Risk Management Analysis of Commercial Banks in China under COVID-19 Pandemic

Zelin Wei*

School of Economics and Management, Northeast Agricultural University, Harbin, China

*Corresponding author: Zelin.Wei@STUDENT.WUST.EDU.PL

Abstract. Since the G20 financial reforms were implemented in the wake of the 2008 financial crisis, the COVID-19 pandemic is the first significant test of the global financial system. In contrast to the 2008 financial crisis, the shock had an external origin. Indirect funding dominates China's financial system. For China's economy to grow and for many industries to recover, the banking system's capacity to efficiently handle the effects of the epidemic is essential. Each commercial bank is impacted by the epidemic in a different way due to its unique asset magnitude, debt structure, percentage of intermediate business income, and management style. This paper extracts the degree of commercial banks affected by different risks, and advances relevant suggestions for strengthening commercial banks' internal control and accelerating digital transformation, in order to cope with the adverse impact of the epidemic and to promote a rapid recovery of our economy.

Keywords: Banks and financial institutions; risk management and control; COVID-19 pandemic; digitalization.

1. Introduction

The COVID-19 pandemic in China has reached the stage of normal prevention and control, and macroeconomic recovery has been stable. China's GDP grew by 4.79% year on year in the third quarter of 2021, and the effectiveness of a series of policy tools introduced during the epidemic gradually became apparent [1]. The current global economic recovery is not stable, however, and the advent of the second wave of foreign epidemics is likely to worsen the global economic recession and turbulence in financial markets, and the operation and management of small and medium sized banks faces considerable uncertainty. The development of small and medium-sized banks in recent years exhibits a pattern of differentiation. The top small and medium-sized banks perform well in asset quality, capital adequacy level and risk monitoring indicators, while a considerable number of small and medium-sized banks are faced with two problems. On the one hand, the managerial basis is weak, the risk management mechanism is not perfect constrain its transformation development; Secondly, the normalization of tight regulation, combined with the impact of the epidemic, means that the stock risk of small and medium sized banks is gradually exposed, strengthening risk management of small and medium-sized banks is an important measure to guard against systemic financial risk in the post COVID-19 era [2].

2. Risk Analysis

2.1 Liquidity Risk

Small and medium-sized businesses and households with independent contractors need more capital turnover as a result of the disruption of business operations, while general commercial bank deposits—particularly government deposits—show a fall. A fall in total general deposits has put pressure on indications of liquidity monitoring, especially for small and medium-sized banks that rely heavily on interbank loans. This is true even though several institutions have taken initiatives to stabilize retail deposits.

On the one hand, a significant amount of business and production activity has been impacted, and sales have exceeded their income. Contrarily, the majority of small, medium, and micro businesses struggle to pay regular operating expenses like rent, salaries, and interest rates because they have little cash on hand. Cash flow is therefore limited, and the incidence of delayed repayment and deferral is rising. Some businesses even run the risk of going bankrupt, which worsens the lack of liquidity in the banking sector, which offers micro, small, and medium-sized businesses essential financial support. The systemic risk for small and medium-sized banks has increased as a result of the turmoil in the global financial markets. Some institutions find it more challenging to receive support from central bank policy funds and inter-bank funding as a result of the fall in several business indicators and the lower credit rating of the primary body.

2.2 Credit Risk

With the development of the Internet, the entire social economy is advancing, but with it comes the lower and lower threshold for a greater number of people to use credit, thus increasing the severity of the problem of bad credit throughout society. The existence of non-performing credit is a "stumbling block" in the operation and development of commercial banks, which poses a serious threat to commercial banks and increases the potential risks of operation. Inappropriate treatment of non-performing credit can even result in systemic risks. The COVID-19 outbreak clearly has a negative influence on the economy, and many businesses and individuals struggle with capital turnover, which exposes the dangers of credit institutions. While affected by the outbreak, the development of the real economy is restricted, and individual and corporate incomes fall, which also increases commercial banks' credit risk [3]. Domestic production has recovered quickly, but many small, medium, and micro enterprises are significantly affected by the external environment. The domestic economic environment will continue to face significant difficulties as a result of the trend toward economic globalization and the dire epidemiological scenario abroad. As a result, the credit risk for commercial banks will be considerable.

In recent years, commercial banks have vigorously developed Internet finance. Examples of Internet finance include Internet lending, Internet payment, Internet insurance, Internet crowdfunding, Internet credit investigation, and so on. While commercial banks also increase capital investment in finance construction. Under this new business model, commercial banks are faced not only with traditional risks but also with some unknown risks brought by the Internet. As a result, many banks face some management difficulties in the face of such compound risks. Under these conditions, when Internet financial services emerge, commercial banks need to strengthen their own monitoring. For example, in Internet loans, they can transfer the pre-loan investigation, examination during loan, and post-loan inspection to the Internet. Furthermore, finance like big data and cloud computing can be used for self-examination. On the other hand, regulators should also continually improve the technological level of their own oversight. From the beginning of this year, affected by the epidemic, the business of lending on the Internet has increased, leading to an increase in lending risk [4].

COVID-19 prevention and control management has led to a large increase in demand for supplies such as masks, alcohol, and protective clothing. When the outbreak was first discovered, the country offered numerous preferential policies for the production of epidemic prevention materials because of a shortage of supplies on the market. The bank's review and approval standards for the relevant companies may be lowered somewhat during the credit approval process. In addition, the bank opens the "green channel" for companies producing epidemic prevention materials, and large sums of money are rapidly invested in the epidemic prevention materials production industry. As production gradually develops, supplies gradually keep pace with market demand. China's efforts to control the new COVID-19 outbreak have gradually achieved some success, and in the long term, people's demand for supplies for epidemic prevention and other related products will plateau as well [5]. However, there was a large amount of capital influx in the early stage, and the rapid increase in production capacity resulted in the gradual saturation of the supply of epidemic prevention material to the market. If this is the case, there will be overcapacity in related industries, which will also result in the strain of capital flow s by firms. It is easy for the market to eliminate some firms w hose financial strength is relatively low and whose product benefits are not obvious, and this will lead to an increase in bank credit risk.

2.3 Interest Rate Risk

Both supply and demand have been impacted by the pandemic. The real-sector internal transmission, the real economy's transmission to the financial system, and the developed and emerging economies' transmission are all parts of the pandemic-induced global debt risk transmission mechanism. These transmission mechanisms overlap, and any confusion in any link might result in hazards associated with global systemic debt.

First, the transmission of debt risk occurs in the real sector, i.e., in the sector of non-financial firms and households Communication between government departments and ministries. Debt risk is passed on from the non-financial corporate sector to the household and government sectors. Debt risk is passed on from the household sector to the non-financial corporate sector a s well as the government sector. On the demand side, the household sector 's debt risk will lower its consumption level, and for the non-financial corporate sector, limited output may not be able to realize the circulation, which is arguably even worse. While the household sector is also one of the major sources of tax revenue for the public sector [5]. The debt risk of the household sector may also reduce the fiscal revenue of the government sector and aggravate the debt risk of the government sector.

Additionally, the risk of debt is passed from the real economy to the financial system. Whether it is the non-financial business sector, the household sector, or the government sector, all are closely related to the financial system. If there are debt risks in three sectors of the real economy simultaneously, the risks imparted to the financial system will then not simply add up but will trigger a systemic debt crisis. The financial system transmits debt risk to the real economy. The epidemic caused panic, which manifested itself in the financial system in the form of a correction of asset prices. If the magnitude of the correction is too large, the asset values of all sectors of the real economy will fall relatively, but liabilities will not fall in proportion, leading to the risk of default on debt in all sectors of the real economy. World asset prices have seen a sharp correction since the COVID-19 epidemic.

The interest rate risk is also included in the valuation of financial instrument. RMB asset pricing is based on the yield on our ten-year Treasury bond. Because the yield on ten-year Treasury bonds is the credit guarantee of the state, long term bonds are usually considered to be the risk-free rate of return. The price of assets not only in the stock market but also in the futures market and even in the real estate market depends on the risk-free rate of return in the market [6]. Discounted Cash Flow valuation models, which are widely used in the securities market place, the discount rate r is the average cost of capital, which is positively correlated with the market rate of interest, and the target firm's free cash flows are discounted and discounted at some discount rate r. If the country adopts the monetary policy of lowering interest rates, then the market interest rate will fall, and the average cost of capital will fall correspondingly and the value of the asset will rise correspondingly. By examining the entire securities market from a firm's value, when the market interest rate is low, the investment value of the stock market emerges, drawing a large amount of money into the stock market. In addition, the capital cost is reduced, the debt repayment pressure is reduced, the profitability of enterprises is enhanced, and the individual consumption power is enhanced, thus the stock market and the economy are in a good direction. In general terms, the central bank once the announcement of interest rate reductions, is good for the stock market, on the contrary, is negative.

3. Regulatory Responses & Suggestions

In response to the 2007–09 Global Financial Crisis, the Basel Committee created a series of new regulatory requirements that went into effect in 2009. These regulations are known as the Basel reforms. Similar to that, these standards seek to improve bank regulation, oversight, and risk management. The COVID-19 epidemic has had a large impact on banks, but they have been able to absorb it thanks to their improved quality holdings of capital and liquidity. In late 2020, private banks, city commercial banks, and rural commercial banks all had capital adequacy ratios of 12.37%, 12.99%, and 13.53%, respectively, while joint-stock banks and state-owned large banks had ratios of

13.60% and 16.49%, respectively. This was yet another significant decline from 2019 of 0.76 percentage points. Tier 1 capital adequacy ratio, and core Tier 1 capital adequacy ratio of commercial banks were, respectively, 15.13 percent, 12.35 percent, and 10.78 percent by the end of 2021, according to CBIRC's disclosure. In comparison to the end of 2020, they will increase by 0.43%, 0.31%, and 0.06%, respectively. The capital adequacy ratio and the level 1 capital adequacy ratio were the clearest from an incremental standpoint, as indicated in Table 1 [7].

Table 1. Four banks' capital adequacy ratios (2020-2022)

	ICBC	CCB	ABC	BOC
2020	13.16%	13.75%	11.04%	11.25%
2021	18.02%	17.85%	17.13%	16.53%
2022	18.30%	18.00%	17.10%	17.00%

In terms of the bank operations, several suggestions are provided as follows. First, commercial banks should strengthen the monitoring of cash flows for lending firms and require firms to open corporate accounts within the bank. Second, it should establish the mechanism for early warning of risk and improve the early warning index system. Thirdly, it will improve the mechanism for the reporting of major risks and hold those who do not report them to account. Finally, it should increase the risk provision, thereby improving the asset exposure risk. Some commercial banks violated regulations during the epidemic period in order to capture the market and increase profits, which need to be highly valued by regulators [8]. Central bank facilities helped banks strengthen their liquidity positions and the financial system weather an initial bout of uncertainty [9]. During the epidemic, for example, some commercial banks colluded with developers to provide installments of down payment to home buyers, and even conducted illegal zero down payment transactions, which posed a hidden danger to bank operations. As a result, the internal control of commercial banks needs to be stricter, to really strengthen the pre-loan investigation, the examination during the loan and the post-loan inspection, to stop the fraud, and to hold those responsible seriously accountable.

Besides, the digital transformation needs to be accelerated. Digital transformation is an effective way for banks to deal with the crisis. Since Chinese commercial banks have already come to a consensus on the digital transformation trend, the popularization of digital platforms has taken several years to make Chinese commercial banks calmer in the face of the COVID-19 outbreak and to suffer relatively small losses. Today, users are able to handle most common banking services such as opening accounts, transferring money, deposits and loans, buying financial products, and paying daily expenses through different digital platforms such as the APP bank, the official we chat account, and the mini program [10]. The digital platform of commercial banks, however, is not perfect, and there is still room for improvement in this area. In addition to its existing functions, the platform is also able to connect with relevant ministries, in order to interrogate and obtain information on people's livelihoods such as social insurance, provident fund and pensions. Eventually, people can take care of all the business necessary for daily life without leaving their homes, which will help to prevent and control the spread of the outbreak and increase user stickiness.

4. Conclusion

The novel COVID-19 epidemic presents many unknown challenges for commercial bank credit analysis and management, but also provides an opportunity to promote and develop large commercial banks. As part of this study's analysis of the COVID-19 pandemic's effects on the banking industry and evaluation of the effectiveness of our regulatory framework, banks' high levels of capital and liquidity played a key role in acting as shock-absorbers of the pandemic's economic impact. Prior to the COVID-19 crisis, banks had adequate liquidity and were well-capitalized, which was a result of, in part, stricter regulations. Despite variations in how the international Basel standards were implemented, capital requirements were consistent across significant jurisdictions. Additionally, facilities provided by the central bank helped banks improve their liquidity positions and the financial sector weather a period of initial uncertainty. Chinese commercial banks are expected to respond positively to adjustment, from the credit process, to sort out the shortcomings of credit risk management within the system. While at the same time combined with its own features to improve internal auditing supervision to a new level, in order to achieve the full coverage of internal auditing of credit risk management. The benefit of big data technology is also being used to advance credit risk management innovation and development.

References

[1] Wu Feihong. Thinking on the digital transformation of commercial banks under the impact of epidemic. Southern Finance, 2020 (12).

[2] Zhang Tianyi. Discussion on the impact of the Novel coronavirus epidemic on commercial banks and their development trend in the post-novel coronavirus period. Modern Business Industry, 2020 (25).

[3] Liu Nan. Analysis of commercial bank business development situation and countermeasures under the COVID-19 epidemic. Times Economics and Trade, 2020 (11).

[4] Li Shihao, Wu Rui. Research on Zero-contact service model innovation and accelerated digital transformation of Chinese commercial banks under the COVID-19 epidemic. Shanxi Agricultural Economics, 2020 (23).

[5] Guo Xiaochun. Research on Risk Management of Commercial banks under the background of Epidemic. Jilin Institute of Financial Sciences. Financial Watch, 2021 (01).

[6] Huang Jun, Sun Jiulun. Risk management of small and medium-sized banks in post-epidemic period. China Finance, 2021 (01).

[7] Bi S F. Epidemic impact and bank risk-taking: An analysis based on 104 urban commercial banks. Eastern Forum, 2022 (02).

[8] Liu Jianmin, Ren Wanyi. Credit risk management strategies of commercial banks under the background of COVID-19. Modern Business, 2021 (20).

[9] Wang Danyang. Discussion on Liquidity risk Management of small and medium-sized commercial banks under the New Coronavirus epidemic. Economic Research Guide, 2020 (35).

[10] Yong Bo. Bank risk Management in the post-epidemic era. Journal of Chongqing University of Technology (Social Sciences), 2021, 35 (10).