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Falling Fortunes: Dissecting the Downfall of Silicon Valley Bank

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1. Abstract

Silicon Valley Bank, a prominent financial institution specialising in serving the needs of startups in the United States, underwent a remarkable journey of ascent and downfall amidst the economic disruptions triggered by the COVID-19 pandemic and subsequent Federal Reserve policies. Following the outbreak of the pandemic, the Federal Reserve swiftly implemented quantitative easing measures to bolster the economy, resulting in a surge of investments and funding for startups. This surge translated into a significant influx of deposits within Silicon Valley Bank.

However, the bank's investment strategy exhibited vulnerabilities, notably with a substantial allocation of $91 billion into Held to Maturity securities offering extended maturity yields. As inflationary pressures mounted due to the quantitative easing measures and geopolitical tensions escalated, the Federal Reserve pivoted towards quantitative tightening, causing US bond yields to rise and consequently diminishing the value of Silicon Valley Bank's asset portfolio.

In response to the quantitative tightening, startups began withdrawing their deposits from the bank, prompting the need to liquidate Held to Maturity securities at a loss to meet liquidity demands. The revelation of these financial challenges precipitated a sharp decline in the bank's share price, raising pertinent questions about risk management practices. Notably, the absence of a serving Chief Risk Officer for an extended period compounded concerns regarding risk mismanagement. Furthermore, the bank's over-reliance on a single clientele group underscored the inherent risks associated with a lack of diversification in the banking sector.

This research paper meticulously examines the intricate interplay of economic forces, Federal Reserve policies, and internal risk management practices that contributed to the downfall of Silicon Valley Bank. Through a comprehensive analysis of these factors, it elucidates the importance of robust risk management frameworks, diversification strategies, and prudent investment decisions in safeguarding financial institutions against volatility and systemic risks in dynamic market environments.

2. Introduction

Silicon Valley Bank was a leading bank in the US with its established reputation and laurels. However, in 2023, The unexpected collapse of the Silicon Valley Bank shocked all the investors, economists and experts across the globe. Over the years, with its increasing client base, share value, profits and reputation, SIlicon Valley Bank had been seen as a bright spot for investment. Just 5 days before its fall, it was named as one of the best banks in the US by Forbes. A lot of questions have been raised on the sudden collapse.

In 2021, the market capitalization of Silicon Valley Bank was $39.84 billion and got exploding deposits from its depositors. But all of a sudden, the market capitalization of Silicon Valley Bank dropped to $6.27 billion 2023. Immediately after the collapse of Silvergate Bank in March 2023, the Silicon Valley Bank collapsed, followed by Signature Bank and First Republic Bank. This amplified the stress in the banking industry. The consecutive failures of banks in the US have escalated tensions in the market, not just in the US, but all across the world.
This raises thousands of questions regarding the stability and credibility of the current banking system. The banking system stands to be an integral part of the economic system the modern world

relies on, making it crucial to protect the banking sector. To answer these important questions, it is necessary to understand the reason for the collapse of the Silicon Valley Bank.

Looking at the history, there were 566 bank failures from 2001 to 2023, being significantly contributed by the 2008 financial crisis, after which the bank failures have escalated. Over this course of time, banks have failed due to multiple reasons.For instance, higher proportion of Non-performing assets or Bad loans, which can not be easily liquidated by the bank.

Furthermore, imprecise investment decisions, which often causes the value of investment, made by the bank, to depreciate as seen in the case of Silicon Valley Bank.

Financial recessions also contribute largely to the bank failures. In today's date, the 2008 financial crisis and Covid-19 recession are significant to study bank failures. In the 2008 financial crisis, a sudden fall in housing prices led to borrowers being unable to repay loans causing an economic downturn. Whereas, in the COVID-19 recession, the lockdown imposed interrupted the money circulation in the market, resulting in a recession world-wide.

3. Literature Review

The collapse of Silicon Valley Bank (SVB) in 2023 marked one of the most significant financial events of the decade, drawing parallels to the 2008 financial crisis. This literature review explores the broader contextual frameworks related to bank failures, risk management in banking, regulatory oversight, and market behaviours that may have contributed to the downfall of Silicon Valley Bank. The review synthesises existing studies, offering insight into the causes and implications of bank failures, with a specific focus on the role of liquidity crises, asset-liability management, and regulatory responses.

Bank Failures and Financial Instability:

The literature on bank failures provides a comprehensive understanding of how poor asset quality, liquidity mismanagement, and systemic shocks can lead to the collapse of financial institutions. According to Gorton (2012), financial instability often arises from liquidity crises when banks are unable to meet short-term obligations due to a mismatch between their assets and liabilities. This mismatch became a critical factor in the downfall of SVB, where the bank's long-term assets, particularly government bonds, lost value due to rising interest rates, creating a liquidity crunch.

Empirical studies on past bank failures, including those from the 2008 financial crisis, show that inadequate risk management can exacerbate the effects of economic downturns. Allen and Gale (2007) argue that banks are highly vulnerable to liquidity risks during periods of financial stress, as evidenced by the sharp increase in deposit withdrawals during crises. SVB's inability to effectively manage the liquidity risk inherent in its balance sheet contributed to its rapid demise, mirroring similar cases in previous financial crises.

Risk Management in Banking:

Risk management is a central theme in banking literature, emphasising the importance of asset-liability management, capital adequacy, and stress testing. Basel III regulations, introduced in response to the 2008 financial crisis, sought to strengthen bank resilience by mandating higher capital requirements and better liquidity coverage ratios (BCBS, 2011). However, as noted by Adrian and Liang (2018), the effectiveness of these regulations depends heavily on their implementation and the ability of banks to anticipate future risks. In the case of SVB, its heavy exposure to long-term securities and reliance on a concentrated depositor base limited its ability to manage interest rate risk effectively.

A growing body of literature also examines the role of governance and internal controls in risk management. According to Fahlenbrach and Stulz (2011), weak governance structures often lead to poor decision-making, particularly in areas such as investment strategy and risk oversight. SVB's concentration in the tech sector and its failure to diversify its depositor base or asset portfolio may have been a result of such governance deficiencies. The rapid deterioration of SVB's financial health highlights the failure of traditional risk management practices, particularly in the context of a rapidly evolving macroeconomic environment (DeYoung, Peng, & Yan, 2013).

Interest Rate Sensitivity and Liquidity Management:

Interest rate risk is another critical factor in understanding SVB's collapse. Several studies point to the sensitivity of bank assets to interest rate fluctuations, particularly in the context of large holdings of long-term securities. According to Demirgüç-Kunt and Detragiache (1998), banks that are overly reliant on fixed-income assets are particularly vulnerable to interest rate shocks. SVB's investment strategy, which involved a significant portion of its assets in long-term government securities, made it susceptible to the sharp rise in interest rates by the Federal Reserve. As interest rates increased, the market value of these assets declined, forcing SVB to sell them at a loss to meet liquidity demands.

Additionally, literature on liquidity management emphasises the importance of maintaining a diversified funding base to withstand periods of financial stress. Iyer and Puri (2012) discuss the concept of "liquidity runs" when depositors, fearing a bank's solvency, begin withdrawing funds en masse. This was evident in SVB's case, where its concentrated client base—comprising largely tech companies and venture capital firms—amplified the speed and severity of the bank run. Liquidity risk management, therefore, requires not only effective asset-liability matching but also a broad and stable depositor base.

Regulatory Oversight and Banking Crises:

Regulatory frameworks play a critical role in maintaining banking sector stability, with a particular focus on capital adequacy, liquidity buffers, and risk exposure limits. Literature on the regulatory environment surrounding the financial sector often points to the importance of timely regulatory interventions to prevent banking crises (Barth, Caprio, & Levine, 2013). The failure of SVB has reignited debates on the adequacy of regulatory oversight in preventing bank collapses, particularly in mid-sized and specialised banks.

In the aftermath of the 2008 financial crisis, the Dodd-Frank Act introduced a range of reforms aimed at curbing excessive risk-taking in the banking sector (Coffee, 2011). However, certain provisions of the act, particularly those concerning smaller banks, were rolled back in subsequent years. This regulatory relaxation may have contributed to SVB's risk-taking behaviour, as the bank was not subjected to the same stringent oversight as larger systemically important financial institutions (SIFIs). According to Acharya, Cooley, Richardson, and Walter (2010), such regulatory gaps can increase moral hazard, where banks may take on excessive risks, assuming they will be bailed out in case of failure.

Moreover, the literature on macroprudential regulation highlights the need for a proactive approach to identifying systemic risks before they materialise (Claessens, Ghosh, & Mihet, 2013). In SVB's case, regulatory authorities were criticised for failing to anticipate the rapid deterioration of the bank's financial position, particularly given the known vulnerabilities associated with interest rate hikes and concentrated depositor bases. This points to broader questions about the adequacy of stress tests and other preventive measures in identifying banks that are vulnerable to sudden economic shocks.

Market Behavior and Bank Runs:

The behavioural aspect of financial markets plays a significant role in bank runs and the rapid escalation of financial crises. According to Diamond and Dybvig (1983), bank runs are often fuelled by panic rather than rational economic considerations, creating self-fulfilling prophecies that lead to a collapse. This framework can be applied to the case of SVB, where the speed and magnitude of the bank run were amplified by market rumours, social media, and digital communication platforms, resulting in a sudden outflow of deposits.

Scholars such as Kelly and O'Grada (2000) have also explored the contagion effects of bank runs, where the failure of one institution can trigger panic in other parts of the financial system. The run on SVB not only destabilized the bank itself but also sent shockwaves throughout the tech and venture capital sectors, raising concerns about the broader stability of specialized banks. These contagion effects, exacerbated by modern communication tools, underscore the importance of managing public perceptions and market confidence during times of financial instability.

4. Methodology

This research paper adopts a secondary data analysis approach to examine the financial collapse of Silicon Valley Bank (SVB). The researcher has relied on a diverse range of publicly accessible sources, including news articles, industry reports, financial blogs, and analytical commentary. These secondary data sources serve as the foundation for understanding the complex set of factors that led to the bank's downfall, offering insights into both external market forces and internal management decisions.

Given the scope and nature of the research, secondary data was deemed the most appropriate for several reasons. First, the data available in financial news outlets, such as The Wall Street Journal, Bloomberg, Reuters, and Financial Times, as well as reputable blogs in the finance sector, provide a robust and timely account of SVB's financial condition, strategic decisions, and regulatory environment. These sources are not only well-regarded in the field but also offer a wealth of expert opinions, market analysis, and commentary from insiders, which is crucial for dissecting the bank's failure in a nuanced manner.

The researcher conducted a comprehensive review of these sources to identify key themes surrounding SVB's business model, investment strategies, liquidity management, and the broader macroeconomic conditions that may have contributed to its collapse. A systematic approach was taken to select the data: articles and reports were chosen based on their relevance to the case, depth of analysis, and publication by credible institutions with a strong track record in financial reporting. In this study, thematic analysis was employed as the primary analysis technique. This approach allowed the researcher to identify, analyze, and report patterns (themes) within the data, facilitating a deeper understanding of the underlying issues contributing to SVB's financial crash. By organizing the data into thematic categories, the researcher was able to present a clear narrative that highlights the interconnected factors influencing the bank's operational decisions and market performance.

Secondary data analysis also allowed the researcher to compare multiple perspectives on SVB's financial crisis. For instance, while some sources focused on the bank's over-reliance on long-term investments in a rising interest rate environment, others highlighted regulatory failures and inadequate risk management as contributing factors. This comparative analysis adds richness to the findings, offering a more well-rounded narrative of the events leading up to the bank's failure.

To ensure the reliability and accuracy of the findings, the researcher carefully cross-referenced information from different sources, confirming key events and figures reported across various platforms. Additionally, the secondary data provided the opportunity to trace the chronology of

events, from early warning signs in SVB's portfolio structure to the eventual market reaction and regulatory interventions. The use of blogs and informal commentary was balanced with more formal reports to ensure that the data remained objective and credible.

Through this method of secondary data analysis and the application of thematic analysis, the researcher was able to construct a comprehensive understanding of the multiple factors that precipitated the downfall of Silicon Valley Bank. The findings are presented in subsequent sections of the paper, where the insights derived from the collected data are critically analyzed and contextualized within the broader financial environment at the time.

This methodology, relying solely on secondary data, provides the advantage of leveraging extensive pre-existing information and expert opinions while maintaining a critical perspective on the possible biases and limitations of the sources used.

5. Brief about Silicon Valley Bank (SVB)

Silicon Valley Bank, was a primary subsidiary bank of Silicon Valley Bancshares, was founded in 1983 in Santa Clara, California, United States of America. SVB was a commercial bank which held specialisation in financing innovative startups, particularly the technological and life science companies. In addition to this, SVB is also known for wealth management, financial adviser, a networker and a foreign exchange risk hedger. SVB was one of the major financing banks for tech startups because other banks did not support many of these startup companies claiming them to have high risks. As the silicon valley multiplied, SVB also witnessed its rise. SVB has supported over 30,000 companies such as Shopify, Pivot Energy and Insight Partners.

SVB launched its IPO in 1988 and over the years, SVB acquired Leerink Partners in 2019, WestRiver Group's Debt Investment Business in 2020, Boston private in 2021. Its services expanded to the US, Asia and Europe supporting companies who aspire to bring sustainable change in the world. By the end of 1983, SVB owned assets worth about $18 million which markedly increased to $212 billion before its collapse. As of Q4 2022, SVB lends total loans of about $75 billion. Though this growth was not linear, the total assets owned by SVB shot up during the COVID-19 pandemic when the tech-startups received noteworthy funds from venture capitalists.

In 2011, SVB won the Bank of the year award followed by the Service Provider of the Year award at investor All Star Awards in 2013, as it offered lucrative policy rates, loans and cash management services.

6. The brief about US economy

The Covid-19 pandemic forced several countries, including the US, to impose a lockdown and brought the money circulation to a sudden halt. This caused many countries to have economic crises. For instance, the Indian GDP contracted by 24.4% from April-June 2019 compared to April-June 2020. The Covid-19 slowed down the economic growth in China.

The US Real GDP fell drastically in the Q1 in 2020 fell by 4.6%, sharply declining further in Q2 in 2020 to a staggering 29.9%. In addition, the Covid-19 pandemic caused the unemployment rate to tremendously surge to 13.0% in Q2 2020 from 3.9% in 2019. The US stock market was also negatively affected from the Covid-19 pandemic. The S&P 500 index is told to be the benchmark of the overall performance of the stock market. Between the peak in February and low point in March 2020, the S&P 500 index fell more than 34%. The shareholders returns in the majority industries in the US sharply declined in 2020.

The US government took measures to recover the US economy. For instance, the CoronaVirus Tax relief plan to make it financially easier for the US citizens to live during the Covid-19 Pandemic. The tax relief gave Child Tax credit up to $3600 where a taxpayer gets tax reliefs based on the children dependent on him or her. Further, the Internal Revenue Service (IRS) also issued first, second and third Economic Impact Payment, providing financial aid to the eligible people. The IRS also provided employer tax credits to several businesses affected by the Covid-19 pandemic.

Furthermore, considering the declining real GDP, the Federal reserve lowered the policy rate in Q2 2020 to 0.06% from 1.26% in Q1 2020. This made the loans cheaper to the people in the USA to be borrowed, increasing the financial liquidity in the market. As a result, the real GDP grew at 35.3% in Q3 2020. During the Covid-19 pandemic, there was a need for financial liquidity in the market, in order to recover the economy. The Federal Reserve kept the policy rate low at 0.09% in Q4 2020; 0.08% in 2021 Q1; 0.07% in 2021 Q2; 0.09% in Q3; 0.08% in 2021 Q4 and 2022 Q1.

In addition, the US Federal reserve resorted to quantitative easing to infuse liquidity in the financial markets, for a faster recovery into the economy. On 15th March 2020, the Federal reserve announced that it would purchase Treasury securities at least of worth $500 billion and government-guaranteed mortgage-backed securities at least of worth $200 billion. From June 2020, the Federal reserve aimed to buy at least Treasuries worth $80 billion and residential and commercial mortgage-backed securities of worth $40 billion. As the federal reserve purchased these securities and treasuries from the market, thereby infusing more money in the financial markets. This led to the forex reserves escalating from about $4 trillion to about $9 trillion at the start of 2022.

Moreover, it further offered loans at low policy rates to the primary dealers — firms that directly purchase government securities from the government and resell them, thereby making a market for the government — to ensure their smooth functioning.

These measures helped the US government and the Federal reserve to rebound the economy quickly. As a result, the Real GDP bounced back as it spiked by 35.3% in Q3 2020 and 3.9% in Q4 2020. The unemployment rate also eased to 6.7% in Q3 2020. The unemployment rate declined to 4.8% in September 2021 and continued to decline further as it was before the pandemic, indicating a quick recovery.

However, these measures had their negative effects as well. As of Q3 2020, the debt on the US government rose to $26.9 trillion, an increase of $4.2 trillion from the previous year, largely contributed by the US government's response to the Covid-19. From the total debt, the public holds the majority of the debt, 78%, while 22% is the intragovernmental debt holdings.
Since these measures cause money to be circulated in the market, it further gives rise to inflation. The median Consumer Price Index for October 2020 was 1.4% which surged to 5.4% in October 2021. The inflation further peaked to 7.0% in December 2021. The median Consumer Price Index continued to be high at about 8% until June 2022. On 27th July 2022, the Federal reserve hiked up the policy rate to 2.25% - 2.5%, further to 3.00% - 3.25% on 21 September 2022. As a result, the median Consumer Price Index started to decline to 8.5% in July and 6.5% in December 2022.

uring the Covid-19 pandemic, over 5 million startups were registered in the US alone. This figure is not usual for any country. The low policy rate led to loans being cheaper to people in the USA. As a result, entrepreneurs and investors were able to borrow more loans, due to which, startups had more cash leading to a lot of startups being launched during the Covid-19 pandemic.

7. Aftermath of Russia-Ukraine war

Not only did the low policy rate cause inflation in the US, the Russia-Ukraine war also largely contributed to the inflation. Russia, being a top crude oil and refined oil products exporters, exports about 8 million barrels of oil each day. Being a part of NATO, the US issued sanctions on Russia, dropping their imports from Russia, including oil imports.

This led to shortage of oil in the USA leading to sharp price rise. According to the U.S. Information and Administration, Brent oil prices in the USA shot up from $78/b, on 3rd Jan 2023, to more than $120/b while WTI oil price in USA shot up from $76/b, on 3rd Jan 2023, to more than $120/b. This sharp rise in oil price rise severely contributed to rise in inflation in America. The inflation rate rose from 7.5% in Jan 2022 to 9.1% in June 2022. This caused the Federal reserve to increase the policy rate to curb the inflation rate.

Furthermore, in order to curb the inflation, the Federal reserve opted for quantitative tightening. The Federal reserve paused investing up to $30 billion and $17.5 in maturing Treasury securities and Mortgage-backed-securities every month respectively in June 2022. These caps were further scheduled to increase $60 billion in Treasury securities and $35 billion Mortgage-backed-securities in September 2022. As of April 2022, the Federal reserve had reserves at about $9 trillion, which declined to about $7.7 trillion in early December 2023, showing a sharp decline of 13.7% from its peak. This was majorly because the Federal reserve sold the Treasures and Mortgage-backed securities into the market.

8. Influx in Deposits

The low interest rates from Q2 2020 to Q1 2022 made debt cheaper to be borrowed which caused increased financial liquidity in the US market. The start-ups and angel investors borrowed more cash from commercial banks to invest in the start-ups. Since SVB specialised in banking for start-ups, the cash borrowed by the start-ups was deposited in SVB, causing an influx in deposits of SVB.

The bank had insured deposits worth $61.76 billion in 2020. These insured deposits further increased by 3 times to about $189.2 billion in 2023. The SVB derived its revenue majorly through its US clients. The bank's total assets was about $71 billion in 2019 which rapidly increased to about $116 billion in 2020. The assets further almost doubled to nearly 211 billion in 2021 and 212 billion in 2022. ‘

The high interest rates in 2022 and strong growth loan led to an 41% increase in annual net interest income in 2022. SVB's CET 1 risk-based capital ratio of 12.05% and 15.26% and TIER 1 risk-based capital ratio of 15.40% and 15.26% indicated strong capital and classified as "well-capitalised" as per the banking regulations.

9. The mis-investment & start-up winter

Table-1

(Dollars in millions)	December 31, 2022	2021
AFS securities, at fair value:		
U.S. Treasury securities	$ 16,135	$ 15,850
U.S. agency debentures	101	196
Foreign government debt securities	1,088	61
Residential MBS:		
Agency-issued MBS	6,603	8,589
Agency-issued CMO—fixed rate	678	982
Agency-issued CMBS	1,464	1,543
Total AFS securities	26,069	27,221
HTM securities, at net carry value:		
U.S. agency debentures	486	609
Residential MBS:		
Agency-issued MBS	57,705	64,439
Agency-issued CMO—fixed rate	10,461	10,226
Agency-issued CMO—variable rate	79	100
Agency-issued CMBS	14,471	14,959
Municipal bonds and notes	7,416	7,156
Corporate bonds	703	706
Total HTM securities	91,321	98,195
Non-marketable and other equity securities:		
Non-marketable securities (fair value accounting):		
Consolidated venture capital and private equity fund investments	147	130
Unconsolidated venture capital and private equity fund investments	110	208
Other investments without a readily determinable fair value	183	164
Other equity securities in public companies (fair value accounting)	32	117
Non-marketable securities (equity method accounting):		
Venture capital and private equity fund investments	605	671
Debt funds	5	5
Other investments	276	294
Investments in qualified affordable housing projects, net	1,306	954
Total non-marketable and other equity securities	2,664	2,543
Total investment securities	$ 120,054	$ 127,959

The table 1 presents the investment portfolio of SVB at December 31, 2022 and December 31, 2021. The HTM securities are the securities which are owned until maturity in a long time period. The bank heavily invested in Held To Maturity (HTM) securities in the U.S. Agency Debentures $486 million; Agency-issued MBS $57705 million; Agency-issued CMO-fixed rate $10461 million; Agency-issued CMO- variable rate $79 million; Agency- issued CMBS $14471 million; Municipal bonds and notes $7416 million and Corporate bonds $703 million, at a total $91.321 Billion as of December 31 2022.

On the other hand, SVB had lesser investment in Available For Sale (AFS) securities. The AFS securities are the securities which can be sold before it reaches maturity. The bank invested $16,135 million in the U.S. Treasury securities; $101 million in U.S. Agency debentures; $1088 million in Foreign government debt securities; $6603 million in Agency-issued MBS; $678 million in Agency-issues CMO-Fixed rate; and $1464 million in Agency-issued CMBS, at a total $26069 million as of December 31 2022.

This caused the majority of SVB's assets to mature at a long period of time creating 2 problems:

1. Liquidity Crunch
   Since the majority of assets invested in Held-to-Maturity securities could not be quickly sold, the bank could not liquidate its assets quickly to respond to changing financial conditions in the country. As a result, the selling of those bonds got delayed for a long time.
2. Unrealized loss
   Since the maturity period of the majority of the assets were long, they could only be sold after a long period of time. So even if the value of the assets decrease, they can not be sold into the market and its value would continue to decrease creating unrealized loss.
   As the Federal interest rate rapidly increased from 0.25%-0.5% in March 2022 to 5.25%-5.5% in July 2022, the bond yields continued to rise. The US treasury rate rose from 1.72% on 1 March 2022 to 2.93% on 19 April 2022. This led to a fall in the value of bonds SVB had invested. Further the US treasury rate rose to 3.49% on 14 June 2022 and to 4.14% on 8 November 2022. The sharp rise in US treasury rates caused the bond yields to rise causing the value of the bonds to decrease. So the value of bonds SVB had invested in continued to decrease but SVB could not sell them due to long maturity periods creating unrealized losses.

SVB had $15 billion of unrealized losses against only $16 billion in equity. The approximately $90 billion invested in Held-to-Maturity securities fell to $75 billion in 2023, So now the assets of the company have significantly decreased. This indicated poor financials of the company and further decreased the financial liquidity the bank had. As per Congressional Research Services, SVB had unrealized losses as 8% of their assets,

After this mis-investment, to make situations even worse, the start-up winter started in the United States. The rising federal interest rates made loans expensive to be borrowed creating a liquidity crunch in the United States capital market. This was further forced by the global economic uncertainty. Ever since the Russia-Ukraine war, there were high inflation rates and continuous efforts for quantitative tightening around the world. For instance, the European Central Bank raised its key interest rate from minus 0.5% to 4% between July 2022 to September 2023 in order to combat inflation rates. Similarly, the Bank of England, to reduce inflation rate to about 2%, increased its interest rates from 0.1% in 2020 to 3% in December 2023.

This created a high risk of global recession. As per Bloomberg, the US had a 65% probability of going into a recession in 2023 with the UK having 75%, Germany having 60% and Canada having 60%. These critical economic conditions followed by quantitative tightening in the United States made it difficult for the start-ups to get financed to continue their operations as investors were losing confidence in the market and borrowing loans became expensive. As a result, the only option left for the start-ups to get financed was to withdraw their deposits from their banks.

Since Silicon Valley Bank was the banker for the start-ups, all of its clients started to withdraw their deposits to meet their financial needs. In order to get the deposits withdrawn, amid the liquidity crunch, the Silicon Valley Bank had no other option but to sell their Held-to-Maturity securities and realise their unrealized loss. The CEO of SVB disclosed that it had to sell $21 billion bearing a loss of $1.8billion as realised loss, while its unrealized losses still remained high.

10. The stock crash

So here, the company already had a high unrealized loss, which they started to realise. In addition, the depositors started to withdraw their money from the bank. As a result, in order to meet its financial needs, the bank had to borrow $15 billion while also liquidating its stocks worth $2.25 billion.

As soon as this news broke out in the market, while SVB was liquidating its stocks, its shareholders started to panic. Followed by the crash of 2 major banks previously, the shareholders started to sell their shares of Silicon Valley Bank, leading to Panic Selling. As a result, SVB witnessed a staggering 60% drop in its stock price on 9th March and officially collapsed on the very next day.

11. The empty chair and blinded risk

While a lot of industry experts and people have raised questions on the mis-investment of Silicon Valley Bank, not many have noticed the ignorance of risk management in the bank which led to its collapse. Risk-management, though crucial in any financial services firm, has often been ignored by investors or financial managers.

As per the investigation by the Federal Reserve of United States, Silicon Valley Bank's Chief Risk Officer, Laura Izurieta formally departed from her role in October 2022 after which, Kim Oslon was appointed the position. A Chief Risk Officer (CRO) analyses and evaluates risks and threats associated with any investments and suggests risk mitigating measures for the same.

In the case of Silicon Valley Bank, the CRO was responsible for analysing the risk associated with the long maturity periods of the securities and predicting the rise in interest rates which would decrease the value of their securities and come up with mitigating measures. However, this stands to be ineffective in the bank which raises questions on the CRO of the bank.

According to SVB's proxy filing, though Laura Izurieta formally departed in October 2022, she had already stepped down her position in April 2022. Meaning that for 6 long months, the bank did not have any Chief Risk Officer who could analyse the potential threats in their investments. This raises serious questions on SVB's ignorance towards risk management in its investment and the internal management of the company leaders which led to the collapse of the Silicon Valley Bank.

Specialisation has often been misunderstood to bring unique selling points, thus being successful in the market. The same was the case with Silicon Valley Bank. The bank had given complete focus to startups, as their clients, in the United States. Its net interest margin was pressured at 2.28% in 2022 to attract more startups.

Centering focus to one specific sector of clients carried its own risk. If the clientele would have been diversified, disruptions in the tech start-ups would have caused comparatively less deposit withdrawal. Specifically catering to tech start-ups increased SVB's vulnerability to disruptions in the start-up sector.

12. What if LCR would have been implemented on SVB

Ever since SVB crashed, questions have been raised on Liquid Coverage Ratio (LCR) regulation of 2019 by the Federal Reserve.

$$LCR = \frac{High\ Quality\ Liquid\ Assets}{Total\ Net\ Cash\ Flow\ Amount} \times 100$$

High Quality liquid assets= assets that can be easily converted into cash
Total Net Cash Flow amount= the financial institution's estimated cash flow during a 30-day stress period.

According to the regulation, any bank with assets over $250 billion is mandated to have 100% Liquid Coverage Ratio, meaning that their assets worth 30 days of their cash flow in stress period should be easily liquidated. Since SVB did not have assets over $250 billion, it was exempted from this regulation. By the end of 2022, SVB's LCR would have been 75%.
Questions have been raised on the effectiveness of the LCR regulation claiming that stricting LCR regulations such that SVB would have to have 100% LCR could have reduced the damage if not prevent it completely. It would have allowed SVB's supervisors to identify the risks of liquidity the bank was facing. However it is to be noted that if SVB would have been forced to purchase High quality liquid assets, they would have purchased long-term assets more. To prevent the bank run, SVB should have invested on short-term treasuries or reserve balances instead of long-run assets due to the rising interest rates. This limits the effectiveness of LCR if implemented on SVB, thereby not preventing the bank run completely but reducing the same.

13. The Conclusion

To conclude, the collapse of Silicon Valley Bank in 2023 sent shockwaves through the financial world, raising serious concerns about the stability of the banking system. Once a beacon of success in the industry, the bank's downfall was swift and unexpected. At its peak, SVB boasted a market

capitalization of $39.84 billion in 2021, but by 2023, this had plummeted to a mere $6.27 billion. The collapse of SVB, following closely on the heels of other bank failures like Silvergate Bank, Signature Bank, and First Republic Bank, intensified the strain on the banking sector, sparking global economic tensions.

A variety of factors contributed to SVB's demise. The bank's rapid expansion and specialisation in financing innovative startups, particularly in the technology and life sciences sectors, fueled its growth. However, its investment strategy, heavily reliant on long-term securities with low liquidity, left it vulnerable to changing market conditions. As interest rates rose sharply in 2022, the value of SVB's bond portfolio plummeted, leading to substantial unrealized losses.

he onset of the startup winter, coupled with global economic uncertainty and quantitative tightening measures, further exacerbated SVB's financial woes. As startups struggled to secure funding and investors lost confidence in the market, SVB faced a mass exodus of depositors seeking to withdraw their funds. Forced to sell off its securities to meet liquidity demands, the bank incurred substantial realised losses, exacerbating its already precarious financial position.

The situation reached a tipping point when SVB was forced to liquidate its stocks and borrow additional funds to stay afloat. Panic selling ensued among shareholders, leading to a catastrophic 60% drop in SVB's stock price on March 9th, ultimately culminating in the bank's collapse the following day.

The unravelling of SVB also highlighted critical lapses in risk management within the organisation. The departure of the Chief Risk Officer in October 2022, coupled with a prolonged vacancy in the role, left the bank vulnerable to the very risks it was tasked with mitigating. This failure to effectively manage risk, coupled with internal management shortcomings, ultimately sealed SVB's fate.

The collapse of Silicon Valley Bank serves as a sobering reminder of the fragility of the banking sector and underscores the importance of robust risk management practices to safeguard against catastrophic failures. As the industry grapples with the aftermath of SVB's downfall, it faces a crucial imperative to reassess and reinforce its risk management frameworks to prevent similar crises in the future.

References

"10 Year Treasury Rate Market Daily Trends: Daily Treasury Yield Curve Rates | YCharts." YCharts Financial Research and Proposal Platform, 24 May 2024, ycharts.com/indicators/10_year_treasury_rate#:~:text=Basic%20Info,a%20maturity%20of%2010%20year.

"Interest Rates and Bank Rate." Bank of England, 22 June 2023, www.bankofengland.co.uk/monetary-policy/the-interest-rate-bank-rate.

---. "SILICON VALLEY BANK CELEBRATES 20 YEARS OF DEDICATION TO ENTREPRENEURS." Silicon Valley Bank - Banking for Innovation Economy, 17 Oct. 2003, www.svb.com/news/company-news/silicon-valley-bank-celebrates-20-years-of-dedication-to-entrepreneurs. Accessed 27 May 2024.

Acharya, V. V., Cooley, T. F., Richardson, M., & Walter, I. (2010). Regulating Wall Street: The Dodd-Frank Act and the new architecture of global finance. Wiley.

Adams, Michael. "Federal Funds Rate History 1990 to 2024." Forbes, 20 May 2024, www.forbes.com/advisor/investing/fed-funds-rate-history. Accessed 27 May 2024.

Adrian, T., & Liang, N. (2018). Monetary policy, financial conditions, and financial stability. International Journal of Central Banking, 14(1), 73-131.

Aibangbee, Y. (2023, May 15). Silicon Valley bank would have passed the liquidity coverage ratio requirement. Bank Policy Institute. https://bpi.com/silicon-valley-bank-would-have-passed-the-liquidity-coverage-ratio-requirement/

Allen, F., & Gale, D. (2007). Understanding Financial Crises. Oxford University Press.

Barth, J. R., Caprio, G., & Levine, R. (2013). Guardians of finance: Making regulators work for us. MIT Press.

Basel Committee on Banking Supervision (BCBS). (2011). Basel III: A global regulatory framework for more resilient banks and banking systems. Bank for International Settlements.
Business Standard. "Inflation declines in Europe again; here's what it means for interest rates." Business Standard, 3 Apr. 2024, www.business-standard.com/world-news/inflation-declines-in-europe-again-here-s-what-it-means-for-interest-rates-124040300634_1.html. Accessed 27 May 2024.

Claessens, S., Ghosh, S. R., & Mihet, R. (2013). Macroprudential policies to mitigate financial system vulnerabilities. Journal of International Money and Finance, 39, 153-185.

Coffee, J. C. (2011). Systemic risk after Dodd-Frank: Contingent capital and the need for regulatory strategies beyond oversight. Columbia Law Review, 111(4), 795-847.

CRS INSIGHT. Banks' Unrealized Losses, Part 2: Comparing to SVB. Congressional Research Services, 2023. crsreports.congress.gov/product/pdf/IN/IN12232. Accessed 23 May 2024.
Demirgüç-Kunt, A., & Detragiache, E. (1998). The determinants of banking crises in developing and developed countries. IMF Staff Papers, 45(1), 81-109.

DeYoung, R., Peng, E. Y., & Yan, M. (2013). Executive compensation and business policy choices at US commercial banks. Journal of Financial and Quantitative Analysis, 48(1), 165-196.

Diamond, D. W., & Dybvig, P. H. (1983). Bank runs, deposit insurance, and liquidity. Journal of Political Economy, 91(3), 401-419.

Fahlenbrach, R., & Stulz, R. M. (2011). Bank CEO incentives and the credit crisis. Journal of Financial Economics, 99(1), 11-26.

Gorton, G. B. (2012). Misunderstanding Financial Crises: Why We Don't See Them Coming. Oxford University Press.

Iyer, R., & Puri, M. (2012). Understanding bank runs: The importance of depositor-bank relationships and networks. American Economic Review, 102(4), 1414-1445.

Kelly, M., & O'Grada, C. (2000). Market contagion: Evidence from the panics of 1854 and 1857. American Economic Review, 90(5), 1110-1124.

Lessons from applying the liquidity coverage ratio to Silicon Valley bank. (n.d.). Yale School of Management | Educating Leaders for Business and Society. https://som.yale.edu/story/2023/lessons-applying-liquidity-coverage-ratio-silicon-valley-bank
Prasad, Prarthna. "Silicon Valley Bank Had No Official Chief Risk Officer for 8 Months While the VC Market Was Spiraling." Fortune, 10 Mar. 2023, fortune.com/2023/03/10/silicon-valley-bank-chief-risk-officer/.

Silicon Valley Bank - Banking for Innovation Economy, www.svb.com/.

Silicon Valley Bank. "Facts at a Glance." Silicon Valley Bank - Banking for Innovation Economy, www.svb.com/newsroom/facts-at-a-glance. Accessed 27 May 2024.

U.S. Energy Information Administration. "U.S. gasoline prices ahead of Memorial Day weekend are 1% higher than last year." EIA, 23 May 2023, www.eia.gov/todayinenergy/detail.php?id=55079-. Accessed 27 May 2024.

Wilkins, Carolyn. Case Study #2: The Rise and Fall of Silicon Valley Bank. University of Pennsylvania, 2024. www.sas.upenn.edu/~vr0j/4230-24/Case_Study2_SVB.pdf. Accessed 11 Apr. 2024.