

The Effect of Chinese Monetary Policy on Banking During the Global Financial Crisis

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List of Abbreviations

NPL	Non-Performing Loans
NIM	Net Interest Margin
PBC	People's Bank of China
RMB	Ren Min Bi
REL	Real Estate Loan
SMEs	Small and Medium Enterprises
YOY	Year over Year

1. Abstract

After the global financial crisis broke out in 2008, China implemented an extraordinary loosening monetary policy and active fiscal policy which promoted China's economy to recover firstly in the world, however, the inflation rate continued to rise at the same time. In order to prevent high inflation, China turned to a sound monetary policy with tight trend. Since banks are the main body in the transmission of Chinese monetary policy, and the proportion of state holding banks in the banking system is still the highest, the two rounds of monetary policies had made a great impact on banking. The paper includes four parts, the first part is the introduction to the main monetary policy tools in China; the second part focuses on the loosening monetary policy and its effect on banking; the third part is about the sound monetary policy with tight trend and its effect on banking; and the last part is conclusion.

2. Introduction to the main monetary policy tools in China

The monetary policy tools used by the People's Bank of China (PBC) mainly include reserve requirements, open market operations, interest rate policy, credit policy and window guidance, as well as real estate credit control.

2.1 Reserve requirements

In most western countries, the reserve requirements tool is rarely used. However, in China, it has been a frequently used and highly important tool in recent years. It has not only been used to change the aggregate credit and money supply, but also to adjust the credit structure through different reserve ratios. For instance, the required ratio on the small and medium financial institutions, rural financial institutions is lower than that on the major financial institutions, in order to support the SMEs and "three rural".¹

2.2 Open market operations

The feature of open market operations in China is that besides purchasing and selling government bonds and policy financial bonds, the PBC controls the size and frequency of central bank bill issuance. Central bank bills are mainly short-term bills issued by the PBC and sold to depository institutions so as to reduce base money; on the contrary, the

¹ "Three rural" refers to "agriculture, rural areas and farmers".

expiration of central bank bills means base money is increased.² Central bank bills were introduced in 2004 because the state bonds held by the PBC were not enough to realize sterilized intervention.

2.3 Interest rate policy

Since the bank rates in China are still guided by the PBC, the interest rate policy can be used as a monetary policy tool. It includes two categories, one is to adjust benchmark interest rates offered by the central bank, including re-loan rate, rediscount rate, and reserve balances rate; the other is to adjust the benchmark interest rates on financial institutions' deposits and loans and set the floating range.³ The interest rates offered by banks can only fluctuate within the floating range around the benchmark rates.

2.4 Credit policy and window guidance

Credit policy is made according to state macro-economic policy, industrial policy and area economic development policy, in order to direct the financial institutions' credit size and structure. Before 1998, the credit policy is carried out through credit ceiling. In 1998, credit ceiling was cancelled, and window guidance has been put into effect. The PBC utilize window guidance to direct banks to increase or reduce loans to different kinds of industries or corporations. Although window guidance is a kind of indirect control tool, it is effective because Chinese major financial institutions are all state-owned or state holding.

2.5 Real estate credit control

Real estate credit control is a kind of specific monetary policy tool used to regulate the real estate price growth rate by changing mortgage minimum down payment ratio. The down payment ratio on the second home or more is often higher than that of the first home in order to restrict the investment and speculative demand. Real estate credit control is not only used by the PBC, but also used by the state council when the real estate price growth rate is high.

² The maturity of most central bank bills is within 1 year, some of them are 3 years.

³ On June 8, 2012, the upper limit of the deposit rate floating range of banking financial institutions was adjusted to 1.1 times the benchmark interest rate, and the floor level of the floating range of lending rates was adjusted to 0.8 times the benchmark interest rate.

3. Loosening monetary policy and its effect on the banking

The global financial crisis has led to a significant decline in China exports, to stimulate domestic demand and promote economic growth, from September 2008 to December 2009, the PBC carried out a nominally “moderate” but actually extraordinary loosening monetary policy.

3.1 Loosening monetary policy measures

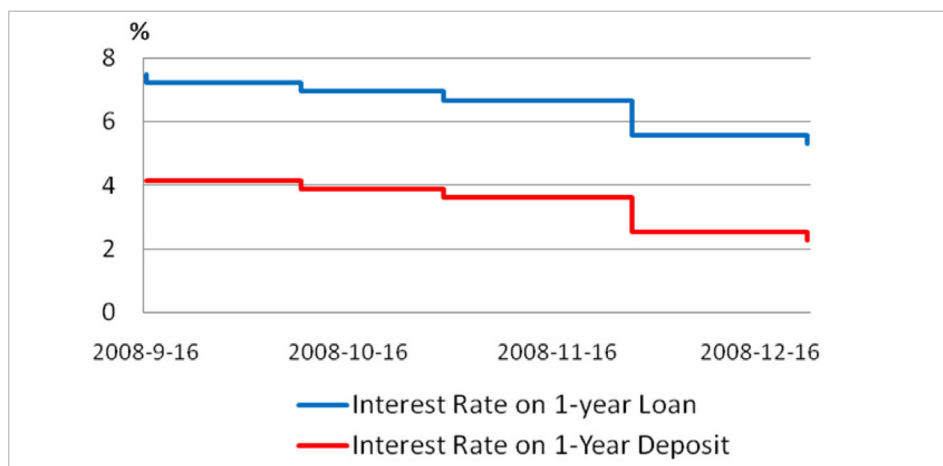
3.1.1 Reduced benchmark interest rates

Since September to the end of December 2008, the PBC had dropped the rate paid on requirement reserve and excess reserve from 1.89%, 0.99% to 1.62% and 0.72%, respectively. The re-loan rate for 1 year dropped from 4.68% to 3.33%; the rediscount rate dropped from 4.32% to 1.8%. In addition, the PBC had dropped the benchmark rate of financial institutions’ deposits and loans for 5 times. For example, benchmark rate of one-year deposits and loans dropped from 4.14%, 7.47% to 2.25% and 5.31%, respectively (See Fig. 1).

3.1.2 Reduced required reserve ratio

From September to December 2008, in order to release liquidity to banks so that they can make more loans to support economic growth, the required reserve ratio had been reduced for 4 times, the ratio for major depository institutions dropped from 17.5% to 15.5%, while, the ratio for medium and small institutions dropped from 17.5% to 13.5%.

Figure 1: Benchmark interest rate in China



3.1.3 Cut down issuance of central bank bill

Before the first half year of 2008, in order to fight and prevent inflation, the PBC had issued large amounts of central bank bills to reduce base money. However, since July 2008, the PBC cut down the issuance scale and frequency of central bank bill gradually to keep adequate liquidity in banking system. For example, the balance of central bank bills dropped from 4.59 trillion in September 2008 to 3.99 trillion in September 2009.

3.1.4 Window Guidance

In January 2008, credit ceiling was used again to prevent inflation. While, in November 2008, it was cancelled again, commercial banks have been allowed to expand credit scale within a reasonable extent. At the same time, the PBC tried to use window guidance to adjust and optimize credit structure, for example, in addition to giving priority support to the “three rural”, SME, it encouraged banks to make supporting loans to major infrastructure projects.

3.1.5 Loosened real estate credit control

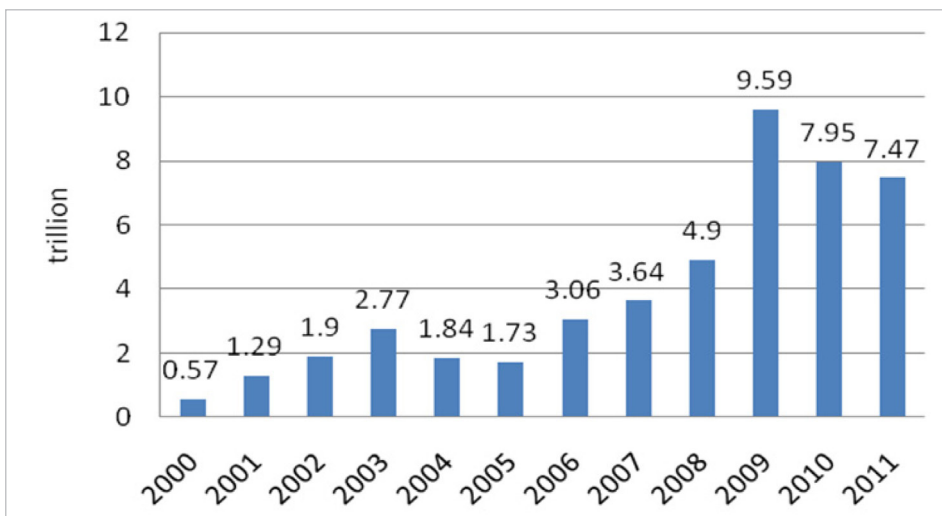
In order to increase domestic demand, from October 2008, for the first normal and self-habitation home, the down payment ratio was lowered from 30 % to 20 %, and the lowest commercial mortgage rate was decreased to 0.7 times the benchmark rate. For other types of mortgage, the credit standards should be raised appropriately.

3.2 The effect of the expansionary monetary policy on the banking

3.2.1 Rapid expansion of the banking credit scale

Affected by Chinese government’s 4 trillion economic stimulus plan and the expansionary monetary policy the banking credit requirements were abnormal easing, and the credit scale increased rapidly in 2009 with 9.59 trillion yuan RMB loan increment, which was 4.69 trillion yuan more than the previous year (see Fig. 2). The YOY growth rate of RMB loan balance rose rapidly from 15.9 % at the end of 2008 to 31.7 % at the end of 2009. Both the size and growth rate of loan are the highest since 2000.

Figure 2: Yearly loan increment of banking

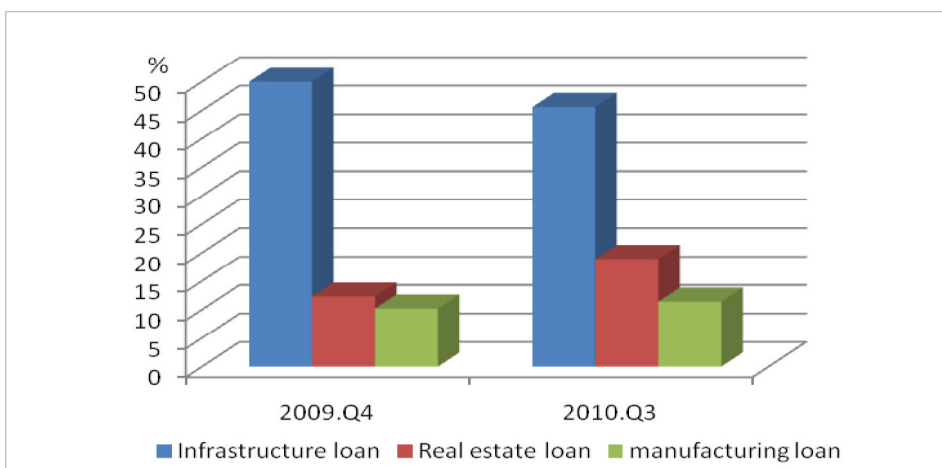


Source: www.pbc.gov.cn

3.2.2 Analysis on the structure of the huge amount of loans

As far as the term structure of the loan increment is concerned, medium and long term loans increased more than the short term loans. In 2009 and 2010, the medium and long-term loans accounted for 70% and 83% of the loan increment. In terms of the industry structure of the medium and long term loans, these loans mainly flowed to infrastructure, real estate, as well as manufacturing (see Fig. 3).

Figure 3: Industry structure of the medium and long-term loan increment



Source: Monetary Policy Report of the PBC (2009, 2010, Q3), <http://www.pbc.gov.cn/>

In the infrastructure loans, the proportion of the municipal infrastructure loans which rely on the local government financing platform is high. Local government financing platform refers to those “City Construction Investment Company” or some companies like that established by the local government for the purpose of local infrastructure and guaranteed by local governments’ revenue, and they raise funds mainly from commercial banks. In 2009, over 3 trillion yuan loans were made to various types of local government financing platforms which accounted for 34.5 % of the total loan increment. Additionally, real estate loan (REL) also increased quickly. The incremental REL accounted for 21.9 %, 25.4 % of the total incremental loans in 2009 and 2010 respectively, especially in 2009, the YOY growth of REL balance reached a record of 38.1 % (Table 1).

Table 1: Real estate loan in China

Unit: trillion Yuan

	REL increment(1)	Total loan increment(2)	(1)/(2)	YOY growth of REL balance
2009	2.00	9.59	21.9 %	38.1 %
2010	2.02	7.95	25.4 %	27.5 %

Source: The statistical report of the loan direction of financial institutions (2009/2010), <http://www.pbc.gov.cn/>

3.2.3 The credit risk increases sharply

Along with the surge in credit scale, the credit risk in the banking industry increases sharply, especially the credit risk of local government financing platform and real estate, which caused widespread concern. The reasons for the high credit risk of local government financing platform are as follows: first, the commitment letter of local government repayment presented to commercial banks does not belong to a legally binding guarantee in the security law. Second, the investment projects are mostly public projects with long payoff period and low return, when the huge amount of financing platform loans exceeds the local governments’ ability to repay in the future, a large number of NPL will appear.

The risk of real estate loans results from the real estate development loans firstly. As the real estate industry is a capital-intensive industry, and the leverage ratio is usually high, once the real estate bubble burst, the real estate companies’ cash flow will soon deplete, and the risk will be transmitted to the banking rapidly. Second, the risk results from the residential mortgage loans. Presently, the personal credit system in China is not sound, and the commercial banks have not formed a scientific and complete assessment system of mortgage risk. During the period of expansionary monetary policy, the commercial banks usually tend to degrade the assessment criteria for the borrowers and loosen lending scrutiny. From the beginning of 2010, Chinese government has implemented a series of strict measures to control the real estate bubble. If the real estate price decline in the future, the mortgage risk will increase significantly. Due to the slow pace of securitization of mortgage, the mortgage risk is highly concentrated in the banking system.

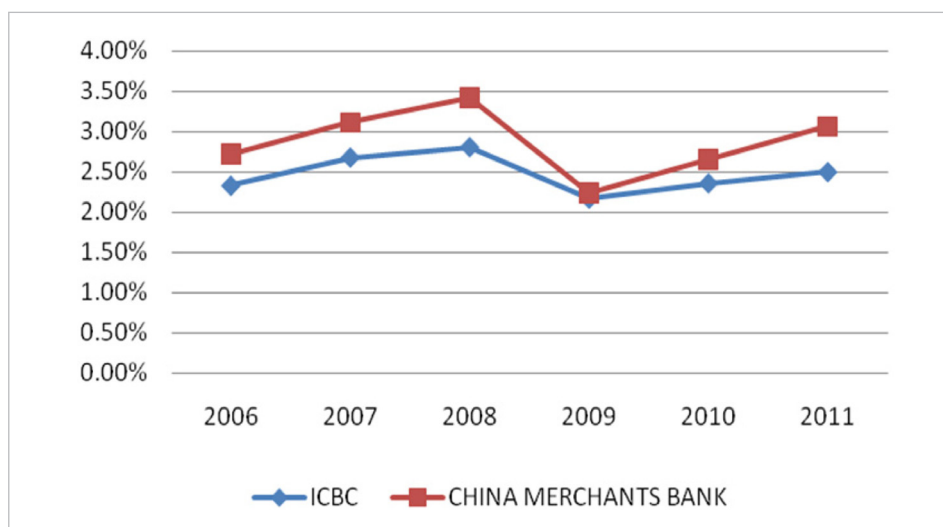
3.2.4 The liquidity in banks decreased

Due to huge amount of loans, from the end of 2008 to the end of 2010, the liquidity ratio of the banking financial institutions fell from 50.07% to 43.7%, and the excess reserve ratio fell from 5.6% to 3.2%, which formed a sharp contrast with the U.S. banks which holding high excess reserve at the same time.

3.2.5 The net interest margin and profit growth rate reduced

The loosening monetary policy led to the reduction in the net interest margin (NIM) of commercial banks. For example, from 2008 to 2009, the NIM of Industrial and Commercial Bank of China (ICBC) fell from 2.8% to 2.16%, and the NIM of China Merchants Bank fell from 3.42% to 2.23% (see Fig. 4). Since net interest income accounts for over 60% of the banking total income, the YOY profit growth rate of the banking fell from 30.6% to 14.6%.

Figure 4: Net interest margin of ICBC and China Merchants Bank (2006–2011)



Source: Annual reports of ICBC and China Merchants Bank (2006–2011)

4. Sound monetary policy with tight trend and its effect on banking

The loosening monetary policy resulted in rapid growth of loans and money supply. In addition, the main western countries implemented a quantitative easing monetary policy (QE), which led to global surplus liquidity thus a large number of international capitals flew to China, which aggravated the excess money supply. Faced with continuously rising inflation and real estate bubble, the PBC began to tighten the monetary policy from the beginning of 2010. In December 2010, Chinese government clearly announced to implement a “sound monetary policy”.

4.1 Main measures of the sound monetary policy with tight trend

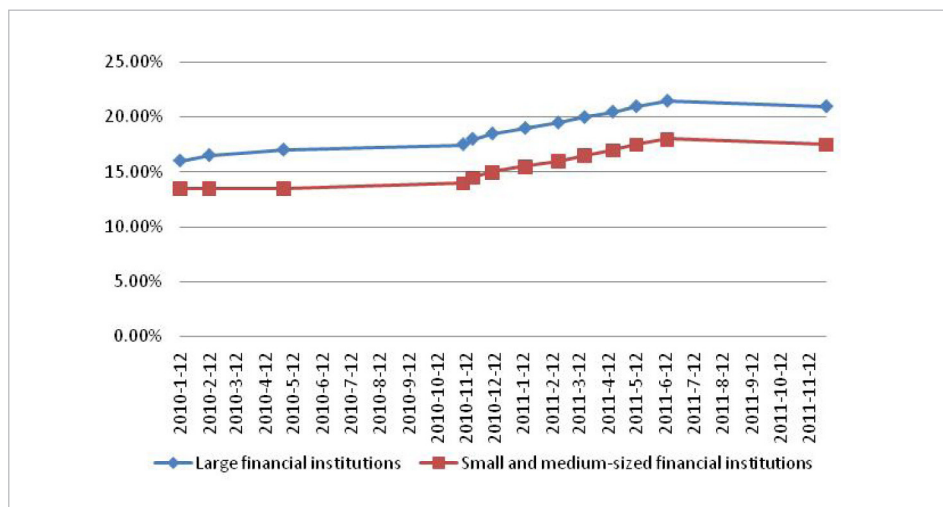
In the first three quarters of 2011, the primary goal of the sound monetary policy was to maintain price stability. After October, since the European sovereign debt crisis continuously spread, and Chinese economy growth has been slowing down, along with gradual decline of CPI, the monetary policy became loosening to a certain extent.

4.1.1 Raised required reserve ratio and introduced differential dynamic adjustment of required reserve ratio

From January 2010 to June 2011, the PBC had raised required reserve ratio for 12 times. The ratio for large financial institutions was raised from 15.5% to 21.5%, the highest record in history; for small and medium financial institutions, the ratio was raised from 13.5% to 18% (see Fig. 5).

In addition, in 2011 the PBC introduced differential dynamic adjustment of required reserve ratio tool which is an innovation of policy tool. It aims at guiding the financial institutions to keep a moderate credit growth and optimize the credit structure through countercyclical regulation. It mainly concerns the following factors: first, the deviation degree between the banking credit scale and economic growth as well as price index; second, the implementation effect of credit policy; third, indications such as a single financial institution's influence degree to the total deviation, its systematic importance and soundness. If the loans made by a financial institution has a significant impact on the total deviation, or the institution has a high degree of systematic importance, and poor soundness, its required reserve ratio will be higher than the general standard, and if the institution achieves the requirements of relevant indicators after credit adjustments, the ratio will be lowered to the general level.

Figure 5: China's Required Reserve Ratio (2010.1–2011.12)



Source: <http://www.pbc.gov.cn/>

4.1.2 Conducting open market operations flexibly

In the first three quarters of 2011, the PBC mainly issued central bank bills and conducted short-term repurchase operations to reduce the liquidity in the banking system. In the fourth quarter, the PBC reduced the issuance scale and frequency of central bank bills according to the changes of economic situation and liquidity in the banking system.

4.1.3 Raised the benchmark rates on deposits and loans

After the raise of benchmark rates on deposits and loans for twice in 2010, in the first half of 2011, the PBC had raised the benchmark rates successively for three times. The rate on 1-year deposit was raised from 2.25% to 3.5%, and the rate on 1-year loan was raised from 5.31% to 6.56% respectively. In the fourth quarter of 2011, the benchmark rate remained stable.

4.1.4 Strengthen window guidance and credit policy

The PBC has guided the banking to keep the pace of lending reasonably, optimize the credit structure, and guard against credit risk, as well as support the real economy. For example, it encouraged banks to further strengthen credit support to the key fields, such as “three rural”, SMEs, livelihood projects especially housing project for low-income urban residents, energy-saving and mission-reduction, strategic and emerging industries, cultural industries. At the same time, the PBC required banks to strengthen the management of loans made to local governments financing platform and strictly control loans to high energy consumption, high emission and overcapacity industries.

4.1.5 Strengthen real estate credit control

In order to control the rapid expansion of the real estate bubble, the State Council has issued a series of ever tougher regulation files, and the down payment ratio of the second or more home has been raised to 60% gradually, the mortgage rate was raised to 1.1 times the benchmark rate, and the mortgage for the third home has been suspended.

4.2 The effect of sound monetary policy with tight trend on banking

4.2.1 Liquidity tightening led to a rise in financing cost

During the first half of 2011, the liquidity was lacking in the banking system especially for the small and medium-sized banks. On one hand, affected by the quantitative tools, commercial banks' excess reserve ratio continued to decline; on the other hand, although the nominal rates

Deposits had increased for several times, the inflation rate continued to rise quickly, which led to the negative real rate even lower. When CPI reached the peak of 6.5% in June, the nominal rate on 1-year deposit was only 3.25%. Continuous negative real rate led to increasing outflow of saving deposits and a sharp slowdown in growth.

The condition of tightening liquidity in banking system gave rise to a sharply rise in inter-bank offering rates. In June 2011, the Inter-bank weighted average rate of 7-day reached a peak of 5.95%. Since major banks have more funds than the medium and small-sized banks, the former are usually lending banks, seldom affected by the high rate; while the latter are borrowing banks, so they were encountered with higher financing cost. Since the third quarter, due to moderately easing of monetary policy, the liquidity condition became better.

4.2.2 The credit growth rate fell smoothly and credit structure bettered

Due to the sound monetary policy with tight trend, the credit growth of banking began to slow down. In 2011, the RMB loan increment was 7.47 trillion yuan; at the end of 2011, the RMB loan balance was 54.8 trillion yuan, with the YOY growth rate dropped to 15.8%. Along with the credit growth fall, the credit structure has also been bettered. First, the overall growth rate of REL has fallen. At the end of 2011, the YOY growth of REL balance dropped to 13.9%. However, loans of housing project for low-income urban residents increased rapidly, with a YOY growth rate of 66.2%.⁴ Second, the proportion of loans made to the "three rural" and SMEs has increased. By the end of 2011, the banking financial institutions' agriculture loan balance accounted for 25.7% of the total loan balance, the YOY growth was 24.9%, about 9% higher than the average loan growth; the SMEs balance accounted for 19.6%, and the YOY growth was 25.8%, about 10% higher than the average loan growth.⁵ Third, credit support to the culture, energy industry and remote

⁴ Source: Annual Report of China Banking Regulatory Commission (2011), <http://www.cbrc.gov.cn>.

⁵ Ibid.

border district has increased. Fourth, the term structure of loans has been improved. The growth of short-term loans was higher than that of medium and long-term loans. By the end of 2011, banks' short-term loan balance reached 21.7 trillion Yuan, with YOY growth of 21.8%; the long-term loan balance was 33.4 trillion Yuan, with YOY growth of 11.8%.

4.2.3 The effect on the credit risk and asset quality of banking

The sound monetary policy helps to improve the overall quality of credit assets and reduce credit risk. First, given the reduction of loanable funds in the banking, the risk prevention awareness has been enhanced, and loans are examined more carefully, along with an increase in lending interest rates and standards, which is helpful to reduce NPL. Second, the optimization of the credit term structure helps to control the credit risk. However, because the interest rates on loans to the SMEs increased, the financing cost for SMEs has risen. Since the European debt crisis is becoming worsen and the economic growth is slowing down, the profit of the SMEs decreased and their solvency has deteriorated, which led to the increase of credit risk, especially for the small and medium-sized banks that mainly make loans to the SMEs.

4.2.4 The NIM and profit growth rate continued to increase rapidly

Although the tightening monetary policy restrained the growth of credit scale, the bargaining power of the commercial banks as a whole has been improved as the loan resources became relatively scarce. Banks tend to make more loans to the SMEs with high demand for funds, because some of them have the ability to accept a higher premium, floating upward from 20% to 100% of the benchmark rate. From 2009 to the first three quarters of 2011, the proportion of loans applying to up-floating rate increased significantly from 36.55% to 67.19% (See Table 2), and the weighted average interest rate on loans rose from 5.25% at the end of 2009 to 8.01% in September 2011.⁶ Since the deposit rate ceiling is controlled by the PBC, the up floating of loan rates led to the increase of NIM. In 2011, the average NIM of 16 listed banks was 2.67%.⁷ The increase of NIM made up for reduced profits resulted from restrain of credit scale. The after-tax profit of the banking was 1.25 trillion yuan, with a YOY growth of 39.3%.⁸

Table 2: The ratio of different interest rates on banking loans (%)

	Down floating	Benchmark rate	Up floating
2009-12-01	33.19	30.26	36.55
2011-09-01	6.96	25.86	67.19

Source: Monetary Policy Report of the PBC (2009: Q4, 2011: Q3), <http://www.pbc.gov.cn/>

⁶ Source: Monetary Policy Report of the PBC (2009: Q4, 2011: Q3), <http://www.pbc.gov.cn/>.

⁷ Tang Yawen. Analysis on the annual and the first quarter report of listed banks, the Research Report of the Northeast Securities Company, May 2, 2012.

⁸ Source: Annual Report of China Banking Regulatory Commission (2011).

5. Conclusion

To fight the global financial crisis, China implemented an extraordinary loosening monetary policy to stimulate economic growth. After that, a sound with tight trend monetary policy was carried out to control inflation. The two rounds of monetary policy had different effects on the credit size and structure, credit risk, liquidity and profit of the banking.

The expansionary monetary policy gave impetus to huge amount of loans, which mainly made to infrastructures, real estate, and manufacturing industry. Therefore, the medium and long-term credit risk has increased dramatically, especially the credit risk from real estate and local government financing platform. At the same time, the liquidity in the banking system was lowered; the NIM and profit growth rate decreased accordingly. The sound monetary policy with tight trend not only pulled the credit growth rate back to normal, but prompted the optimization of credit structure gradually. It also helps the banking industry to control credit risk in general, but the credit risk of SMEs has increased to some extent. The liquidity in the banking system became tight, especially for the small and medium-sized banks, thus their financing cost increased a lot. The NIM in banking rose quickly, which is an important reason to promote the high profit growth rate.

From the fourth quarter of 2011, the European debt crisis has become worsen, therefore, Chinese export and economy growth began to drop, and the PBC has to carry out loosening monetary policy once again. To minimize the negative effect of monetary policy as little as possible, the central bank and commercial banks need focus on the following issues.

From the central bank level, first, it should uphold the principle of macro-prudential management, and grasp a reasonable intensity of an expansionary monetary policy as well as the exit time, in order to prevent the size of banking loans increase excessively. Second, comprehensively make use of traditional monetary policy tools and innovative tools such as differential dynamic adjustment of required reserve ratio. From the banking industry level, first, they should adhere to strict and prudent lending principles, continuing to strengthen credit risk management. Second, China's banks must accelerate the transformation of the profit-making model, and improve the proportion of non-interest income continuously. China's deposit and lending rates have not become market rates thoroughly. The commercial banks' net interest margin is usually 2.5–3%, much higher than that of the commercial banks in western countries which is less than 1%. With the deepening of market-oriented interest rate reform, competition of interest rate among commercial banks is becoming more intense, therefore, expansionary monetary policy will reduce NIM of the commercial banks obviously, and tightening monetary policy may not help increase NIM significantly. Commercial banks should develop new types of business actively to broaden the sources of income, getting rid of excessive dependence on NIM gradually, thus reduce the adverse effect of monetary policy on their profitability.

References

- Che, D. (2011):** The Impact of Current Monetary Policy on Commercial Banks, *International Finance*, No. 4, pp. 8–13.
- Chen, T. (2010):** Monetary Policy during the Global Financial Crisis – Comparison between the U.S. and China, *Asia-Pacific Economic Review*, No. 8, pp. 77–82.
- Liu, C. (2011):** Analysis on the Default Risk of Local Government Financing Platform and the Relative Countermeasures in Post-crisis Period, *Economic Issues in China*, No. 7, pp. 60–66.
- Liu, X., Guo, N. (2012):** Analysis on the Credit Risk Factors of Chinese Housing Mortgage, *Shandong Social Sciences*, No. 3, pp. 105–108.
- The Research Team of the Business Management Department of the PBC. (2011):** The Impact of Monetary Policy Operations on Banking Sectors – Based on the Empirical Study of Commercial Bank Panel Data, *Investment Research*, No. 11, pp. 3–15.
- Zhang, B. (2011):** The Response of Commercial Banks to the Risk Under a Condition of the Sound Monetary Policy, *The Banker*, No. 2, pp. 22–25.
- Zhang, L. (2012):** Analysis on the Impact of the Tight Monetary Policy on the Profitability of Commercial Banks in China, *Finance and Accounting Monthly Journal*, No. 1, pp. 24–26.
- Zhuang, Y., Ji, W. (2008):** The Impact of the Tight Monetary Policy on the Asset and Liability Business of Chinese Commercial Banks. *China Finance*, No. 7, pp. 62–63.