Evaluation of Credit Risks Existing in Chinese Commercial Bank

Zheng Ge[1|*]

[1] *Tippie College of Business, University of Iowa, IA, 52240, USA*
**zheng-ge@uiowa.edu*

ABSTRACT

The research is to introduce to the readers what is credit risk and how serious the credit risk is in current years. The loan can be defined as five levels in credit risk, and they are "normal loan" "concern loan" "subprime loan" "suspicious loan" and "loss loan". Each level of the loan has a different probability of loan loss related to credit risk. In Chinese commercial banks, there were still many flaws that needed to be improved, including no targeted credit risk management methods, imperfect data processing system, and lacking talents. Aiming at the three main problems, more serious regulation to the credit risk management system, using updated equipment, and hiring more professionals can effectively deal with the problems. Although the paper analyzes and gives suggestions to only three problems of credit risk existing in Chinese commercial banks, the direction is the most important point that the article emphasizes. The research also tried to remind people of how serious the credit risk is and how urgent it is to perfect credit risk management methods.

Keywords: Credit risk, loan, credit risk management

1. INTRODUCTION

Under the impact of the financial crisis, the global economy has suffered a lot. Especially under today's background of coronavirus, many actions taken to release the epidemic stress cause the economy to develop at a very slow pace. With the many businesses getting restarted, credit risk caused by the loan is becoming non-negligible nowadays [1]. Based on the study on credit risk from commercial banks in China, we are going to see the existing problems nowadays, such as the level of credit risk management is seriously lagging, the internal management system of credit risk is imperfect and the external supervision and restraint system of credit risk is not sound. To deal with the problems, we have to figure out the key sally port and the suitable solutions. In this article, we are going to analyze some great and bad examples of credit risk management to conclude why they are successful and why they are failed. This article would be divided into 3 main parts. In the first part, we are going to introduce what is credit risk and the main categories of the credit risk level. Existing problems that existed in Chinese commercial banks nowadays would be included in the second part. In the last third part, we are going to analyze several solutions aim at the problems mentioned in the second part.

1.1. Related Research

Koulouridi et al. studied how COVID-19 influence the development of the economy and credit risk management after the epidemic. To avoid COVID-19 spreading, many businesses were required to shut down and many employees lose their jobs causing the economy hard to develop. Nowadays, with the restarting of many companies, the loan is facing a new challenging environment. To adapt to the pace, banks have to evaluate whether borrowers have the ability to pay back and prepare to deal with the problems caused by credit risk [1].

Basel researched the principles of credit risk management and they conclude that there were too many sources that would cause credit risk, and the loan is one of the biggest sources. Credit risk can be defined as the probability that the borrowers have no ability to pay back as the contract stated. Based on it, banks need to consider any factors that would cause credit risk and well-prepared solutions if credit risk happened [2].

Beijing Court Regulations stipulate explicitly the objective and standard of loan classifications, the basic requirements of loan classification, and also the implementation and management of loans. In the regulation, loans can be classified into five levels, which

include normal, concern, subprime, suspicious, and loss. The last three categories were collectively called non-performing loans [3].

Staff researched the changes in credit risks during the period of epidemic. Under the influence of COVID-19, bad loans are getting serious due to many companies wanting to restart. According to CBIRC, the non-performing loan rate is getting higher than before and they will take actions to avoid the risks [4].

Pengpai news analyze the reasons why Baoshang bank went into liquidation and conclude some inadvisable actions. A non-performing loan is one of the biggest reasons causes Baoshang bank existed serious credit risk. A big loss in operation is the other factor [5].

Härle et al. studied the future of bank risk management, and there are six big trends. The first big trend is that the monitoring will keep broadening. The second tendency is that the expectation of customers will be higher with the development of technology. The third trend is that technology is developing and it can help forecast the credit risk more accurate. There would also be more risks in the future, but risk function can effectively help banks deal with the problems. The last trend is that the stress of cost-saving will be continuing [6].

Navarro researched the top 5 risks of using outdated measurement tools. One of the biggest risks is that online criminals would have chances to attack and steal important information from the database. Besides the problems of incompatibility and drop in productivity, losing data and causing bugs in the system are nonnegligible. There might be big mistakes caused by the outdated risk management tools in forecasting risk [7].

Cloutier and Folly-Darlis studied supervisors' focus on credit risk in the first quarter of 2021. Because of COVID-19, banks are easy to be affected by the changes in credit risk. With the non-performing loan increase, supervising is required to control the non-performing loan rate [8].

Guo et al. analyzed the ERP credit management system which can be used to make reliable credit decisions when there is a need. By using the system of ERP credit management, every sale order can be checked by credit managers to make sure there is no illegal situation, and ERP would collect each customers' information to access. Not only providing detailed customers' credit information to us but also updating the customers' information timely is also the big function of ERP credit management, so that the commercial bank can excavate potential customers more efficiently [9].

Brown and Moles researched several different approaches to evaluate credit. To make sure the process of the deal goes well, credit analysts need to guarantee that their counterparty's credit rating. "Judgement

methods", "Expert Systems", "Analytic Models", "Statistical Models", "Behavioral models" and "Market Models" mentioned by Brown and Moles are very effective ways in accessing credit [10].

1.2. Objective

The research is going to analyze the categories of credit risk, and introduce the current status of credit risk in China. Although the loan rate dropped, there are still many credit risk problems existing in Chinese commercial banks. The paper will also analyze three all major problems that currently exist in Chinese commercial banks. Aiming at the problems, there is a great example of Baoshang bank explaining how important mastering credit risk management methods is. Finally, there would be some appropriate solutions to these existing problems.

2. WHAT IS CREDIT RISK

2.1. The definition of credit risk

Whatever for a company or for a bank, the customer is always one of the biggest sources of wealth. However, one of the biggest risks is also from customers, like credit risk. Credit risk can be defined as the possibility that any side of the contract fails to follow the contract obligation and finally causes loss to one party of both of the parties [2]. Mostly, credit risk happened not only in loans but also in any other businesses, like guarantees, investments, and so on. Credit risks are always being exhibited in the following several forms, and they are unable to repay the loan normally, unable to realize the mortgage, unable to realize the pledge.

2.2. The categories of credit risk

2.2.1. Normal loan

The probability of loan loss is 0. Commercial banks are confident in their borrowers about being able to follow the contract and can repay the principal and interest [3].

2.2.2. Concern loan

The probability of loan loss is no more than 5%. Although the borrowers are able to repay the principal and interest, there might be some bad factors causing borrowers to have trouble repaying the loan [3].

2.2.3. Subprime loan

The probability of loan loss is between 30% to 50%. Borrowers have trouble repaying the principal and interest, but they still can achieve it through mortgage something else [3].

2.2.4. Suspicious loan

The probability of loan loss is between 50% to 75%. Borrowers can't repay the principal and interest in full even they mortgage their property [3].

2.2.5. Loss loan

The probability of loan loss is between 75% to 100%. Borrowers are unable to repay the principal, and whatever any actions would be taken, there must be a loss [3].

3. THE PROBLEMS CAUSED BY CREDIT RISK

3.1. Analysis of the Credit risk of commercial banks in China

Compare to credit risk management abroad, credit risk management researchers in China have less time studying credit risk. Since commercial bank credit risk is very complex, formulating effective risk management strategies and methods is very necessary. China Banking and Insurance Regulatory Commission revealed that the non-performing loan ratio of 134 commercial banks is about 2.49%. Compared to the end of the first quarter, the non-performing loan ratio of thousands of rural banks getting 2.04% higher which is 4.9% [4]. The data shows that the non-performing loan rate is still very serious, and it is not hard to infer that nowadays non-performing loan has attracted many commercial banks and governments' attention. Baoshang bank is a great example explaining how important credit risk management is since it went broke because of serious credit risk on May 24, 2019. A huge loss in operation causing debts is much more than assets and the high non-performing loan ratio which reach 3.35% in 2017 are the two main reasons why Baoshang bank announce to the public about closing down [5]. CBIRC took over all of its business and they announced to the public the fact that Baoshang bank existed serious credit risk. The non-performing loan still has the potential tendency to be higher nowadays, also there would be more unfamiliar risks in the future [6]. Whether bad loan rates grow or not is related to the current economic environment. Based on it, a commercial bank should keep strengthening their management methods of risk prevention and control to drop the bad loan rate.

3.2. The existing problems of credit risk in China

3.2.1. Ignore the gaps between different risk management methods

Ignoring the importance of derivative risk, the factors that caused the credit risk, and the gaps between each credit risk management method are very serious problems in nowadays commercial banks. Since credit risk is keeping changing and getting more serious nowadays, many risk management staffs may not have the consciousness to adapt to the changing credit risk. There are two main reasons why it is hard for the staff to manage the credit risk. One of the reasons is that although the staff might focus a lot on analyzing credit risk, they might ignore the importance of analyzing market risk and operational risk. Except for the importance of analyzing more comprehensive risks, there are also differences in credit risk management between different regions and businesses. Once people ignore the differences, not only the original credit risk may not be solved, but also there might be some new risks.

3.2.2. Weak credit risk management system and inaccurate information

A weak credit risk management system is another problem existing in China now. Since many commercial banks nowadays in China have incomplete information system construction, commercial banks can't master the latest and complete information of their clients' individual or companies. Because of lacking basic data and materials, data analysis in credit risk may not be accurate and it might cause further credit risk analysis can't proceed. Even there might be easy tools to analyze the data of credit risk, lacking data would seriously affect the final results and cause the commercial bank didn't get familiar with their clients very clear. Based on the inaccurate results, commercial might need to face big losses finally.

3.2.3. Backward risk management tools and lack of high-quality risk management talents

Since everything is changing nowadays including the credit risk and uncertainty in the market, the outdated financial tools can't be used to hold the keeping changing data. It is highly possible that the outdated risk management tools would cause data to get lost or bugs in the operating system [7]. Therefore, aiming at the more complex data and credit risk, it would be infeasible in decreasing credit risk by using outdated financial tools and methods. Besides requiring updated financial tools and methods, risk management requires the managers to be trained professionally in adapting its variability. However, professional-trained managers with a high-comprehensive quality are very limited. Based on it, professional credit risk management teams always lack the talents, like people who work as financial engineers, or people who are familiar with risk management, and so on.

4. SOLUTIONS FOR EXISTING PROBLEMS

4.1. Strengthen credit risk supervision

The global financial crisis is a great example of emphasizing how important risk management is. Aiming at the problem of ignoring the gaps between different risk management, establishing a regulatory department that is responsible for credit risk would be very effective. Lenders should find out any factors that might increase credit risk and solve them in time by strengthening supervisory focus [8]. After setting up a professional regulatory department, one of the most important actions that should be taken would be improving various credit risk management systems. Since there are too many differences between different credit risk management methods, setting up a professional and private professional regulatory department is very necessary. It would also be very effective since the private regulatory department can figure out which would be the best way to deal with the problem of credit risk by analyzing its credit risk in the current situation.

4.2. Introduce advanced equipment and update the database regularly

To react to the credit risks, commercial banks should keep introducing advanced equipment and strengthen risk warning management in advance. Since many banks still have outdated equipment forecasting the credit risk rating, there is no doubt that there might be something that went wrong especially using outdated equipment to test a huge bunch of data. Also, data is keep changing now which means there must be a huge bunch of data in a database. Keeping updating the database regularly would help the credit risk managers analyze more accurately and completely. Like the ERP credit management system, banks can not only discover potential customers but also exclude any factors that would cause credit risk by using an updated database and system [9]. If it is necessary, making an appointment with clients and using the analyzed data to help them eliminate the bad risk factors timely would reduce the probability that commercial banks face losses in the future.

4.3. Hire more talents

There is an old saying in China that "Professional work should be done by professional people". To figure out which ways would be best to fit, there should be a lot of measurement ways being used to get the results. According to Brown and Moles, "Judgement methods", "Expert Systems", "Analytic Models", "Statistical Models", "Behavioral models" and "Market Models" are the five main models to measure the credit rating [10]. To successfully use the models and figure out the best ways, hiring talents who are proficient in finance, computer, law, and so on are very important. Taking credit assessment should be very necessary to the hired employees since they should have the abilities to react and take appropriate actions to sudden changes of risks that are affected by the changing market environment. Hiring talents is not enough in managing credit risk completely. Regularly organizing credit risk management training activities can make up for the flaw that the credit risk manager would get unfamiliar with the processes. Once the talents are hired and giving them regular training activities and tests, credit risk can be accurately assessed and being solved.

5. CONCLUSION

The paper introduced what is credit risk and the influences that a bad credit risk would bring. Although many places have already paid attention to managing credit risk, there were still a lot of ways that needed to be improved, like coming up with targeted and more complete risk management methods, introducing more advanced equipment, and hiring more talents with professional knowledge. Although the suggestions are not complete to deal with all the credit risk problems, observing law and discipline, keeping innovative thinking would help a lot in declining the loss brought by credit risk and studying more complete and effective ways in dealing with the credit risk problems. The paper concludes the failed example of Baoshang bank aims to remind people to pay more attention to how serious the credit risk is and to plan ahead.

REFERENCES

[1] Koulouridi, E., Kumar, S., Nario, L., Pepanides, T., & Vettori, M. (2020, July 31). Managing and monitoring credit risk after the COVID-19 pandemic. McKinsey & Company. Retrieved December 18, 2021, from https://www.mckinsey.com/business-functions/risk-and-resilience/our-insights/managing-and-monitoring-credit-risk-after-the-covid-19-pandemic

[2] Basel. (2000, September). Principles for the management of Credit Risk. Retrieved December 20, 2021, from https://www.bis.org/publ/bcbs75.pdf

[3] Guiding Principles for Loan Risk Classification. (2001, December 24). Retrieved December 20, 2021, from http://fgcx.bjcourt.gov.cn:4601/law?fn=chl242s073.txt

[4] Staff, R. (2020, May 25). China says Banks' bad loans high due to virus, credit risks grow. Reuters. Retrieved December 20, 2021, from https://www.reuters.com/article/us-health-coronavirus-china-banks-idUSKBN2320GI

[5] Pai, P. (2020, October 29). Reflection on the Baoshang Bank incident! PengPai News. Retrieved December 20, 2021, from https://www.thepaper.cn/newsDetail_forward_976 4117

[6] Härle, P., Havas, A., & Samandari, H. (2016, July 22). The Future of Bank Risk Management. McKinsey & Company. Retrieved December 20, 2021, from https://www.mckinsey.com/business-functions/risk-and-resilience/our-insights/the-future-of-bank-risk-management

[7] Navarro, P. (2021, June 14). Top 5 risks of using outdated software in your company. Business 2 Community. Retrieved December 20, 2021, from https://www.business2community.com/tech-gadgets/top-5-risks-of-using-outdated-software-in-your-company-02412185

[8] Cloutier, E., & Folly-Darlis, A. (2021, May). With asset quality on the Brink, supervisors' focus on credit risk is growing. KPMG. Retrieved December 20, 2021, from https://home.kpmg/xx/en/home/insights/2021/05/w ith-asset-quality-on-the-brink-supervisors-focus-on-credit-risk-is-growing.html

[9] Guo, Y. M., Wang, M. M., & Lu, J. (2011, April). The credit management system research of ERP. IEEE Xplore. Retrieved December 20, 2021, from https://ieeexplore.ieee.org/abstract/document/5954 607/authors#authors

[10] Brown, K., & Moles, P. (2008). Research methods for business students 5th Edition. Retrieved December 20, 2021, from https://ebs.online.hw.ac.uk/EBS/media/EBS/PDFs/ Credit-Risk-Management.pdf