

Analysis on China's Credit Card Risk Management and Preventive Measures Based on Basel II Accord

¹ Lei SUN, ² Ying-jun SUN

¹ Business School, University of Shanghai For Science and Technology, Shanghai 200093, China

² Business School, University of Shanghai For Science and Technology, Shanghai 200093, China

Email: sunlei0330@126.com

Abstract –With the further development of Chinese credit card business, the risks which the credit card brings focus minds, mainly including credit risk, operational risk, fraud risk, technical risk and legal risk. Based on the Basel II Accord, the paper is analyzed on credit card risk management; put forward some advices to prevent the risks.

Keywords –Risk of credit card; Risk management; Basel II Accord

1. The status of credit card in China

Late start of the credit card business in China, China in 1979 has been the introduction of the credit card business, but it was not until December 2002, China Merchants Bank launched the first in the country a card and dual currency in line with international standard credit card after credit card in China really sense to enter a period of rapid development. 2003 is also known as the first year of China's credit card. This year, all commercial banks have opened in China's financial center Shanghai Credit Card Center to issue its own credit card. According to the latest statistics show that the amount of bank card issuers continued growth accelerated year on year growth of debit cards, credit cards a year-on-year slowdown. As of the end of the first quarter of 2012, the country issued a total bank card 3.102 billion, an increase of 5.2% compared with the end of the fourth quarter of 2011, year-on-year growth of 21.5%, accelerating 3.8 percentage points year-on-year growth rate over the same period last year. Which had issued debit card 2.812 billion, an increase of 5.6% compared with the end of the fourth quarter of 2011, up 21.7% year-on-year growth rate of 4.8 percent compared to the same period last year

to speed up; credit card volume of 290 million, an increase of 1.8% compared with the end of the fourth quarter of 2011, an increase of 20.0% year-on-year growth rate slowed down by 5.7 percentage points compared with the same period last year. Total credit card credit and credit card end should be subordinated to the total credit (credit card overdraft balance) to maintain rapid growth. Credit card overdue for six months, total credit outstanding increased slightly, to account for the end of the period should be subordinated to a slight increase in the proportion of the total credit. As of the end of the first quarter of 2012, credit card credit total of 2.79 trillion yuan, a year-on-year growth of 33.2%, an increase of 184.785 billion yuan, an increase of 7.1% compared with the fourth quarter of 2011; ending should be subordinated credit totaling 752.086 billion yuan, a year-on-year growth of 58.7%, a decrease of 60.87 billion yuan, a decrease of 7.5% compared with the fourth quarter of 2011. As of the end of the first quarter of 2012, the credit card is six months overdue outstanding credit total of 12.035 billion yuan, an increase of 1.004 billion yuan, an increase of 9.1% compared with the fourth quarter of 2011; credit card overdue six months of total credit outstanding accounted

for the end of the period should be 1.6% of the total amount of the subordinated credit accounting for comparing the fourth quarter of 2011 increased by 0.2 percentage points. With the continuous expansion of the scale of China's credit card business, its risk control has become increasingly attracted attention. At the same time, China's luxury goods consumption is gradually heated up, and the gradual emergence of a younger age and conspicuous consumption characteristics of German "Berliner Zeitung" June 11, 2011, reference to the latest report of the World Luxury Association said last year, the luxury of the Chinese Mainland The total consumption of goods market has reached \$ 10.7 billion, accounting for 1/4 of the global share. Is expected in 2012, China will surpass Japan to become the world's largest consumer of luxury goods. When the credit card ending total outstanding credit growth experienced luxury consumption growth, the banking system risk management capabilities will face a new test.

2. China's credit card risk classification

Risk refers to the probability of loss, and the size of the amount of the loss. Expected loss = the probability of loss (the amount of losses / given the loss occurred). Credit card risk mainly refers to the degree of risk of loss, specifically; the credit card risk refers to the card-issuing bank, cashing outlets, merchants and cardholders in the issue of the acceptance, use and maintenance of the abnormal situation such as credit card link economic losses. Specifically, the risk of credit card business in China mainly for the following forms:

2.1 Credit risk

In accordance with the Basel Committee's definition of credit risk refers to the possibility of default by the counterparty financial institutions or can not travel contract and lead to loss of 2. Credit risk consist primarily of two aspects, namely, economic risks and the risk of moral hazard. Risk of economic capacity due to various reasons, such as illness and death of family members, a decline in personal income, bankruptcy as a result of customer credit institutions credit debt can not be repaid, resulting in the loss of funds of credit institutions. Moral hazard to consumers malicious credit

through various illegal means, third-party use of various illegal means to grab illegal profits from the credit card business activities, thereby bringing capital losses to credit institutions, cardholders and card issuers. Credit risk, mainly due to the asymmetry of information between customer behavior guidelines and the uncertainty of the financial position and credit institutions and consumers. Customers as a society, its Code of Conduct over time and changes in its financial position will be affected by the impact of macroeconomic instability, the rise and fall of the client's industry, customers own physical condition and many other factors. Information asymmetry between credit institutions and customers, the credit agencies to understand customer behavior and the actual economic capacity is not complete, and customers of the business operations of credit institutions to do the process was able to fully grasp. In addition, the risk of moral hazard is from the third party of fraud and other financial crimes.

2.2 Operational risk

According to the Basel Committee's definition of operational risk refers to the risk of loss caused directly or indirectly due to unsound or effectiveness of internal control processes, people and systems or external events. Operational risk is mainly due to improper operation on the operating procedures and the risks arising from the management of osteoporosis, operator errors. For example, the computer system failure caused by the credit card authorization cannot be a result of making the wrong decision model and strategy of the observing program execution error.

2.3 Fraud Risk

The risk of fraud is including fraudulent applications and fraudulent transactions. The fraudulent application fraudsters steal another person's identity information and apply for the credit card to open an account. Fraudulent transactions fraudsters steal the information on the card or card swipe.

2.4 Technical risks

Hardware and system software used by the credit card

business in China are imported products, the core technology from abroad to master. If there are problems, the system will face a huge threat. Second, China's credit card business application software development basically takes the two modes of self-development and process outsourcing. Staff mobility, these two methods will stay hidden. For example, developers fully understand the application, may destroy the operating system to achieve a particular purpose or steal bank funds.

2.5 Legal risks

No legal basis for the credit card business in China is still in its infancy, many business sectors and operating practices. The credit card market, the theme of the responsibilities, rights, relations have provisions is unclear. Therefore, there is a big legal risk in the credit card business.

Credit cards are unsecured, free margin, collateral-free credit products, credit risk is the risk of credit card business loss, mainly in the form of credit card risk. If the bad debts of credit risk is high, not only will directly reduce bank profits, and regulatory agencies will require higher capital and, in particular, the greater degree of the new Basel capital requirements for credit risk linked credit risk losses far more than expected, there will be a huge crisis of capital, inadequate control will directly lead to bankruptcy of banks. Strengthen credit risk management of the credit card has become a top priority of the National Bank. Therefore, this article is mainly focused on credit risk management.

3. The Basel II framework under the Credit Risk Management

Central bankers from the United States, the United Kingdom, France, the Federal Republic of Germany, Italy, Japan, Belgium, Canada, Sweden, the Netherlands (the "Group of Ten") in 1974, the Basel Committee on Banking Supervision (Basel Committee on Banking Supervision), the purpose is to strengthen the communication and cooperation in banking supervision. Basel Committee discussed and adopted in the period July 1988 and signed by the "Group of Ten" and the central bank governors of 12 countries in Luxembourg, Switzerland, the formation of the "International

Convergence of Capital Measurement and Capital Standards Agreement, referred to as Basel II. Basel is collectively referred to a number of important agreements reached by the central banks of the member countries of the Bank for International Settlements in Basel, Switzerland. Its essence is to improve and supplement the lack of a single national regulatory system of commercial banks, to reduce the risks and costs of bank failures, the most important form of the joint supervision of the International Commercial Bank, and has a strong binding.

1988 Basel core is established based on risk-weighted index of the minimum capital ratio of 8%, the Basel agreement on capital (core capital and supplementary capital) should be a minimum of 8% of risk-weighted assets, which The core capital should be at least 4% of risk-weighted assets. 1988 Basel agreement is a major breakthrough in the international banking supervision, it first established the international standardization of bank capital adequacy requirements, and to some extent, the degree of risk linked to the capital requirements of banks and bank assets to promote the the stability of the international banking system and security. But it also has a great flaw: it mainly for the credit risk, market risk, operational risk while ignoring. Its risk classification is too simple, and similar assets can not further distinguish the degree of risk, the sensitivity of bank capital to asset risk is still low.

In order to make up for the deficiencies of Basel in 1988 from 1999, the Basel Committee began to consider modifying Basel, the Basel II finally introduced in June 2004. Protocol II to become the new standard for international banking supervision and operations, the China Banking Regulatory Commission, in 2009, about 10 large banks to implement risk management model based on the IRB and the full implementation of Basel II. Protocol II credit risk faced by the commercial banks, market risk, operational risk and interest rate risk higher regulatory requirements Standards Act and the IRB are two ways to measure credit risk. It shows that Basel II will be banking, including credit cards, including the new risk management requirements.

3.1 Under Basel II credit card risk analysis

In the perspective of the New Basel Capital Accord risk

and risk measurement methods, the credit card business is based on the "law of large numbers" as an operating basis, with a high degree of risk diversification advantages. According to the law of large numbers, the average results of a large number of random phenomena has nothing to do with the characteristics of each individual random phenomenon, therefore, the card issuers do not have to spend a lot of cost and control means to valuation each cardholder random risk, and should turn its attention on thousands and thousands the average cardholder overall risk grasp, and the overall level of risk of the cardholder is deemed to expected risk individuals. Secondly, as long as the cardholder is fully multi-card issuers can be directly calculated with the experience of the loss of the card-issuing the arithmetic mean of the risk, no need to measure the risk of the expected value of the individual. At the same time, due to the credit limit is recycled, the multiple Game formation reputation mechanism - the level of its credit line credit card, become an important symbol of the mature market economy, people's creditworthiness. Higher credit card overdraft interest rate (per annum up to 18% or more), but also gives a strong risk of loss coverage ability. Consolidated income high rate of return (overdraft interest + fee + rebate + deposit) it risk-adjusted rate of return is high (about 2 % on average assets of China's banking industry, while the return on assets of the credit card is usually up to 5 %, a difference of nearly 25 times). Different target customer base in accordance with their behavioral characteristics is divided into different collections, each collection based on past default data to form the actual proportion of the revenue and costs, the loss data of the reference to the past, credit card fraud, operational risk coefficient formed for credit card product line , which can measure the cost of the basic risk of credit card products. Divided reasonable crowd behavior patterns in the statistical sense can be foreseen, and thus the expected loss of the credit card business can be measured, while the small crowd irrational behavior caused by the unexpected loss ratio. Cover credit risk and operational risk can be predicted on the basis of high credit card pricing, high reliability, and thus the expected loss of the credit card business can be measured accurately, and the crowd irrational behavior caused by the unexpected loss ratio is small. Cover credit risk and operational risk can be predicted on the basis of high

credit card pricing, reliability is high. And the need to allocate the amount of economic capital is running. In this sense, the credit card is a fully controllable risk, low-risk business. In addition, the new Basel agreement clearly included in the scope of regulatory capital, operational risk and operational risk as part of the bank capital ratio denominator.

3.2 Under Basel II credit risk calculation method

For credit card loan assets, the Basel II it is classified as a recurring types of retail loans, their credit risk measurement models available four important parameters to calculate the expected loss, that is, the probability of default, loss given default, exposure at default expiration date. $L_{miss} = P_{un} \times P_{loss} \times A_{un} \times T_{lit}$ (L_{miss} : expected loss; P_{un} : The probability of default; P_{loss} : default loss rate; A_{un} : exposure at default; T_{lit} : valid). For the credit card business, due to the special requirements of the application and approval, as well as risk management, each customer's data and information from the application must be complete, while the bank's internal business processes and customer card records, credit records preserved intact electronic information, plus on the credit card itself is operating basis of the law of large numbers. Customer classification, according to credit card customers and historical data, and estimates the corresponding probability of default and loss given default is possible, as long as the existing structure of the data in accordance with the new Basel requirements excavation and finishing can be. Fact, indicators of domestic commercial banks in the credit card business risk management applications, has been reflected from different angles, the concept of the probability of default and loss given default rate, now need to do is to be integrated and comprehensive analysis of these indicators. From these indicators, at least in the overall level of card issuers already have the basic information of the related customer transaction behavioral characteristics, overdrafts and arrears and temporal characteristics of the basic types of loss and loss of data and loss recovery position to measure the loss of credit card business is expected to basic data, organize data in accordance with the Basel II requirements, a different level of defaults customers reasonable classification, establishing a correspondence between the use of international

advanced banks of the three, you can basically establish and meet Basel II requirements, credit risk measurement model. On this basis, following the law of large numbers, in the tradeoff own management level, risk control capacity and market and customer status based on the development of the appropriate risk strategies, use of technology and mathematical statistics means to explore the risks and benefits of the Law of Correspondence especially want to risk control throughout the product design, marketing, approval, card issuing, trading, clearing, repayment, collection and customer service process, so that a reasonable risk benefit ratio, business receipts in completely covering the risk loss based on the guarantee should be room for profit, in order to achieve the revenue maximization.

Basel II risk management framework, the Bank should pursue high-return, low capital needs of the business. The basic features of the credit card business in accordance with the Basel II requirements. From within the bank, the card-issuing bank in the early development of the credit card business, establishing a relatively comprehensive data system, its risk monitoring indicators from different angles reflects the Basel II related indicators to measure the expected loss and economic capital requirements, create the conditions for the implementation of in accordance with the Basel II risk management model and risk metrics. In accordance with the requirements of the essential characteristics of the credit card business and intensive management, realize centralized credit card risk management and process control, as the risk management resources to be spent under the premise of the law of large numbers, revenue loss risk coverage.

4. Measures against our credit card risk and policy recommendations

4.1 To strengthen the education of the risk of the cardholder.

Legal departments, financial departments should vigorously carry out publicity and education activities of the knowledge of laws and credit card, and the media to increase the popularity of consumer financial concept strengthen cardholders proper use of the credit card of the consciousness and awareness of the dangers of bank card crime; commercial banks to increase auditing and

supervision, the establishment of the rule of law and the business of the credit card handling personnel training mechanism to prevent credit risks from the source; society, the family is to educate the younger generation to develop good financial habits to control excessive consumption cautious liabilities.

4.2 As soon as possible to develop the introduction of the Consumer Credit Act.

Specifically to develop a highly-targeted and operability, and be able to adjust the various types of consumer credit business by drawing on the mature experience of the developed countries, consumer credit law, to provide for the effective protection of the legitimate rights and interests of consumers of credit card issuers and financial law support, to create a good card environment, and comprehensively promote the sustained and healthy development of the credit card business.

4.3 Card issuers to adjust their thinking, strengthen the responsibility, and effectively improve the scientific management system.

First, create a favorable environment for the development of the credit card business. To conscientiously implement "issued by the China Banking Regulatory Commission on July 22, 2010, commercial bank credit card business supervision and management measures" to promote the sustained and healthy development of the credit card business. The second is to strengthen the information disclosure system. Timely public prompted risks in the credit card business, to fulfill inform the debtor credit obligations, limit consumer over-consumption. The third is to strengthen self-discipline and internal management. To establish sound credit card business risk management and internal control system, strictly implement authorization management to effectively identify, assess, monitor and control business risks. Four credit card to apply the threshold to establish a sound credit review mechanism. Additional guarantor system unstable income or credit blemishes claimant, a bad credit record, limited in its bid to host the other financial business should give; want to confirm the source of income of the applicants, especially students, repayment ability and liabilities situation, control the amount of new consumer

credit card current, strict implementation of the "must implement a second source of repayment for a second source of repayment party (parent or guardian) is willing to material written guarantees on behalf of repayment.

4.4 To strengthen Credit Card Risk cooperation mechanisms.

First, the establishment of a credit card risk joint prevention and early warning mechanisms, and work together to form a jointly prevent credit card risk. China UnionPay card-issuing bank should strengthen cooperation to establish communications with the channels of contact and the case of public security, taxation and other departments, Investigation Mechanism, and timely information about the risk event, to prevent the proliferation of all types of risk in the industry. The second is to strengthen the supervision and management of commercial banks, the credit card business. The China Banking Regulatory Commission and its dispatched institutions should earnestly perform their duties of supervision and management of commercial banks in the credit card business, and timely monitoring and evaluation of the risk of credit card business, and related industry self-regulatory organization, guidance and supervision; take full advantage of its own regulatory resources, timely prompt bank card development and various types of risk, guidance standardized and orderly development of commercial banks in the credit card business. Third, the issuing bank should establish a system of risk management of credit card business. Equipped with the necessary equipment, systems and personnel, on the credit card accounts for suspicious transactions should be taken promptly contact the cardholder to adjust the line of credit, locked accounts, emergency stop payment and risk management measures. At the same time, by the public security organs, the judiciary, the cardholder or relatives sources that the risk of cardholder information, immediately stop the raised the lines super line of credit card services authorized staging business authorization may expand the credit risk operation.

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Vitae

Sun Lei, was born in 1987 in Nanjing, China. She is studying for her Master degree now in Business School, University of Shanghai for Science and Technology.

Sun Yingjun, was born in 1962 in Heilongjiang. She is the professor in Business School, University of Shanghai for Science and Technology.

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May 22, 2012, the People's Bank of China released the first