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Banking Risk Assessment under COVID-19 Pandemic

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Abstract: Since the banking industry is a crucial component of the financial markets, how to manage it is an important issue, especially the aspect of risk management, in which, some commercial banks perform poorly. This research uses the definition and some cases introduce what is the meaning of liquidity risk, credit risk, market risk, and systemic risk. Then this paper takes some big-name banks such as SVB, and Credit Suisse as examples and researches their management ways when facing risk to prove the necessity of risk management and why banks should deal with the risk. Additionally, the author cites Basel III to emphasize the importance of the capital adequacy ratio which can obtain the capital markets stable. This research draw a conclusion that how the banking industry should manage the risk and what measure should they take when facing corresponding risk, only by managing the risk reasonably, the banking industry can maximize risk reduction and increase the revenue to obtain operation. With this, in the future without covid-19, the banking industry can be more stable.

Keywords: systemic risk, banking risk management, COVID-19 crisis

1. Introduction

Since 2019, COVID-19 has evolved into a major public health event affecting the world. Based on the Human Mortality Database, the average life expectancy was measured in 27 countries (mostly developed countries in Europe and America) for the period 2020-2021 (as of 26 September 2021), and age-based differentiation of the changes in the average lifespan [1]. It is no doubt that COVID-19 affect people's health, but much research reveals that it is only one aspect influenced by COVID-19, another crucial aspect is the economy, consumption is the leading driver of economic growth in most country. Strict isolation and prevention control will be implemented during the outbreak, which will significantly reduce consumer demand from the consumer side and will have a big impact on the services sectors such as tourism, catering, leisure entertainment, and aviation logistics. Obviously, the banking industry is not an exception. Most of the policies put emphasis on the commercial enterprise or individuals, such as increasing allowance and credit volume, strengthening the support in fiscal policy, and so on. But commercial banks took very little profit from these policies. During the COVID-19, the amount of deposits absorbed by the bank decreased, due to the interruption of work, they may withdraw money from the bank to sustain life, which squeezed the commercial banks into certain content, these factors triggered excessive liquidity risk, market risk, credit risk, and systemic risk, several big names commercial banks failed to survive during this three year, such as SVB and Credit Suisse, to name but a few. But what factor triggered these risks, what point did they fail to deal with and how to tackle the problem is an issue that deserved to discuss. Compared to previous studies,

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this research put more emphasis on the reason and measures to discuss risk management in the banking industry under COVID-19, it uses a brief definition to introduce the four kinds of risks respectively and apply some cases to prove the importance of the risk and how to deal with these risks in a correct way. After drawing conclusions, this research tries to lead the readers to understand the different risks further and raise the awareness that commercial banks should treat the risk reasonably and take the corresponding measure when it comes, with which, they may repeat the same way of SVB and Credit Suisse, even in the future without the covid-19, the financial markets will operate better.

2. Liquidity Risk

Liquidity risk is mainly produced by the time when banks are unable to cope with liquidity problems caused by falling liabilities or increasing assets. When a bank lacks liquidity, it cannot rely on the growth of liabilities or the rapid realization of assets at reasonable costs to obtain sufficient funds. That is the reason why lacking liquidity may affect their profitability. In extreme cases, liquidity can cause banks to fail.

It takes some rural banks in Henan Province, China, as examples. Excessive liquidity risk imposes them to become bankrupt, which cause them to lose the ability to meet customers' demand for cash, China Banking and Insurance Regulatory Commission and the local financial supervision bureau helped them advance customers' deposits in batches, which was watched by the whole country [2]. The reason why they become bankrupt now is inappropriate management. In some economically undeveloped areas, the leader of the bank is short of experience in how to manage the liquidity risk, which directly causes they to lose the ability to obtain daily operation, and at last, they go into bankruptcy and even trigger some illegal behaviors that give them false illusion to survive.

Rural banks as new rural financial institutions, except for some general risk in other commercial banks, rural banks have their particular feature [3]. Firstly, their small capital size influences their risk resistance ability [3]. The main customers of these rural banks are tiny companies and farmers, their small amount of deposits and relatively poor credit may leave hidden trouble to the banks. Secondly, the probability of simultaneous outbreaks is high[3]. When a rural bank performs a tiny problem, farmers are likely to spread this information in an incorrect way which may cause panic, they may squeeze the bank, which leads to bankruptcy. Thirdly, due to their heavy amount and remote locations, it is difficult to supervise the liquidity risk [3].

So, how should rural banks tackle these problems? They should achieve five points: making liquidity forecast, strengthening liquidity management, participating in the operation of the currency market actively, improving warning of risks, and reinforcing external supervision. Especially under COVID-19, banks should do more to manage the liquidity risk. Because during this time, the liquidity risk in commercial banks becomes more prominent, due to the interruption of business activities. Commercial banks' general deposits descended, especially public deposits, although every bank takes measures to stabilize the deposit. The decline of the general deposit still pays a negative impact on the liquidity supervision index [4]. Furthermore, cash flow steaming again has heavy pressure, but funds supporting the resumption of work and production will gradually increase. During the COVID-19, small and medium businesses' incomes are significantly lower than expected, and short-term ability to pay off must decrease, especially in some retailing and the catering industry, to name but a few, with the resumption of the company, loan demand will gradually rocket, that is a challenging demand for credit management ability of commercial banks [4].

Commercial banks must improve their ability to manage liquidity risk. They should reinforce the test of liquidity risk pressure and arrange the emergency plan, the test give focused on the quantitative analysis, by calculating the loss of commercial banks when the extreme case happens. After this, the

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banks' leader should assess and judge the fragility of liquidity risk to take further measures [4]. Additionally, improving dynamic asset and liability management capabilities is an inevitable process, it means strengthening the stability of financing sources in determining the amount, structure, and period of assets and liabilities, they should take liquidity risk into full consideration. Last but not least, commercial banks should improve the construction of liquidity risk management information systems, achieving refined dynamic liquidity risk management [4]. Through this, commercial banks can manage liquidity risk better.

3. Credit Risk

Credit risk refers to the possibility that the borrower fails to repay the principal and interest of the loan on time or fails to repay the loan after the deadline, which may cause changes in the income of commercial banks. Generally speaking, credit risk can be divided into two categories. The first category mainly comes from the production and sales risks of enterprises (i.e. the risks caused by changes in market conditions, production technology, and other factors in the process of production and sales of commodities by the borrowers), another category of risks mainly refer to natural and social risks. Natural risk refers to the risk that the borrower suffers economic losses due to natural factors and fails to repay the principal and interest of credit. Social risk refers to the risk caused by the behavior of individuals or groups in society.

Now problems in commercial banks' credit management mainly exist in six aspects. Initially, basic management is weak, which leads to serious gaps in credit files. Secondly, the separation of loan examination and lending system is not strictly implemented. The main performance is the loan separation institutions are set up slowly. Examination and loan separation institutions are mere forms. The next points are their slack in loan policies and weak law knowledge of loans, which make the commercial banks lack legal consciousness and lead the loan to lose legal protection. Additionally, the internal supervision is not sound, the credit management system has loopholes, and the management of managers is ignored. However, the most crucial problem for commercial banks is illegal account operation, it is not only involved in taking the form of private off-book accounting, and misusing accounts but also involved in adjusting accounts and loans around the scale.

Fundamentally, the main cause of the above problems lies in credit management is not sound. Credit Suisse is a typical case, which is the second-biggest bank in Switzerland. Unfortunately, it collapsed in March 2023, it is likely to lay a negative impact on Switzerland's reputation [5]. Who should take the main responsibility for the collapse of Credit Suisse? It is no denying that management confusion is a crucial factor, CEO's resignation is the beginning. Chairman's resignation makes the bank out of management thoroughly [5]. In mid-2023, due to the distrust of Credit Suisse, $119 billion is taken away by their customers, which directly lead the bank to bankruptcy [5]. Therefore, without credit risk management, collapse is an inevitable trend. But how to manage it? Strengthen the management before and after the loan, a sound pre-loan and post-loan management can reduce credit risk [6]. Moreover, commercial banks should promote the application of data technology, the use of data technology can enhance the degree of information sharing, help the staff obtain more comprehensive customer information, and then judge the ability of customers to return loans [6]. Besides, establishing an effective internal supervision mechanism and improving the quality of employees is still meaningful. It is necessary to realize the full convergence of internal audit work, to prevent in advance, participate in the process and supervise afterward, so as to avoid the adverse impact of credit risk on commercial banks in advance [6]. Publicizing and cultivating the risk awareness of credit risk management for all employees from top to bottom can efficiently tackle the second point, which can keep the credit operation stable in case their leader or boss resigns.

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4. Market Risk

Market risk refers to the risk that the price or value of derivatives will change as a result of adverse movements or sharp fluctuations in the market prices of the underlying assets. It contains four categories: interest rate risk, Exchange rate risk, Stock price risk, and Commodity price risk. Especially the rate of interest, interest rate risk refers to the risk of investors' capital loss due to changes in interest rates in the market. Interest rate risk is divided into repricing risk, options risk, benchmark risk, and yield curve risk.

Among these four kinds of market risk, the most well-known one is interest rate risk. That is the main reason why Silicon Valley Bank collapsed. It is the second biggest failure in banking in American history. Why did such a large bank get into the dilemma? Weak management of interest rate risk is a vital factor. Several blunders were made by this bank. The most serious one is putting excessive emphasis on Treasure bonds when the interest rate is low [7]. Until the end of 2022, $120 billion in investment securities was reported by the SVB, which standing 55% of its assets, but treasuries and mortgage-backed securities comprised three-quarters of its investing portfolio [7]. In fact, from the perspective of credit risk, it belonged to safe investing. However, SVB neglected the potential interest rate, with the rapid rising of the interest rate. The value of stocks and bonds is inversely proportional to the interest rate, the value of the assets owned by SVB declined sharply, they must sell their assets to obtain the bank operation. Once the news spread quickly among the folks, they squeeze the bank by withdrawing the deposits. To some extent, the interest rate risk triggered liquidity risk. It is no doubt that this trend is an omen of bankruptcy. Of course, the tremendous growth in deposits and the sharp decline in loans during COVID-19 are also factors. Before its bankruptcy, it was known as one of the biggest banks in the world. It presented without the risk management how fast the financial markets change, banks in every corner of the world should draw some lessons. When interest rate increases sharply, staff should weigh all possible outcomes, and analyze all situations. Some general measures of managing market risk are composed of risk aversion, acceptance of risk, risk diversification, and risk transfer. What needs to notice is that it is a general not an optimal method, banks require different strategies to cater to different situations.

But four kinds of ability to resist market risk are necessary, the ability of fund management, the ability to avoid risk, the ability to unwind risk, and the ability to turn losses around. With this, banks can resist market risks in unpredictable markets.

5. Systemic Risk

Initially, what is the systemic risk? What is the difference between the three mentioned risks? In fact, the risk that is inherent to the entire market or market sector is referred to as systemic risk. Systematic risk, also known as volatility risk, market risk, or undiversifiable risk, has an impact on the entire market, not simply a certain stock or sector [8]. However, market-wide systemic risk is given, reflecting the influence of monetary, geopolitical, and economic variables. Unsystematic risk, which affects a particular sector of the economy or type of security, is distinct from this sort of risk.

Systematic risk is frequently regarded as challenging to avoid because it is entirely unpredictable. But by creating a diversified portfolio, investors can slightly reduce the impact of systematic risk [8]. Additionally, another factor can also reduce systemic risk. That is the capital adequacy ratio, capital adequacy regulation can ensure that commercial banks have sufficient capital, which can provide financial guarantees for their daily operations, capital circulation, business expansion, and improved efficiency [9]. Furthermore, capital adequacy regulation not only provides detailed risk measurement methods but also prompts commercial banks to monitor their capital adequacy status and change trends daily under the pressure of capital regulation to detect the risk of asset depreciation in a timely manner [9]. As Basel III says, it requires that the bank's capital adequacy rate is not less than 8% and

the core capital sufficiency rate is no less than 6%. In addition, Basel III also purposes that commercial banks should have strict capital deduction restrictions, expand risk asset coverage, introduce leverage, and strengthen liquidity management. After several milestones in financial markets, expectations for systemic risk analysis and macroprudential policy (MPP) recommendations are outlined in Fund policy and operational instructions [10]. The operational advice defines a fully integrated study of macro-financial links and systemic risk, which is what the TSR called for to be a fundamental component of Article IV consultations [10]. The employment of principally prudential measures to reduce systemic risk is considered a crucial stage in the formulation of macroprudential policy recommendations, financial distortions that might cause long-term accumulation of vulnerabilities or structural vulnerabilities inside the financial system are what give rise to systemic risk [10]. Advice on the macroprudential policy should be supported by a thorough risk assessment that is guided by a perspective on systemic risk. Systemic risk has multiple dimensions, and it may be increasing in one dimension while decreasing in another. The staff's recommendations for macroprudential policy should therefore begin with a thorough and rigorous analysis of systemic vulnerabilities to establish an understanding of the scope of systemic risk and its causes. These weaknesses may be broad-based or sector-specific, structural or time-varying.

6. Conclusion

To sum up, it is no denying that risk management is necessary, especially under COVID-19. All liquidity risks, credit risks, market risks, and systemic risks can influence the development of the economy and finance, and every type of risk has its own tackling measure and main cause. Commercial banks should deal with different risks in the correct way. Taking systemic risk as an example, all of the banks should strengthen supervision and ensure the capital adequacy ratio.

Now, there is a new issue, with the collapse of many big-name commercial banks. More and more people increasingly worry about whether the banking industry should accept Basel IV. In other words, commercial banks should raise the capital adequacy ratio to safeguard financial markets and make the markets more stable, but there are still problems with the study, sometimes, the blame cannot be placed solely on the bank. Because interest rates, monetary policy, and fiscal policy are controlled by the country, instead of commercial banks, these factors influence risk management directly. When meeting problems, if the government cannot be sensitive to the market or cannot react promptly, commercial banks will also be affected. So, both the government and commercial banks should draw some lessons from the collapse of some commercial banks all over the world to manage the risk reasonably, by which, commercial banks can run the company better in the future.

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