

Research and Thinking Based on Credit Suisse Bank Crisis

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Abstract: In view of the acquisition of the global systemically important bank Credit Suisse, this paper objectively describes the beginning and end of the crisis of Credit Suisse, focuses on the analysis of the difficulties faced by Credit Suisse before the acquisition, the reasons behind and the impact on the financial market, and carries out deeper thinking and analysis. First, it provides reference for the development of banking industry and risk prevention and control; Secondly, strengthening the importance of bank risk management; Finally, it provides some feasible suggestions for the stability of financial market.

Keywords: Credit Suisse, Systemically important banks, Banking Crisis, Financial regulation.

1. Introduction

Founded in 1856, Credit Suisse is one of the global systemically important banks recognized by the global banking regulators, and is also known as the "king of credit finance". As a financial giant with a history of 167 years, it has managed nearly 1.4 trillion Swiss francs, from the disclosure of financial reporting problems, stock price plummeting, to the announcement of being acquired at a "low price" of 40%. From the king of credit finance to the commoner devalued by the market took only a week. Just a week before the Credit Suisse crisis, on March 10, the famous Silicon Valley bank in the US venture capital circle declared bankruptcy after a run; On March 12, the financial regulator of the US state of New York shut down signature banks that support crypto businesses, citing "systemic risk."

From the halo of the international financial crisis in 2008, to now become the first systemically important bank to fall in a new round of western banking crisis, Credit Suisse's debacle originated from a series of scandals over the years, and the risk spilt from the US banking industry caused by the closure of Silicon Valley Bank is only the "key lead" to ignite the Credit Suisse crisis. The spate of bank failures has prompted people to ask what has happened to the banking industry in Europe and the US. If the Silicon Valley bank with hundreds of billions of dollars in assets is a "small and medium-sized bank", how did the "elephant" with a trillion dollars of Credit Suisse fall?

2. Credit Suisse Crisis Events

2.1. The Bank Is in Crisis

Personal reasons are often the key to success or failure. As the king of global financial credit, Credit Suisse, although the surface is bright, but the bank has already been in crisis.

First of all, Credit Suisse's risk control mechanism has serious loopholes and its internal control is not sound. This made various risk events happen one after another, which brought a heavy blow to Credit Suisse Bank. In 2021, the Archegos explosion caused Credit Suisse to directly lose about 5.5 billion US dollars, and the Greensill bankruptcy caused Credit Suisse to directly lose 3 billion US dollars. Credit Suisse was implicated in a corruption case in

Mozambique between 2013 and 2016; In February 2022, Credit Suisse provided money laundering assistance to criminal clients, including oligarchs, drug dealers and human traffickers. In 2022, during the Russia-Ukraine war, the neutral Credit Suisse bank froze Russian assets, causing its users to withdraw their funds over concerns about the safety of their assets. In addition, there are "Spygate", "the collapse of Arcigos", "Tuna bonds"... Secondly, Credit Suisse's own hematopoietic ability is poor, and its operating income continues to lose money. Overall, its balance sheet continues to deteriorate and shrink. Total assets have shrunk from 1.36 trillion Swiss francs in 2007 to 531.4 billion Swiss francs by the end of 2022, a decline of more than 60% in more than a decade. The balance sheet has lost its basic blood function, operating income in 2022 was -25.1% year-on-year, and the full-year loss reached 7.293 billion Swiss francs. Moreover, Credit Suisse's continued loss of deposits on the debt side creates liquidity risk. On the one hand, the rapid loss of deposits in the short term leads to a passive contraction of the balance sheet. In 2022, the size of Credit Suisse's assets and liabilities shrank sharply, from \$827.2 billion at the end of 2021 to \$559.3 billion, a decrease of 32.6%; Debt shrank by 32.4 per cent from \$778.8 billion to \$511.6 billion. At the same time, Credit Suisse.

2.2. The External Financial Environment Has Deteriorated

At the end of 2019, the COVID-19 pandemic was sweeping across the world, posing unprecedented challenges to countries around the world. In March 2020, in order to deal with the economic recession caused by the epidemic, the Federal Reserve opened unlimited QE and lowered the benchmark interest rate to about 0. In March 2022, the Federal Reserve launched an unprecedented interest rate hike cycle in order to curb inflation, raising interest rates by 450 basis points within a year, directly from zero interest rates to 4.5% to 4.75%, a speed rarely seen in history. Under the influence of many factors such as the negative spillover effect of the Federal Reserve's aggressive interest rate hike and the spread of the European energy crisis, the eurozone inflation data continued to rise, and the pressure of the European Central Bank increased sharply, and the European Central Bank was forced to also start the interest rate hike cycle, from July 2022

to March 2023, six interest rate hikes totalling 350BP.

This makes the banking industry in the development of balance sheet management face serious challenges; most banks have a series of thunderstorms. On March 2, 2023, Blackstone Group defaulted on \$560 million worth of commercial real estate mortgage-backed securities, shattering investor confidence. On March 10, Silicon Valley Bank suffered a run and its share price plunged 60%. On March 11, Silicon Valley Bank was shut down by California regulators, and Silicon Valley Bank officially declared bankruptcy. In just 48 hours, Silicon Valley Bank experienced a public capital raising, a massive run, and a collapse in market value before it went bankrupt and was taken over by the FDIC. On March 12, Signature Bank was closed by the New York State Department of Financial Services. This has increased market panic and increased market vulnerability. In this context, Credit Suisse, as a bank with a high proportion of investment banking business, will not only face a more severe maturity mismatch problem in the face of interest rate hike, but also bear greater liquidity contraction pressure, resulting in further operational difficulties.

But then Credit Suisse imploded. On March 14, 2023, Credit Suisse announced its 2022 financial results. The report showed that the bank's loss in 2022 was the largest since the 2008 financial crisis, and the net profit loss attributable to shareholders reached 7.293 billion Swiss francs, more than four times the loss of 1.65 billion in 2021. It said it had found "significant deficiencies" in its reporting procedures for 2022 and 2021 and was taking remedial plans.

2.3. Shareholders Refused to Bail Out the Crisis

At this time, Credit Suisse needed help to fix the "material weakness" of the financial results, and the capital injection support of major shareholders was the last chance for the bank to save itself. But the biggest shareholders "never" dealt it a fatal blow.

On March 15, 2023, the day after the announcement of the financial results, Amar Al Hudari, chairman of the Saudi National Bank (SNB), the largest shareholder of Credit Suisse, said in an interview with the media: "There will be absolutely no further liquidity support to Credit Suisse." This is mainly because SNB's stake in Credit Suisse is currently at a "limit level" of 9.9 per cent. Once the shareholding exceeds 10%, both domestic regulators in Saudi Arabia, Switzerland and the European Union will comprehensively enhance the level of scrutiny, and many new regulatory rules will be triggered.

Although the SNB chairman cited regulatory and regulatory constraints as the main reason for his confidence in Credit Suisse. But the withdrawal of the backing by the largest shareholder still sent confidence in Credit Suisse plunging. Customers rushed to withdraw their money from banks. According to the Wall Street Journal, Credit Suisse is facing client outflows of up to \$10 billion a day. Stock prices plunged again, with Credit Suisse's European and American shares closing down more than 20% on the day, falling below 2 Swiss francs for the first time on record. They fell more than 30% around March 16. Bond markets have also come under fire. The one-year credit default swaps (CDS) on Credit Suisse bonds rose from 835.9 basis points at the end of the day on March 14 to nearly 1,000 basis points (higher CDS prices indicate a higher probability of default), which is more than 10 times that of European peers such as Deutsche Bank and UBS.

2.4. M&a Crisis of The Century

After experiencing volatility in the stock and bond markets, on March 15, 2023, French Prime Minister Borner called on the Swiss side to intervene and "solve" the problem, while saying that the French and Swiss finance ministers would hold talks on the same day. The Swiss National Bank SNB and the Swiss Financial Market Supervisory Authority FINMA issued a joint statement on the market uncertainty, saying: "The problems of certain banks in the United States do not pose a direct contagion risk to the Swiss financial market. Credit Suisse meets the capital and liquidity requirements for systemically important banks. If necessary, the Swiss National Bank will provide liquidity support to Credit Suisse." On March 16, the official website of Credit Suisse International announced that Credit Suisse, through the exercise of its option, borrowed up to CHF 50 billion of secured loan facilities and short-term liquidity facilities from the Swiss National Bank (that is, the Swiss National Bank), which are fully guaranteed by high-quality assets.

But after a swift \$50 billion injection of funds from the Swiss central bank in Europe and the United States, the interbank market still rejected Credit Suisse's paper transactions, and counterparties did not consider continuing to trade. Just in time, on March 20, 2023, UBS Group (UBS) reached an agreement with Credit Suisse and the Swiss National Bank to acquire Credit Suisse for \$3.23 billion. Under the terms of the deal, UBS bought Credit Suisse for \$3.23 billion in a deal aimed at averting a broader financial crisis. The Swiss government backed the deal by providing liquidity support - guaranteeing UBS losses of up to SFr9 billion (\$9.7 billion) - and waiving the requirement to obtain shareholder approval. Credit Suisse shareholders will receive one UBS share for every 22.48 Credit Suisse shares they hold.

The deal sets two precedents. The first is that shareholders are deprived of the right to decide. The acquisition of shareholders does not have the right to vote, equity investors will lose more than 60%. Secondly, the risk of debt is higher than that of equity. The deal was designed to bolster Credit Suisse's core capital by completely writing down Credit Suisse AT1 bonds with a face value of \$17.2bn, leaving holders of Credit Suisse AT1 bonds with nothing. However, to the dissatisfaction of creditors, Credit Suisse AT1 bonds were completely written down, but retained part of the interests of shareholders, which violated the priority enjoyed by bondholders in the corporate crisis, broke the general repayment order of debt over equity, and made bonds riskier than equity.

3. The Cause of The Credit Suisse Banking Crisis

3.1. The Economic Downturn Reduces the Asset Quality of Banks

In the third quarter of 2022, European GDP grew by about 0.2% quarter-on-quarter, almost stagnant. At present, Europe is mainly facing the COVID-19 epidemic, the Russia-Ukraine conflict political crisis, high inflation and other problems, combined with the tightening of major central banks, trade demand, risk aversion and other factors, increasing asset volatility and vulnerability. Credit Suisse's loan loss provisions have increased sharply since 2019, with an average growth rate of 260%. From the perspective of enterprises, under the severe macro situation, some enterprises

cooperating with Credit Suisse, especially those with high leverage and high business concentration, have problems such as deteriorating financial condition, declining solvency, and difficulties in capital turnover. With the decline of corporate collateral value and realization efficiency, Credit Suisse is faced with increased credit risk, default probability and default loss rate. The Russia-Ukraine conflict, for example, exposed Credit Suisse to SFr244m of exposure to Russia, while the pandemic hit the supply chain and caused Greensill to go bust. From the banking side, Credit Suisse holds a large number of trading and investment positions in the stock market, hedge funds, private equity, real estate and other fields, and market fluctuations will affect the fair value of assets. At the same time, banks are a pro-cyclical industry, and macro factors will affect customers' economic activities and product demand, resulting in business obstruction or interruption.

3.2. Over-reliance on Risky Investment Banking

Credit Suisse's former risk chief constantly emphasised the "commercialisation" of its risk and compliance departments and "alignment with the front office", leading to a culture of risk chasing short-term profits. Credit Suisse's aggressive global expansion strategy, focused on the U.S. market and riskier areas such as mortgage debt obligations and underwriting leveraged buyout loans, has long maintained an average of more than 40% of net investment banking revenue. From a horizontal comparison, the proportion of investment banking revenue of Morgan Stanley, Goldman Sachs and other investment banks has remained below 25% for a long time, which is much lower than the proportion of Credit Suisse. At the same time, in terms of client selection, Credit Suisse has the problem of high risk and low return. When Credit Suisse failed to fully hedge counterparty credit risk, it cooperated with clients with high leverage, high credit risk and high business concentration, and in order to maintain customer relationship and constantly meet customer demand, it constantly exceeded the risk exposure limit.

3.3. The Independence of The Risk Management Department Is Insufficient

The risk department should be relatively independent from the business line, with an operating mechanism to form checks and balances, and Credit Suisse's risk department is not independent enough. On the one hand, the business is not independent. Risk management exists the phenomenon of "cooperation", "compromise" and "fraud", in order to cooperate with business development, reduce the business threshold, lower management requirements and tolerance. On the other hand, the risk department is in a relatively weak position compared with the front desk department due to insufficient resource allocation, small number of personnel and insufficient professional degree, resulting in the failure of "risk control under the command of business" and risk early warning.

3.4. Inadequate Monitoring and Reporting Mechanisms

Comprehensive risk management is a new stage in the evolution of risk management, including risk governance, cultural construction, risk measurement, information communication and reporting system and other links. However, Credit Suisse has obvious shortcomings in the

monitoring and reporting mechanism, and does not adhere to the principles of timeliness and effectiveness in risk monitoring. The construction of data system is lagging behind, and some data relies on manual reporting by business departments. The risk department of Credit Suisse is faced with the problems of data dispersion, low quality and lagging update, which makes it difficult to meet the timeliness of risk monitoring. At the same time, the stress test results have some problems, such as separation from the customer's actual situation, artificial adjustment scenario, tail risk scenario failure, etc., which is difficult to meet the effectiveness of risk monitoring. In terms of reporting mechanism, risk management responsibilities and reporting paths are not clear enough, there is a lack of effective risk information transmission channels, some types of risks are reported to the head of the front desk technical department, and the information delay further expands the extent of losses. In the Arcegos case, for example, the Board was never briefed on the risks before the crisis. Overall, Credit Suisse's crisis was mainly affected by external economic shocks, risky business preferences and weak risk management culture, and losses mostly occurred in cross-border investment banking.

4. The Impact of the Credit Suisse Crisis

4.1. Market Confidence Has Been Hit Hard

The essence of financial institutions is customer confidence. The market has lost confidence in the banks as they continue to thunder and the government continues to do everything it can to save them. So, even if the US government stepped in to provide liquidity to the banks and the Credit Suisse takeover took place, the markets must have been very nervous, especially after this unprecedented zeroing of bonds ahead of equities.

From an investor's perspective. In the rescue, AT1 bonds will be written down to zero, a move that is bound to cause investors to lose confidence in such products. Because the market will add this layer of potential risks to the product in the future, the market will probably reprice, and when the bank issues such products, the cost will also increase accordingly. From a banking perspective. Credit Suisse, as Switzerland's second largest bank, the country's fifth largest syndicate, systemically important bank, from the disclosure of financial problems, stock price collapse, to the announcement of a 40% discount "cheap" acquisition only took a week. In addition, the Silicon Valley Bank and other European and American banks have been thundering, which has greatly affected the market's confidence in the banking system. In addition, central banks continue to cover up problems without a bottom line, which also reduces market confidence in banks. When markets lose confidence in the banking system, money tends to flow into tangible, guaranteed assets such as gold, Treasury bills and the yen. From the perspective of financial markets. The major adjustment of the interest rate policy of central banks in Europe and the United States led to sudden changes in the market environment, a series of bank thunderstorms, and huge fluctuations in the stock market and bond market. Although the outcome of Credit Suisse has been determined, the market panic is still high. In order to prevent the weakness of the European and American banking system from "point to point", and the risk from a single bank to the entire industry and the market, may force the Federal Reserve and the European

Central Bank to adjust the interest rate policy in the future, these are unknown. The serious problem of information asymmetry in the financial market has hit the confidence of the financial market even more.

4.2. Increased Financial Vulnerabilities in Markets

The Swiss government's partnership with the central bank and UBS eventually saved Credit Suisse from bankruptcy and temporarily halted further contagion into global financial markets. But Credit Suisse's shock is hard to overcome in the short term.

On the one hand, the risk aversion of stakeholders easily leads to the accumulation of risks. After experiencing the European and American banks continuous "burst of thunder" after the blow, market confidence is difficult to recover in the short term, risk aversion mood significantly enhanced. At present, there are various speculations about the potential "black swans" in European and American banking, thus reinforcing the vulnerability of the market. Credit Suisse's equity and bond entities and Business Object are very broad, and the follow-up bailout will involve many stakeholders. Any windfall may trigger a chain reaction in the financial markets, or even a sudden accumulation of financial risks. The bailout, for example, uses elements of stabilization and emergency legislation rather than customary shareholder protection laws, which would result in a write-down of Credit Suisse's AT1 debt, this means that holders of Credit Suisse's AT1 will bear the full cost of write-downs, which amount to SFr16bn, and a flood of lawsuits will adversely affect market expectations, making a successful acquisition likely to trigger a sell-off in the financial markets.

Second, the risk of spillovers remains vigilant. At present, the European and American banking industry experienced the crisis of Credit Suisse Bank, the financial market fragility has further strengthened, and the slightest change will bring serious impact to the financial market. In addition, with the deepening of economic globalization, risks are spreading more quickly among financial institutions and market players and have a wider impact. The banking crisis will not only affect the financial market of our country, but also spread rapidly in the market along the contagion path of the banking crisis. Moreover, bank risks in Europe and the United States have not yet been fully released, and the European debt crisis has been looming. If these risks are interrelated, a new storm may be formed on the global financial markets. Moreover, moral hazard is increasing. The moral hazard of bank bailouts has been troubling regulators. In this regard, the EU tries to raise the capital adequacy ratio of banks according to the Basel III agreement, strengthen the prior supervision to realize the stability and safety of banks, and reduce the moral hazard. The US has emphasized market discipline, reinforcing the "give up" signal by weighing regulatory costs against bailouts. However, judging from the final disposition result of the bankruptcy of Silicon Valley Bank and Credit Suisse, they have received the government's assistance in varying degrees. Behind them, banking institutions have been playing games with the government and regulatory authorities, without taking the interests of taxpayers and investors into full consideration. Thus, bank bailouts, while contributing to financial stability, would also weaken the banks' self-discipline motivation, and would be detrimental to the long-term health of financial markets.

4.3. Financial Risk Spread

Credit Suisse Bank, as a systemically important bank, plays an important role in the financial market. When Credit Suisse's problems occur, it will have a ripple effect on financial markets

A Banking Crisis Contagion Based on Information Channels: Credit Suisse's banking crisis has caused a lot of information interference and caused serious information asymmetry. The deposit and loan are the main asset business of Credit Suisse Bank. This will lead to the bank depositors' runs, and will affect the normal operation of other banks. This will speed up the contagion of the bank crisis and expand the scope of the contagion. Second, banking crisis contagion based on credit channels: Credit Suisse, Switzerland's second-largest bank, has a wide range of operations, and is closely linked with other financial entities, with a growing volume of transactions. A banking crisis is bound to hit Switzerland's reputation in financial markets. And in recent years, the business intercourse between banks is more and more frequent, the scope of transactions is increasing, the creditor's rights relationship between banks is neither mortgage nor insurance, so that a bank crisis will easily cause chain reaction and quickly spread to other banks. Third, banking crisis contagion based on payment clearing system: Credit Suisse Bank is a leading bank in Switzerland. Its strength is strong and its capital system is huge. Its thunderstorm has brought about a large number of banks runs on deposits and serious debt repayment problems. This will inevitably cause a huge chain reaction and bring a huge blow to the interbank capital clearing system.

In short, the Credit Suisse crisis will affect several major areas. This will have a direct impact on the banking system in Europe and the United States. Second, it will affect the normal operation of the securities market, especially its huge AT1 bond problem, which will bring serious information asymmetry to the bond market, and may lead to market failure. Third, it will also affect investors, not only causing serious losses to investors, but also seriously impacting their market confidence, and then bringing negative feedback effects to financial markets. Fourth, it will bring greater challenges to the financial supervision of the financial supervision authorities. Fifth, it will produce risk spillover effects that cannot be ignored, which will shock the international financial market, further increase financial fragility, trigger greater risks and bring about more serious consequences.

5. Revelation

5.1. Strengthening Macroscopical Situation Study and Judgment

The global macro-economy is facing uncertain factors such as repeated epidemics, high inflation, and monetary policy adjustment in developed economies, which have an impact on emerging economies, including China. Commercial banks should proactively prevent and control risks and set up risk appetite matching the risk-taking level. On the one hand, commercial banks should strengthen risk study and judgment, actively respond to the spillover effects of policy adjustment and political events in developed economies, and adjust domestic monetary and fiscal policies, and continuously optimize risk management strategies of banks to ensure that they are in line with their own development, management level and market environment. On the other hand, commercial

banks should grasp the direction of industrial policy adjustment, optimize the structure of credit industry and term structure, increase support for key areas such as logistics, transportation, food security, scientific and technological innovation, green development, and reduce policy risks.

5.2. Systematic Risk Management

One of the reasons for the crisis of Credit Suisse is that risk control is ineffective, background checks of front-office departments are mere formalities, and stress test results of risk departments are artificially tampered with. Commercial banks should integrate the foresight, overall and initiative of risk management into every link of operation and management, and fulfill the responsibility of risk prevention and control before, during and after the event. On the one hand, commercial banks should strictly implement pre-loan audit and post-loan management, timely follow up and analyze the operating status of existing customers, and fully grasp the financial status of customers. On the other hand, commercial banks should actively carry out stress testing, improve the measurement methods and the coverage of scenarios. Proactively manage the exposures of risk industries. Strengthen the limit management for industries with long periods, high sensitivity, and high concentration. Respond in a timely manner to situations where the limit is exceeded, and clarify the owner and reporting path. In addition, commercial banks should establish and improve reputation risk management system, and it is suggested that reputation events should be included in the scope of assessment.

5.3. Digital and Intelligent Risk Management

Credit Suisse's data governance and early warning mechanism lag behind is an important reason for its slow risk response and large risk loss. In terms of digitalization, it is recommended to integrate internal and external data in multiple dimensions and levels, improve the standardization and standardization of underlying risk data and the automation of data summarization, and break down information silos and data barriers to share internal information. Proactively build data centers, improve big data analysis capabilities, and strengthen data enablement. At the

intelligent level, explore the application of emerging technologies such as big data modeling and artificial intelligence in risk prevention and control, and build a human-machine intelligent risk control platform. Improve the functions of the risk early warning platform and risk monitoring platform, and strengthen the transformation of intelligent risk control from post-event management to pre-event management, offline management to online management, and static management to dynamic management.

5.4. Strengthen Financial Supervision

To strengthen supervision and control, we must focus not only on large organizations, but also on medium and small organizations. It is important not only to monitor anomalous behaviour of institutions and markets, but also to focus on specific behaviours and converging changes. Finance has its own risk genes. Banks are highly pro-cyclical. Rapid adjustments in the external environment and macroeconomic policies in the short term will inevitably bring about asset price revaluations and changes in institutional and market risk appetite, amplifying risk exposures, intensifying pro-cyclicality, and promoting a substantial adjustment of assets and liabilities. We should attach importance to the combination of macro-prudential supervision and micro-examination supervision.

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