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Analysis of Silicon Valley Bank Bankruptcy from the Perspective of Risk Management

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Abstract: The bankruptcy of Silicon Valley Bank (hereinafter referred to as SVB) is a financial disaster that is shocking and regrettable, as well as a financial lesson worth thinking and learning. The bankruptcy of SVB not only brought huge shock and loss to its customers and investors, but also to the US and global financial markets, and also put forward new challenges and requirements for banking business and supervision. It can be drawn from SVB's bankruptcy, the two main bodies of the bank and government, to gain insight into diversification and balance of banking operations, asset and liability matching and management, as well as the government's strong economic policies, so as to avert a similar financial crisis and foster the sound and steady progress of the financial sector.

1. Introduction

1.1. Research Background

Amid the uncertainty of the macro environment in which the Fed is raising interest rates, the SVB has unexpectedly caught the public's attention. On March 8th SVB made waves by reraising $2.25 billion of the $21 billion of marketable assets it announced it had lost about $1.8 billion. On March 9th SVB's share price fell by more than 60% and there was a serious run on deposits. On March 10th SVB declared bankruptcy. On March 13th America's Treasury, the Federal Reserve and the FDIC jointly announced that they would provide $25 billion in emergency loans to SVB savers, who would get all their money back and taxpayers would not be liable for SVB losses [1-2]. The timely release of the government rescue package has protected depositors' rights and restored stock market sentiment, but the ripple effects of the inevitable bank failure in Silicon Valley continue.

1.2. Research Significance

This paper employs three distinct methods of analysis: literature analysis, case analysis, and comparative analysis. By combining the perspectives of pertinent scholars from both domestically and abroad, a summary of some experiences and teachings is presented, in the hope of gaining some insight and understanding. Exploring the existing issues and causes of the SVB bankruptcy, a thorough and exhaustive examination of it was conducted, with the aim of finding solutions to enhance the anti-risk capacity of banks and preserve the security and steadiness of the entire financial system.

2. SVB Overview

SVB is the 16th largest bank in the United States and was founded in 1983, which is located in Santa Clara, California, and is a member of the Federal Reserve System. It has 17 branches in California and Massachusetts, focusing on financing start-up technology companies.

As can be seen from Figure 1, since the quantitative easing policy of the Federal Reserve in 2020, the growth rate of total assets and customer deposits of SVB has exceeded 20% on a quarterly basis. The growth rate began to decline in the middle and late 2021, and the growth rate reached negative in the second quarter of 2022. From 2020 to 2022, the growth rate of customer deposits was greater than that of total assets, and the negative growth of deposits was significantly greater than that of total assets in the middle of 2022. Total assets include Treasury bonds and long-term loans to start-ups, while customer deposits are mostly short-term. From the mismatch between the growth rate of total assets and customer deposits, it can be inferred that SVB may imply credit risk and market risk.

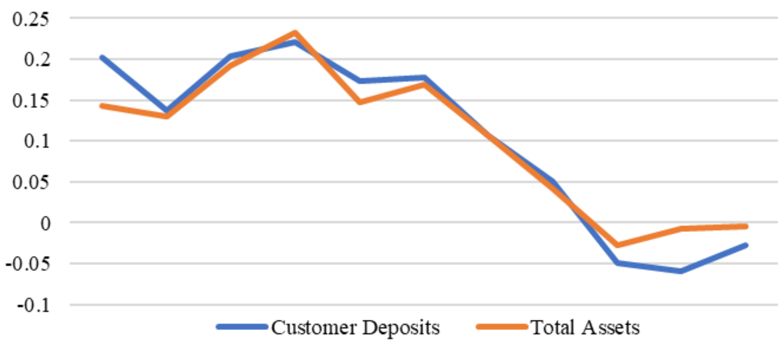

Figure 1: Quarterly growth in Total Assets and Customer Deposits from 2020 to 2022

Figure 2 shows the cash and cash equivalents of SVB revealed a trend of first increase and then decrease from 2019 to 2022. In 2020, affected by the epidemic, the cash and cash equivalents increased significantly by 44% compared with the same period last year, and then decreased year by year, especially in 2021, the decrease was the largest, reaching about -40%. The negative growth of SVB from 2021 can be inferred from the possibility of bank liquidity risk.

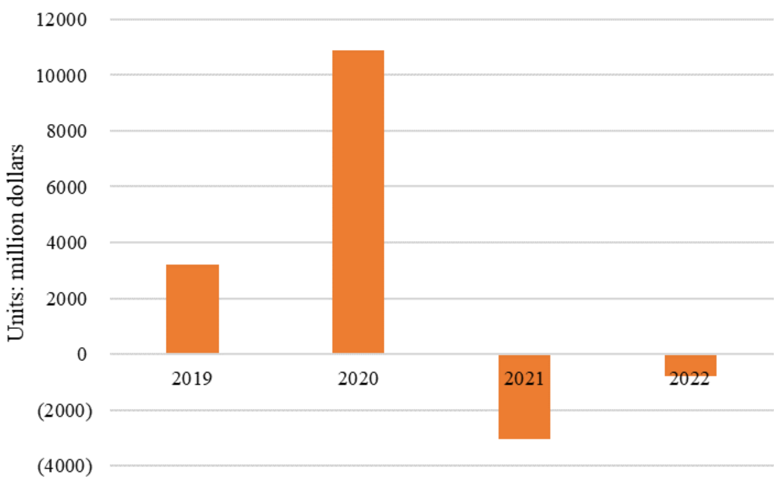

Figure 2: Change in cash and cash equivalents from 2019 to 2022

3. Cause Analysis of SVB Bankruptcy

3.1. Market Risk

SVB made big bets on Treasurys and mortgage-backed securities in a low-interest-rate market environment. While Treasuries and mortgage-backed securities are very safe investments from a credit risk perspective, they carry considerable interest rate risk. As the Fed raised rates, interest rates rose rapidly and the value of these assets plunged, causing huge losses for SVB.

3.2. Credit Risk

Deterioration of SVB loan quality leads to credit risk. SVB’s main customers are technology startups, which tend to have volatile revenues and cash flows and face high market risks and competitive pressures. Since the second half of 2022, the sharp decline of technology stocks and the crisis of financial fraud, lawsuits and bankruptcy of some well-known technology companies have significantly reduced the loan recovery rate of SVB, leading to a surge in its non-performing loan ratio, forcing the bank to face credit risks.

3.3. Operational Risk

The failure of the SVB is symptomatic of the incompleteness of the stress test scenario. SVB's internal executives did not fully consider the macroeconomic impact on the company, especially the stress scenario of a rapid rise in interest rates.

There is a gap in the SVB's chief risk officer. SVB 's chief risk officer was absent for about eight months in 2022 before hiring a new chief risk officer in January. Such leadership gaps can leave the board and risk management team in the dark about new risks emerging in the portfolio, and may ultimately lead to poor strategies and approaches for managing SVB's risks.

Members of the SVB Board of Directors and Management committee have insufficient experience in risk control. Only one of the seven board members on the SVB risk committee has a background in risk management. According to information provided by SVB in its 2023 proxy statement, none of the members of the management board has held a senior risk management position, such as chief risk officer. Without proper experience, the board cannot ask the right questions of management through risk threat and mitigation strategies, given the technical complexity of the bank's risks.

3.4. Liquidity Risk

SVB have a large amount of short-term deposits on the liability side and a large amount of long-term fixed income products on the asset side, so there will be a mismatch of investment duration. When market panics and runs occur, SVB are forced to sell long-term assets to pay off short-term liabilities. However, in the context of the current Federal Reserve's continuous interest rate increase, combined with the insufficient market liquidity, the great sale of SVB is bound to be executed at a cheaper price, resulting in severe losses of SVB, severe depletion of liquidity, and pushing SVB to the abyss of bankruptcy.

4. SVB Bankruptcy Revelation

4.1. Bank Perspective

4.1.1. Matching and Management of Bank Assets and Liabilities

The bank should strive to balance the short-term and long-term capital demand and supply, the objectives and tactics of liquidity and profitability, and the risk and security metrics in order to enhance the balance sheet's compatibility and strength when constructing and altering it. In order to objectively reflect the impact of asset value decline on the balance sheet, in accordance with the principle of value, impairment provisions should be made for reloans, rediscounting, fixed assets and other assets. At the end of the period, the book value should be compared with the recoverable amount, and the losses that have occurred should be timely made to prevent the risk of overvaluation of small assets [3-4].

4.1.2. Diversification and Balance of Banking Operations

The failure of SVB reflects the unitary and unbalanced nature of its business model. SVB over-reliance on lending and investment in the technology industry at the expense of opportunities in other industries and markets has made SVB’s revenues and profits highly exposed to the cyclical and volatile nature of the technology industry. Therefore, banks should diversify and balance their business, that is, seek suitable investment and loan opportunities in different industries and markets, so as to improve the stability and sustainability of revenue and profit.

4.1.3. Regularly Bank Stress Tests

Regulators should regularly conduct bank stress tests, in particular by developing macro-prudential stress tests that simulate financial risk contagion and take into account all potential crisis scenarios to the extent possible; Build a financial risk monitoring indicator system, enrich the toolbox of prudent policies, further enrich the scenario indicators of stress test, include stock prices, unemployment rate, GDP growth rate and inflation rate of other countries and regions into the scenario indicators, and comprehensively evaluate the stability of the banking system under macroeconomic shocks from both domestic and international aspects [5], so as to prevent systemic financial risks.

4.1.4. Importance of Risk Manager

As an important role in the risk control of banks, risk managers must play a good leadership role and should attach importance to the evaluation of the liquidity buffer, potential financing needs and the elasticity of the overall balance sheet. At the same time, risk managers should also use a variety of methods, including contingency liquidity planning scenarios, to understand the impact of various contingencies on the bank.

4.1.5. Risk Management Culture

The board of directors and senior executives should play a leading role, set an example, build a good risk management system, and make every effort to create a deep risk management atmosphere in the bank. Banks can also, according to their development strategies,constantly update their employees' ideas and optimize their knowledge through phased training, online education and other channels, so as to create an excellent staff team of pure thinking, efficient work and learning, and promote the construction of bank risk management culture [6].

4.2. Government Perspective

4.2.1. Robust Economic Policies

The failure of SVB highlights the negative impact of aggressive interest rate hikes by the Federal Reserve. The government should avoid the frequent changes and excessive operations of fiscal policies and monetary policies from aggravating public risks, especially during the economic recovery and buffer period [7-8]. Maintaining a macro-prudential outlook, one should bear in mind the effect of economic regulations on both large and small financial institutions, while executing policy.

4.2.2. Draconian Regulation

The inadequacy of the financial regulatory system is one of the reasons for the failure of SVB. The government should strengthen the risk control of banks, including the establishment of a sound information disclosure system, risk assessment and control mechanism [9]; Strengthen the supervision and punishment of bank related transactions and transfer of benefits; Strengthen supervision over banks' capital adequacy ratio and leverage ratio to prevent banks from lending excessively and taking unnecessary risks; Urge banks to strengthen the disposal of non-performing assets, timely replenish capital and other measures to improve their risk resistance ability, and formulate targeted "one action, one policy" risk resolution plan [10].

4.2.3. Guide the Public to View Risks Rationally

With the rise of financial innovation and Internet finance, people's understanding of financial risks is getting lower and lower, and they are easy to be incited by media reports or emotions to blindly follow the trend of investment. The government needs to strengthen publicity and risk warning, guide the public to establish a scientific and reasonable view of financial management and consumption, and enhance personal financial literacy.

5. Conclusion

As an important part of the financial industry, banks should constantly strengthen risk management according to market changes, so as to reduce the probability of bankruptcy. They should not ignore their own management due to excessive pursuit of profits. Risk management must be continually advanced in order to keep up with the ever-evolving market and economic landscape. The significance of risk management should be amplified, and the capability for risk prevention and control should be augmented, all in order to ensure the bank's long-term success.

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