasing the asset threshold for the implementation of prudential norms, stress test requirements, and mandated risk committees.
2. The new regulation reduced capital needs and leverage ratios for organisations that hold client assets in trust but do not engage in lending or typical banking activities.
3. Small bankers were given lenient reporting and capital requirements, while the Volcker Rule's requirements were waived for firms with assets under $10 billion.
4. The law required the three major credit reporting agencies to provide free access for anyone to freeze their credit reports in order to combat fraud.

Relevance of DODD FRANK ACT

With the passage of the Economic Growth, Regulatory Relief, and Consumer Protection Act in 2018, several limitations imposed by the Dodd-Frank Act were lifted. Under the Dodd-Frank laws, banks with assets of less than $50 billion were subject to stricter capital and liquidity requirements. The new law in 2018 increased this asset threshold to $250 billion. This modification resulted in the regulations for smaller and medium-sized banks being eased. Observers argued that a significant cause in Silicon Valley Bank's failure in March 2023 was the absence of governmental regulation of such large financial companies.

Loosening the Volcker Rule

In 2020, the Federal Deposit Insurance Corporation (FDIC) loosened the prohibitions of the Volcker Rule. Under the revised legislation, banks were given more leeway in terms of capital requirements and were also permitted to engage in venture capital firms.

Although the purpose of this law is clear, it has been one of the most difficult post-financial crisis regulations for regulators and banking companies to put into practise, according to FDIC Chairman Jelena McWilliams. McWilliams also stated that the original rule's limitations were "ineffective" and "overly restrictive."

Martin Gruenberg, a Democrat and member of the FDIC board, voiced opposition to the Volcker rule amendments. According to Gruenberg, the modifications leave the regulation "severely weakened" and "risks repeating the mistakes" of the 2008 financial crisis.

Regulatory Parameter

Bank Stress Test

To determine if a bank has enough capital to withstand a bad economic shock, a study known as a "bank stress test" is conducted under fake circumstances. These scenarios include unfavourable conditions like a severe recession or a financial market collapse..The Federal Reserve and the banks' own risk management teams in the United States conduct internal stress tests on all banks with $50 billion or more in assets.

Following the 2008 financial crisis, stress tests for banks were frequently used. It was concerning that many banks and financial institutions lacked adequate capital. The crisis revealed their vulnerability to stock market and economic downturns. In order to concentrate on the sufficiency of capital reserves and internal capital management strategies, federal and financial authorities later significantly strengthened regulatory reporting requirements. The solvency of banks must be routinely evaluated and documented.

Key takeaways

1)A bank stress test analyses a bank's capital to see if it is sufficient to withstand an economic or financial crisis.

2)Following the 2008 financial crisis, numerous banks implemented bank stress tests.

3. All banks of a certain size are required by federal and international financial regulators to regularly perform stress tests and report the findings.

4)Banks that fail their stress tests are required to take action to maintain or increase their capital buffers.

How a Bank Stress Test Works

To assess the financial viability of banks during a crisis, stress tests focus on a few key areas, such as credit risk, market risk, and liquidity risk. A number of standards have been developed by the Federal Reserve and the International Monetary Fund (IMF) and are used when hypothetical situations are simulated by computers.

About 70% of the banking institutions in the eurozone are subject to severe stress testing regulations set by the European Central Bank (ECB). Semi-annual company-run stress tests are performed, and there are strict reporting deadlines.

A predefined set of scenarios that banks might encounter is included in every stress test. A fictitious scenario can involve a specific catastrophe in a specific location, such as a storm in the Caribbean or a conflict in Northern Africa. Also possible are simultaneous occurrences of a 15% stock market decline, a 30% decline in housing prices, and a 10% jobless rate. The expected financials for the following nine quarters might then be used by banks to assess their capital position in light of the current financial crisis.

There are historical scenarios as well, which are based on actual historical financial events. The most notable examples include the burst of the tech bubble in 2000, the collapse of the subprime mortgage market in 2007, and the coronavirus pandemic in 2020. Others include the 1987 stock market disaster, the late 1990s Asian financial crisis, and the 2010–2012 European sovereign debt crisis.

Objective-

1)if the bank has enough capital to manage itself

2)must be disclosed in public

3)to check how bank responds to financial or economic catastrophe

Prime objective to stop bank run situation or to keep a strict vigil over undercapitalized bank to go in default.

In 2018 due to changes in Dodd frank act ,Mid size banks no longer required to perform the stress test. As the indicator ascertain the performance of bank and guides the proactive action ,lack of alertness and losing of regulatory factor also contributed to SVB Crises

Findings

1)SVB Bank on the run has been due to various economic factors at work,like rising interest rate making the losses on the mark to market portfolios

2)Less efficiency at the SVB Bank level for risk assessment. SVB did not properly manage the interest rate risk related to the securities it owned or provide efficient methods, models, or criteria for measuring interest rate risk.

3)Investor's in panic due to wide information spread

4)Faced credit risk as the rating were turned to negative for SVB bank

5)unprecedented withdrawal caused FDIC to took over

6)The regulatory ease for mid size bank in 2018 also acted as a factor contributing for such crises

7)Bank's were not required to perform Stress test -making SVB to avoid the immediate risk it was facing

8)The bank are allowed to fund venture capitalist making it risker

9)The bank was typical case of funding to start up and the venture capitalist

10)SVB had invested large amount of money in securities at a higher rate of interest faced difficulty in liquidating the existing Bond portfolio

11) In addition, although having a narrow focus, SVB's business model mishandled the liquidity risks related to liabilities, the majority of which were made up of uninsured deposits from venture capital firms and the technology sector.

12)Fed rates increased from zero in March 22 to 5.25%,the highest in 17 years to beat inflation contributed to such crises

13)Global economic environment also contributing to such changes

14)Regulatory framework loosening adds stress signals for financial markets

15)Interest rate and inflation hike adds pressure on financial market participant

16)Investor panic triggered causing liquidity crunch.

17)If mid size banks are part of such stress test the SVB kind of failures can be avoided

Recommendation

1)Changes in regulatory framework causing the crises for SVB and signature bank.
Stringent regulation to be a part of Banking for mid size bank to protect investor's interest and restore the faith in Banking system
2)Interest rate risk was not assessed and managed properly.Need a better assessment to overcome liquidity and interest rate risk
3)Stress test to be also conducted for mid size bank like Silicon valley bank to mitigate the risk and proactive management of banks by regulator
4)strict capital requirement norms for Banks
5)Dodd frank act ensured strict rules for compliance .Risk analysis must be done to compare the cost of loading mid size bank for doing extra compliances v/s protecting the interest of account holders.

Limitation

1)The study considers Parameter of Financial stability but in particular economic and regulatory to make an assessment
2)The Ban run case was witnessed by 3 banks due to un precedent interest rise that doesnot happen in normal course of time
3)Internal factors affecting the performance of entity under study-Silicon valley bank have been ignored

Key highlights of US Financial market's stability parameter post SVB Crises-

1)To safeguard bank depositors and promote the ongoing flow of credit to consumers and companies, the Federal Deposit Insurance Corporation (FDIC) and the Department of the Treasury took strong action. Since March, financial markets have returned to normal, and deposit flows have stabilised thanks to these measures and the resilience of the banking and financial sector, while some banks that had seen significant deposit outflows are still under stress. Going forward, these events can have an impact on credit conditions.
2)Yields on Treasury securities declined in March amid heightened financial market volatility.
3)Due to concerns about certain banks' heavy dependence on uninsured deposits, declining fair values of long-duration fixed-rate assets as a result of higher interest rates, and par risk management, market investors revaluated the health of these institutions.

4)Funding risks. Increased financing challenges were experienced by some banks, especially those that relied largely on uninsured deposits and were exposed to significant interest rate risk. These banks included SVB, Signature Bank, and First Republic Bank.

5)Following the failures of SVB and Signature Bank, equity prices in the banking sector decreased to levels that were significantly below those that were in effect at the time of the November report. Although there was a lot of ups and downs, broad equity indices were slightly higher than they were in the prior report.

6)As a result of the financial crisis in the banking industry, market liquidity conditions became even more precarious. Numerous other markets' liquidity also declined in March. Even while the bid-ask spreads on corporate bonds expanded, they were still far below epidemic levels, especially for investment-grade bank instruments.

7)Increasing interest rates have a variety of effects on banks. Higher interest rates on newly acquired fixed-rate assets and assets with floating rates increase the banks' interest income. Bank funding costs rise as well, but typically much more gradually than market rates. Because the rates they earn on their assets outperform their funding costs as a result, most banks' net interest margins normally rise in a rising rate environment.

8) The Federal Reserve, the FDIC, and the U.S. Department of Treasury acted swiftly to safeguard bank depositors and keep credit flowing to people and companies. By reducing stress across the financial system, these actions assisted in maintaining financial stability and decreased the effects on firms, consumers, taxpayers, and the overall economy.

9) The Deposit Insurance Fund, which will be refilled by special taxes on banks as required by law, will pay for the losses resulting from these acts, which the FDIC eventually calculated to be $22.05 billion. Instead of the taxpayers, these losses will be compensated by the Deposit Insurance Fund.

10)Persistent strains on the financial sector may cause a further contraction in credit, which would cause a significant slowdown in economic activity.

11) If inflationary pressures prove to be more persistent than anticipated, tighter-than-anticipated monetary policy might lead to abrupt increases in longer-term interest rates and impede global economic growth. Governments, people, and businesses that operate abroad, particularly those in emerging market economies (EMEs), may find it more challenging to pay off their debt as a result of these changes.

Conclusion

1. Although the situation of Bank on the run normalized by the FDIC and Fed ,steps to be taken to avoid such crises in future
2. Economic and regulatory factors have contributed to SVB Crises however the interest rate rise which was exceptional can be regarded as prime factor.
3. Regulatory looseing out also become a factor for such crises.
4. Market liquidity still is low in some bond portfolio
5. Stringent capital requirement and risk assessment parameter should be implement like stress test to mitigate the risk and safeguard interest of investor
6. Recessionary conditions due to monetary tightening interest rate high and inflationary conditions are there
7. Ease in dodd frank act also contributed to crises
8. SVB is the specialized bank funding to Tech startup and invest in venture capital faced acute liquidity crises.
9. If interest rate rise continue such incidents can also be repeated as debt service capacity will be reduced for corporate and government.
10. Yields on Treasury securities declined in March amid heightened financial market volatility
11. ongoing banking stress can lead to further contraction in credit signalling recessionary nature.

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