Silicon Valley Bank Collapse: Causes & Consequences

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Abstract. This paper discusses the concept of bank bankruptcy and highlights the recent failure of Silicon Valley Bank (SVB) as a significant case similar to the Lehman Brothers' collapse in 2008. Lehman's failure was attributed to the U.S. housing market collapse and internal risk management issues. SVB's failure, occurring in 2023, resulted from both internal factors (improper decisions, high-risk strategies, and poor financial management) and external factors (economic recession, Federal Reserve interest rate hikes, regulatory challenges, and changes in the tech industry). The bankruptcy of SVB has far-reaching economic impacts on depositors, borrowers, entrepreneurs, investors, and the banking industry. It triggers a crisis of confidence, liquidity pressure, and systemic risks. The Federal Reserve implements emergency measures to address the fallout, reflecting on regulatory approaches to mitigate threats to the banking system. The comparison with Lehman Brothers underscores similarities in improper development strategies, asset structures, risk management, and regulatory oversight, leading to systemic risks and undermining financial market confidence.

Keywords: Silicon Valley Bank, Bankruptcy, Financial Stability.

1. Introduction

Bank bankruptcy means that the bank is declared bankrupt when it is insolvent or unable to repay the debts due. One notable recent bank failure was the collapse of Silicon Valley Bank, an industry giant with more than $200 billion in assets that had been ranked by Forbes as America's best-served bank for many years. There have also been many cases of bank bankruptcy in history. For example, in 2008, Lehman Brothers, the fourth largest investment bank in the United States, filed for bankruptcy protection after failing to negotiate the acquisition due to investment failure, which triggered the global financial crisis.

One reason for Lehman's failure: In 2008, the U.S. housing market collapsed, causing many mortgages to default and house prices to fall. Lehman Brothers is one of the important investment banks. It once made a large amount of investment in the real estate market and owned a large number of assets such as mortgage securities (MBS) and derivatives. However, these assets depreciated rapidly after the collapse of the housing market. It eventually led to the bankruptcy of the company. Before the subprime crisis, Lehman Brothers had exposed many holes in its risk management. First, the most basic asset structure of Lehman Brothers was unreasonable, and the high proportion of fixed securities made it impossible to build a good risk management environment. Second, there is a lack of awareness of risk management within enterprises, and the ability of risk management is constantly weakened. Finally, the company's supervision mechanism is non-existent. Therefore, the failure of Lehman Brothers' internal risk management was one of the reasons [1].

The bankruptcy of Lehman Brothers triggered systemic risk (refers to the country due to a variety of external or internal adverse factors accumulated for a long time without being discovered or paid attention to, resonance in a certain period of time led to uncontrollable panic selling of financial system participants, resulting in increased investment risks in the whole market. Systemic risk affects all participants in the market and cannot be eliminated by diversification. The collapse of Lehman Brothers sent U.S. stocks tumbling, with the Dow Jones Industrial Average falling by the most points and points in a single day since 9/11, and global stock markets plunging [2]. This further undermines the world's confidence in the market and the future. Moreover, the bankruptcy of Lehman Brothers indicates that the subprime mortgage crisis in the United States will be further escalated, and after the bankruptcy of Lehman Brothers, there will be more large institutions and financial institutions will

be destroyed to invest confidence, and the borrowing cost will rise, and they will face the risk of bankruptcy. This will shake the core of the US financial system-the large financial institutions on Wall Street, and promote the subprime mortgage crisis into a global economic crisis.

The failure of Silicon Valley Bank on March 10, 2023 was another sensational global bank failure after the failure of Lehman Brothers. On March 8, Silicon Valley Bank announced that it was selling a large amount of debt and stock at a loss to shore up its balance sheet, a move that caused panic among major venture capital firms. The next day, March 9, Silicon Valley Bank's stock price plunged. Local Time on Friday (March 10), abandoned efforts to raise money quickly and find a buyer, declared bankruptcy and was taken over by the US Federal Deposit Insurance Corporation (FDIC) [3]. The following will focus on the bankruptcy case of Silicon Valley Bank, and conduct a detailed study from the perspectives of the causes and consequences of the case.

2. Causes of the SVB Collapse

The reasons for the failure of Silicon Valley banks can be divided into internal and external reasons.

2.1. Internal Factors

Internal reasons can be divided into two points: incorrect management decisions and strategies and poor financial management and supervision.

First, Silicon Valley Bank made improper decisions and strategies. Before the financial crisis in 2008, Silicon Valley Bank had been focusing on venture capital and commercial loans [4]. This high-risk strategy did not perform well during the financial crisis, but Silicon Valley Bank did not change its strategy and still adopted high-risk investment strategy: Silicon Valley Bank has done exceptionally well over the past five years, with deposits rising sharply from $44bn in 2017 to $189bn in 2021 [5]. So, Silicon Valley Bank decided to invest its surplus money outside the traditional banking industry, a risky strategy that proved wrong. Moreover, Silicon Valley Bank also made mistakes in risk management, failing to properly evaluate the credit risk and asset quality level of borrowers, leading to the deterioration of its own asset quality and the increase of non-performing loans, which also led to the final bankruptcy of Silicon Valley Bank.

Second, there was poor financial management and oversight at Silicon Valley Bank, which had expanded significantly before the financial crisis and opened branches across the country. However, this expansion strategy resulted in high costs and excessive financial pressure, and the bank failed to maintain a sound financial position. Moreover, the proportion of deposits in the aforementioned Silicon Valley banks has risen sharply, and the use of surplus funds in industries other than traditional banking is also a reflection of financial mismanagement. Silicon Valley Bank mainly serves customers in the technology industry and venture capital industry, and its liabilities are mainly composed of deposits from venture capital companies and the technology industry.

2.2. External Factors

The external causes of Silicon Valley Bank's failure can be broadly divided into three points: the recession and the Federal Reserve's interest rate hikes, regulatory challenges and compliance issues, and changing tech industry dynamics. First, due to the economic recession and the Federal Reserve's interest rate increase, Silicon Valley Bank was affected by external factors such as the COVID-19 pandemic and the global economic recession, which led to a sharp decline in loan demand and revenue in the technology industry, thus affecting the loan recovery and profit level of Silicon Valley Bank. When Silicon Valley Bank faced a shortage of loans, it chose to invest in Treasury bonds to make up for the shortfall. For years, investing in government bonds posed no risk to Silicon Valley Bank. However, after the Federal Reserve Board decided to raise interest rates to around 5% in March 2022, the situation changed: Because the bond price is inversely related to the current interest rate, the value of the government bonds purchased by Silicon Valley Bank will decline when the interest rate rises. As most of the funds of Silicon Valley Bank are used to buy government bonds, once it decides to

sell these bonds in the market, it will face a large loss when selling due to the low price at the time of purchase. This meant that the investment portfolio of Silicon Valley Bank was greatly reduced, which led to the bankruptcy of Silicon Valley Bank.

Second, regulatory challenges and compliance issues. In terms of supervision, due to its special nature and high-risk characteristics, Silicon Valley Bank unexpectedly went bankrupt under the strict scrutiny of the Federal Reserve Board, the Federal Deposit Insurance Corporation and other regulatory agencies, which indicates that the bank regulators' monitoring and management of the bank's operation status is insufficient, and there may even be regulatory loopholes. The Fed's regulatory framework focuses on regulating bank size thresholds, but size isn't always a good measure of risk, especially when banks have non-traditional business models. The Federal Reserve's supervision of Silicon Valley banks may have identified the potential risks of Silicon Valley banks, but the Federal Reserve cannot identify whether the risks pose a serious threat to the safety and stability of banks, and the Federal Reserve, as a regulator, may not have the tools to mitigate the safety and eliminate the threats, which indicates that due to the lack of supervision, the bankruptcy of Silicon Valley banks may have occurred early. It's just that regulators didn't catch it. Moreover, the compliance of the indicators monitored by the regulators does not mean that the banks have truly met the risk management requirements, which may lead to the fact that some behaviours taken by Silicon Valley banks in order to make the regulated indicators compliant have planted incentives to cause systemic risks. The existence of systemic risk means that financial contagion may occur in the banking system. Financial contagion means that when a bank faces problems and these problems spread to other banks in the system, it may lead to a chain reaction in the whole financial system, affecting many banks, and eventually leading to the collapse of the industry giant, Silicon Valley Bank [6].

Third, the changing dynamics of the tech industry. In 2020-21, due to the impact of the global COVID-19 pandemic, the Federal Reserve implemented the quantitative easing policy, which drove the stock market, especially the price of technology stocks to climb, resulting in a large amount of money pouring into the technology sector. This has led to a huge increase in deposits at Silicon Valley banks, as tech companies dominate the region [7]. After 2022, however, the environment for the tech industry changed. The impact of earlier easing policies and the Russia-Ukraine conflict led to a sharp rise in domestic inflation in the United States, forcing the Federal Reserve to adopt an aggressive interest rate hike policy. In an environment of sharp rate hikes, the market is tight on liquidity, the tech sector is no longer hot, and money is starting to flow out of the tech sector, causing money to become tight. This change in the macro environment has generated large fluctuations in deposits in the technology sector, which in turn has had a shock to investment in commercial banks, including Silicon Valley banks. The flood of deposits in and out of the tech sector could make it challenging for banks to manage their money and portfolios. Moreover, as the technology industry is the main customer and capital source of Silicon Valley banks, the recession of the industry development prospect has affected the bank in terms of deposits and capital liquidity.

3. Consequences of the Collapse

The bankruptcy of SVB will cause a series of economic impacts. The following will illustrate the economic impacts caused by the bankruptcy of SVB from four perspectives: depositors, borrowers, investors and entrepreneurs, and the banking industry.

First, the impact on depositors. The Treasury, the Federal Reserve, the FDIC, and other agencies took emergency steps to create a new lending program, run by the Federal Reserve and funded by the Treasury, that was designed to address SVB's problems while the FDIC adequately protected all depositors. And according to the FDIC, each account can be insured up to $250,000. However, despite the emergency plan, SVB depositors were unable to withdraw their funds from SVB due to severe cash flow shortage before the implementation of the plan, and the flow of funds was limited. Any withdrawal of their deposits may cause SVB to fall into the situation of rapid run) and depositors will

no longer trust SVB, and depositors will want to take out all their deposits as soon as possible, which will cause another shortage of cash flow due to the rapid run of funds, resulting in the damage of depositors' income such as delayed payment. At the same time, since SVB is one of the representatives of regional banks, its failure will make depositors lose trust in small regional banks and transfer their funds to larger banks [8, 9].

Second, the impact on borrowers. Silicon Valley is recognized as the centre of entrepreneurship and innovation in the world, and there are many start-up technology companies, and SVB's loan users and owners are these start-ups. It shows that borrowers experience a one-day abnormal return (AR) of -4.16% on the day of the bank failure event and suffer a cumulative abnormal return (CAR) of -13.47% in the 30-day window following the failure event. It can be concluded from the analysis that the borrower may face the default of the loan contract, resulting in the loss of the outstanding loan amount. Moreover, with the collapse of the bank, the borrower loses the original source of funds for the loan, and the borrowing enterprise may face the situation of financing difficulties, which may make the borrowing enterprise unable to maintain daily operation and close down [10].

Third, for entrepreneurs and investors. As mentioned above, enterprises with large deposits or loan contracts in SVBs (such as Roku and Roblox) will face significant capital losses, affecting the normal operation and development of enterprises. In addition, the failure of SVB will lead to a decline in the trust of entrepreneurs and investors in regional banks, which will make entrepreneurs and investors re-evaluate and choose financial cooperation institutions (entrepreneurs will tend to choose larger and more stable banks to avoid risks). And SVB had branches in several countries, and the bankruptcy has caused international unease. Technology enterprises in the UK and other countries have been affected, and some companies may face the risk of declaring bankruptcy. In addition, the valuation of technology stocks has declined seriously, and they will face great pressure in the future. As a result, investors in the market will doubt the technology enterprises they invest in, and dare not invest, affecting the development of the financial market [11].

Fourth, the entire banking sector has been affected. The failure of SVB had a great impact on the systemic risk of the US banking industry, especially the subsequent failures of Signature Bank and First Republic Bank. In addition, with the failure of First Republic Bank, the systemic financial risks that might be triggered by the failure of SVB began to spread in the European and American financial markets. The continuous bankruptcy events in the banking industry will lead to a crisis of confidence in the whole banking system, and make investors and depositors start to worry about other banks, which will lead to deposit run and capital outflow. Moreover, successive bank failures have increased liquidity pressure in the market, making it more difficult for other banks to obtain sufficient funds. This could lead to a tightening of liquidity across the financial system, thus affecting the normal flow of funds; Moreover, the systemic risk caused by the failure of SVB and First Republic Bank may spread to the international market, forming a cross-border financial market contagion effect. Systemic risk will further exacerbate economic uncertainty, increasing the risk of a recession [12].

In the face of the financial storm caused by the failure of SVB, the Federal Reserve released the testimony of Vice Chairman of Supervision Barr to the United States Senate banks and others: the Federal Reserve Board set up a temporary lending facility, the Bank Term Financing Program, to allow banks to obtain additional liquidity to meet any unexpected withdrawal needs; There will also be a rethink of the regulatory approach: supervisors will further improve their ability to identify risks that pose a material threat to the safety and soundness of banks and reflect on whether supervisors have the tools to mitigate threats to safety and soundness [13].

4. Conclusion

According to the above comparison with the bankruptcy of Lehman Brothers in 2008, the bankruptcy of SVB is similar to the bankruptcy of Lehman Brothers in 2008: improper development strategy, unreasonable asset structure, inadequate risk management and insufficient regulatory supervision, and both of their failures have triggered systemic risks, affecting the confidence and

vitality of the financial market. To summarize the reasons for the bankruptcy of SVB above, it can be concluded that the failure of SVB was caused by both internal and external factors. Internally, SVB made poor decisions, failed to manage risk, and had poor financial oversight; Externally, the Fed's aggressive interest rate hikes, the recession, regulatory challenges, and changing tech industry dynamics combined to bring down SVBs. And the failure of SVB had many consequences. For depositors, the FDIC and other agencies intervened to protect depositors, but the withdrawal restrictions caused panic and potentially hurt depositors' income; For borrowers, startups and tech companies that rely on SVBS are at risk of defaulting on loan contracts, financing difficulties and potential failure; For entrepreneurs and investors, the loss of capital, the reduction of trust in regional banks and the impact of international economic markets will cause fluctuations in the valuation of technology stocks held by entrepreneurs and investors; For the whole banking industry, the failure of SVB increased the systemic risk, leading to a confidence crisis in the whole banking system, followed by bank bankruptcy and liquidity pressure, and the contagion effect spread to the international market, aggravating the economic uncertainty. Faced with the failure of SVB, the Federal Reserve took steps such as setting up the Temporary Funding Facility and the Term Financing Program for Banks to address the liquidity problem. There will also be a reassessment of the approach to supervision aimed at improving the ability to identify risks that could pose a material threat to the safety and soundness of banks. According to the economic data of the United States after the bankruptcy of SVB, the Federal Reserve has not stopped raising interest rates, and the bank turmoil caused by rising interest rates may bring some pressure to the Federal Reserve.

References

[1] Han, Y. (2020). Reflection on the bankruptcy of Lehman Brothers from a risk management perspective. Era Economics, (22).

[2] Ren, Y. (2011). The Antecedents and Consequences of the Lehman Brothers Bankruptcy, Shanghai Normal University.

[3] Yousaf, I., Riaz, Y., & Goodell, J. W. (2023). The impact of the SVB collapse on global financial markets: Substantial but narrow. Finance Research Letters, 55, 103948.

[4] Aharon, D. Y., Ali, S., & Naved, M. (2023). Too big to fail: The aftermath of Silicon Valley Bank (SVB) collapse and its impact on financial markets. Research in International Business and Finance, 66, 102036.

[5] Al-Sowaidi, S., Faour, W. Causes and Consequences of the Silicon Valley Bank Collapse: Examining the Interplay Between Management Missteps and the Federal Reserve's Floundering Decisions. Journal of World Economic Research, 2023, 12 (1): 38 - 46.

[6] Galati, L., Webb, A., & Webb, R. I. (2023). Access to Fintech Halted Through Finance: Evidence from the Ftx Failure. SSRN.

[7] Naveed, M., Ali, S., Gubareva, M., & Omri, A. (2023). When giants fall: Tracing the ripple effects of Silicon Valley Bank (SVB) collapse on global financial markets. Research in International Business and Finance, 67, 102160.

[8] Zheng, Y., & You, Y. (2023). The impacts of macroprudential regulations on extreme episodes in bank flows: whose policy helps and whose policy harms? Finance Research Letters, 58, 104443.

[9] Manda, V. K. (2023). The Collapse of SVB. MAR-Ekonomi: Jurnal Manajemen, Akuntansi Dan Rumpun Ilmu Ekonomi, 2 (1): 59 - 70.

[10] Liu, X. S., Wei, S. (2023). The effect of SVB collapse on its client companies. SSRN 4443827.

[11] Bales, S., & Burghof, H. (2024b). Public attention, sentiment and the default of Silicon Valley Bank. The North American Journal of Economics and Finance, 69, 102026.

[12] Zhu, Z. Y., He, Y. C. Zhang, Y. Z. (2023). The use of ERM in systemic risk analysis in banking: Take Silicon Valley Bank's bankruptcy as an example. Financial Engineering and Risk Management, 6 (11).

[13] Chen, H., & Yeh, C. (2021). Global financial crisis and COVID-19: Industrial reactions. Finance Research Letters, 42, 101940.