CHAPTER 4
CURRENT SITUATION AND MANAGEMENT PROBLEMS OF LIQUIDITY RISK IN CHINA'S SECURITIES COMPANIES UNDER THE NEW REGULATION

4.1Review of new regulations

4.1.1Development course of the risk regulation system of the securities company

Risk is the inherent characteristics of securities companies. Being the industry's high-risk characteristics, the survival of securities companies is based on the ability of risk prevention and control, and the basic conditions for its development is also due to strict and effective risk management. Internationally, since the 80's, the international cyclical financial market turmoil has been intensified continuously. In 2007, the outbreak of the loan crisis of the United States has transmitted and evaluated into the financial crisis that happened once within one century and has led to economic crisis and the global economic recession. Its fuse is from over-leveraged and over-flooding sub-loans in the secondary derivative financial products from those so-called global Securities companies such as AIG, Lehman Brothers, Merrill Lynch and so on. Its potential risks go far beyond the affordability of a single securities company, the securities industry or even the financial system, and ultimately resulted in catastrophic consequences. In the course of the development of domestic capital markets in two decades, risk management of securities companies went out of control, which brought about numerous illegal issues. These facts show that it is very important to build a comprehensive, effective, dynamic and forward-looking risk early-warning system of securities firms.

In 2006, combined with the summary of the comprehensive management work of the securities company and the practice of foreign mature market, China Securities Regulatory Commission issued the "risk control index management method for securities companies", and established the risk regulation system with net capital as the core of securities companies. The established risk regulation system took net capital as the core, fully drew lessons from the international experience of Basel capital agreement and so on. At the same time, it also takes into account the characteristics of the business types of China's securities companies at the time and requires the securities company to calculate the risk capital according to its business scale through the provision of absolute net capital and relative indexes and their minimum standards. To prepare, and to ensure that the risk capital preparation is less than the net capital, the initial establishment of the business scale and category and the net capital and other risk control indicators to maintain linkage, focusing on prevention and timely control of the risk of the risk of a sustained regulatory system. China has enough space on fiscal and monetary policies to offset a growth slowdown from any adverse shocks. But a credit-fueled investment boom–the tried and tested way to boost growth–will set back the growth rebalancing effort, hinder market-oriented reforms, and increase medium-term risks from excess capacity and nonperforming loans

From the view of supervision practice, the risk control index system, which takes net capital as the core, plays an important role in strengthening the risk management and consolidating the financial foundation of the securities companies, and ensures the sustainable and steady operation of the industry. But there are also obvious deficiencies, that is, insufficient attention to liquidity risk, among which "net capital / net assets" index is one of the core indicators of regulation. Although the index reflects the proportion of the high flow part of the assets in the net assets, the proportion of the high liquidity assets to the net assets is not less than 40%, and the liquidity of the assets of the securities company is improved to a certain extent; the index lacks scientific, it cannot accurately reflect the liquidity gap of securities companies; on the other hand, stringent regulatory standards also restrict the development of securities companies.

Table 4.1 shows the 10 securities companies with the lowest net capital / net assets at the end of 2017. Some are close to the target early-warning line, but the company's actual level of financial leverage is very low, up to 4.8 times that of the D securities company. It is 15 times lower than the banking industry and 13 times the level of leverage after the international investment bank subprime crisis, which is not conducive to the full play of the capital intermediary advantage of the securities market and to reduce the function of the direct financing of the service entity economy.

Table 4.1, 10 securities companies with the lowest net capital / net assets at the end of 2017

No.	Securities company	/ Net capital / net assets	Leverage ratio
1	1 Securities company 1	44.06%	4.65
2	2 Securities company 2	53.59%	2.62
3	3 Securities company 3	57.64%	3.51
4	4 Securities company 4	60.49%	2.65
5	5 Securities company 5	62.23%	4.8
6	6 Securities company 6	63.83%	2.14
7	7 Securities company 7	65.72%	2.1
8	8 Securities company 8	67.14%	2.58
9	9 Securities company 9	68.03%	2.3
10	10 Securities company 10	68.77%	3.11

Data sources: the relevant securities industry and company data are extracted from the website of China Securities Association and the Transmission of China Securities Association.

In February 25, 2014, China Securities Association issued "guidelines for the liquidity risk management of securities companies", it introduced two liquidity regulatory indicators in the Basel Protocol III, "liquidity coverage (LCR)" and "net stable fund ratio (NSFR)", the aim was trying to build a quantitative calculation and monitoring of liquidity risk. After more than two years of operation practice and on the basis of further optimizing the influencing factors, the CSRC issued the decision on modifying the management measures for the risk control index of securities companies in June 16, 2016, and formally listed the "liquidity coverage rate (LCR)" and "net stable fund ratio (NSFR)" as the core index to replace the original "net capital / net asset" index, it embodied a significant increase in the liquidity risk concern of the securities companies and strengthened the maturity matching of the assets and liabilities.

4.1.2 Comparison of new and old risk control indexes of securities companies

The most prominent revision of the new regulation is that the "liquidity coverage rate (LCR)" and "net stable fund ratio (NSFR)" are listed as the core indicators, and there is a clear supervision and guidance significance under the general key tone of the economic work in the current steady seeking and prevention of systemic financial risk.

According to the latest reform thought of Basel capital agreement after the international financial crisis, the regulatory department has urther perfected the risk regulation system of the securities company with net capital as the core and listed two indicators of liquidity risk supervision as the core supervision index, which provided the basis and standard for quantitative assessment for the liquidity risk supervision in the whole securities industry. It helps to manage the liquidity risk in two dimensions: vertical and horizontal.

What is the 'Liquidity Coverage Ratio - LCR'

The liquidity coverage ratio (LCR) refers to highly liquid assets held by financial institutions to meet short-term obligations. The ratio is a generic stress test that aims to anticipate market-wide shocks. The liquidity coverage ratio is designed to ensure financial institutions have the necessary assets on hand to ride out short-term liquidity disruptions. The liquidity coverage ratio started to be regulated and measured in 2011, but the full 100% minimum was not enforced until 2015. The liquidity coverage ratio is an important part of the Basel Accords, as they define how much liquid assets have to be held by financial institutions. Because banks are required to hold a certain level of highly liquid assets, they are less able to lend out short-term debt.

"Liquidity coverage rate (LCR)" and "net stable capital ratio (NSFR)" are set under certain pressure scenarios. The setting of the pressure scenario, which covers the impact of non-systems on specific objects, and the impact on the whole market, covers the overall risk monitoring of the securities industry, making the securities industry not only able to assess the liquidity risks of various institutions, but also allow the securities industry to carry out different markets to a specific market. The pressure tests were carried out to obtain the relevant liquidity risk assessment.

The two indicators of liquidity risk regulation are designed mainly for developed western countries, and the specific measures and standards are not necessarily adapted to the securities industry in China. For example, different from the international investment bank, China's securities companies do not use the customer margin mechanism, but implement customer guarantee tripartite deposit management system, the sources and characteristics of liquidity risk are not exactly the same as the western international investment bank, and the indicators have been adjusted on the specific calculation projects to make it more consistent with the actual situation of the securities industry.

4.2 Liquidity risk of China's securities companies under the new regulation

4.2.1Development and change of China's securities companies in recent years

Since 2012, the development of the securities industry has developed rapidly, and the overall capital strength and profitability of the industry have been greatly improved. The credit like business, represented by the financing margin, the stock pledge and the agreed repurchase business, has developed rapidly. The overseas and cross market business has been expanding, and the asset management, derivatives and other kinds of business are increasingly rich.

By the end of 2017, the total assets of the securities industry were nearly 6 trillion yuan, the net assets were 1 trillion and 600 billion yuan, the customer's guarantee was 1 trillion and 400 billion yuan, the market value of the trusteeship securities was nearly 34 trillion yuan, and the capital under trusting was about 18 trillion yuan. In 2017, the securities company achieved operating income of 328 billion-yuan, net profit over 120 billion yuan, and 124 companies realized profits.

4.2.2Analysis on liquidity risk of China's securities companies

By the end of 2017, 129 securities companies had a total liquidity of 784 billion 152 million yuan, down 1.86% from the same period last year; The net cash outflow in the next 30 days will be 311 billion 799 million yuan, down 2.32% from the same period last year. The industry weighted average liquidity coverage rate was 251.49%, down 1.18%. After the stock market fluctuation in 2015, the overall business scale, especially the financing business, has fallen obviously, the demand for short-term funds has fallen, the net outflow of short-term funds is lower than the scale of the high-quality liquidity, which leads to a slight increase in the "liquidity coverage (LCR)" index.

In terms of asset structure, the composition of high-quality liquidity assets has remained stable compared with 2016. By the end of 2017, the composition of high quality liquidity assets accounted for 37.97%, significantly lower than the previous year; national debt and central bill accounted for 7.72%, a significant increase over the previous year. The proportion of credit bonds is nearly 40%. High quality liquidity assets are relatively simple and have a high degree of reliance on credit bonds.

By the end of 2017, the industry used a total of 2 trillion and 366 billion 358 million yuan for stable funds, a 6.2% reduction in the year on year, of which the remaining duration was more than equal to 1 years' loan and debt scale of 714 billion 341 million yuan, 28.05% from the same period, and a further decline; the required stable funds were 1 trillion and 659 billion 59 million yuan, basically equal to the same period previous year. The weighted average net steady capital ratio (NSFR) of the industry was 142.63%, down 11.77% from the same period last year. As the scale of financing business descends, the industry has reduced the source of long-term debt, and the ratio of long and short period liabilities is not obviously improved, and the pressure of long-term capital stability is increasing.

In terms of funding, by the end of 2017, the total scale of industry integration was 2 trillion and 690 billion 533 million yuan, down 7.13% from the same period last year. The financing structure is still dominated by short-term debt within three months, with a total amount of 1 trillion and 636 billion 590 million yuan and 32.44%, of which the amount of interbank pledge repurchase is 872 billion 790 million yuan, which is 25.83% and 53.73%. Long term liabilities increased by 12.53% over the same period, and slightly increased in the debt structure. Because the debt heavily depends on the interbank repo market, the development of the industry is directly affected by the fluctuation of the capital cost of the interbank market. When the interbank market appears abnormal or extreme, it will challenge the normal operation of the securities company.

As of the use of funds, by the end of 2017, the total capital of the industry was 2 trillion and 157 billion 50 million yuan, an increase of 12.23%. The total amount of "financing" and "stock mortgage repurchase" accounted for more than 66%, with a total amount of 1 trillion and 424 billion 403 million yuan. Among them, the margin scale was 938 billion 824 million yuan, down 19.76% from the same year, 17.35 percentage points to 43.52% from the previous year, and the stock repurchase scale was 485 billion 579 million yuan, up 90.20%, accounting for 22.51%. Under the current rules of business, the term of margin trading is the longest for 6 months, and the business will be open, the longest period can reach 18 months, the stock repo period is the longest for 3 years, and the total debt of more than 3 months is only 10539 billion yuan, and there is a more obvious problem of "short capital long-term use".

The statistics of the regulatory indicators of liquidity risk of securities companies in 2017 were summarized, all companies reached the standard in two indexes. The "liquidity coverage (LCR)" of 26 securities companies is less than 200%, the "net stable fund ratio (NSFR)" of 90 securities companies is less than 200%, indicating that under the same pressure situation, the securities company "net stable capital ratio (NSFR)" relative to "liquidity coverage (LCR)" is more likely to appear unconventional. For a single securities company, the liquidity pressure in the medium and long term is even greater, and the capital of the industry needs to be further supplemented. The "liquidity coverage rate (LCR)" index has the characteristics of great volatility; the "NSFR" "buffer" space is decreasing and needs more attention.

In addition, a statistical analysis was carried out on the correlation between the two indexes in the whole industry from 10 listed companies, 20 listed securities companies and. The statistical conclusions are as follows:

Firstly, two indicators of large securities companies are below the average of the industry. According to the statistics of the top 10 securities companies in 2017, the results showed that the "liquidity coverage (LCR)" and "net stable fund ratio (NSFR)" of the above 10 securities companies were higher than 120%, with the weighted average of 220.28% and 124.19% respectively, which were lower than the industry weighted average of 251.49% and 1, respectively. 42.63%. The data reflect the industry leading large securities companies, although they are in a dominant position in the use of capital efficiency and profitability, but their liquidity index is lower than the industry average, especially the weighted "net stable fund ratio (NSFR)" is close to the 120% early-warning line, such as failure to find a suitable financing channel, in business. The index continued to decline when the scale continued to rise.

Secondly, the liquidity of listed securities companies is relatively stable. The statistics of 20 listed securities companies in the industry showed that the two indexes of 20 listed securities companies were higher than the regulatory requirements of 120%. The weighted average of "liquidity coverage (LCR)" and "net stable fund ratio (NSFR)" were 223.94% and 146.19% at the end of the year, and "NSFR" was slightly higher than the industry average. Level. It shows that listed securities companies have certain advantages in terms of long-term capital and financing channels, and liquidity risk management is more robust.

Thirdly, there is a "false high" phenomenon in some professional securities companies' liquidity risk indicators. According to the statistics of the top 10 securities companies ranking each of the two indicators, the top 10 securities companies are mainly professional brokers, management, investment bank, or business single securities companies. Because of the single business, small size and large fluctuation of funds, the regulatory index of professional securities companies is very high, but it is easy to produce large fluctuations due to individual business behavior. The liquidity index of "high" is difficult to reflect the real liquidity risk of the company.

4.3 Problems in liquidity risk management of securities companies in China

4.3.1New characteristics of liquidity risk in China's securities companies

There has been rapid development of innovation business in the securities industry since 2012: Asset management, OTC derivatives, and credit business have encouraged the potential liquidity risk of securities companies from different aspects. With the increase in the variety of business innovation and the increase of business scale, the acceleration of the market of interest rate exchange market and the rise of Internet finance, the liquidity risk of securities companies is different from that of the past.

China's capital market mainly includes the bond market and the stock market. On the one hand, the continuous fluctuation of the capital market leads to a sharp decline in the market value of stocks and bonds, which will have a great negative impact on the liquidity of China's commercial banks and non-silver financial institutions, including securities fund companies; on the other hand, the popularity of the stock and bond market will cause a lot of speculative funds to change freely between different markets and different kinds of funds, and increase the probability of liquidity risk. For example, the "money shortage" event in 2013 and the "1000 stock limit" in the stock market in 2015 had showed the consequence of liquidity on securities companies.

Under the new economic situation of deleveraging, the people's Bank has urged financial institutions to reduce the circulation of funds within the system through open market operations, short-term liquidity adjustment tools and riskow guidance and other financial institutions, to supervise the service of the real economy, and to the investment, pledge and outside assets of the securities companies. The management of business liquidity has a direct impact.

From 2013 to 2017, the types and patterns of securities companies' business have changed greatly. The scale of financing, such as margin trading, agreed repurchase, stock pledge repurchase and other financing businesses increased rapidly, reaching a maximum of more than one trillion. The rapid increase in scale brings the rapid consumption of funds. The main sources of financing are short term funds within three months, and some even rely on the overnight borrowing funds in the inter-bank market. The proportion of long-term capital in private assets has continued to decline, which has dropped to 40%. The long-term asset allocation and the decline in the ratio of long-term and long-term liabilities make the securities company's assets and liabilities mismatch increasingly serious, and liquidity management is difficult. If the short-term debt ratio is too high or the repayment period is too concentrated, the liquidity supply of the securities companies will be insufficient and the potential liquidity risk will rise.

Some emergencies are also important factors leading to the liquidity risk of financial institutions. For example, in December 2016, after the media exposure of the state Sea Securities violation, it resulted in the self-examination of other financial institutions and reduced the holding of the business, so that the interest rate of the national debt rose for two weeks and the liquidity of the money market was tense. In the end, the disposal was made by the regulatory authorities in a timely manner, if the continuing deterioration of the event, it will lead to a great doubt on the credit of the whole securities industry, and the securities companies that have no violation of the rules will be redeemed, and the liquidity crisis will be contagious in the financial institutions and will cause a systemic liquidity crisis.

4.3.2Problems in liquidity risk management of securities companies in China

The new regulation introduces two liquidity risk monitoring indicators: "liquidity coverage ratio (LCR)" and "net stable capital ratio (NSFR)". Finally, the liquidity risk of the securities company is embodied in the form of numerical value, which realizes the measurability of liquidity risk and improves the effectiveness of liquidity risk management to a great extent. The regulatory standards in the new regulatory provisions are only the minimum regulatory requirements as external regulation and cannot be the only reference index for the internal management of liquidity risks in the securities companies. Most securities companies have initially established a comprehensive risk management system with liquidity risk management as the core. The better the overall risk management system of the company, then the scale of the assets will be better. But most securities companies are still in the initial stage of construction. In this paper, the problems and risks of liquidity risk management in securities companies are summarized as follows:

Firstly, most securities companies do not know how to systematically and comprehensively manage liquidity risk, and the construction of risk management information system of securities companies is lagging behind. Most securities companies have not used computer systems to manage liquidity risk. Secondly, the responsibility of the organizational structure is not clear enough. The risk management responsibilities of some securities companies are not concentrated, clear and independent, and the risk management committee of some companies is set up or not in place. Thirdly, the risk control personnel are generally inadequate, and securities companies are unable to meet the overall risk management needs of risk control personnel; the risk quantification skills and professional risk management skills of risk control personnel in most securities companies need to be further enhanced. Fourthly, risk management reports need to be refined. Individual securities companies do not establish a daily risk management mechanism; some securities companies' daily newspapers are conducted according to their business and product lines; some comprehensive securities company risk management reports did not respond to the case of subsidiaries; the liquidity risk management reports of individual securities companies only reported to the chief financial officer and the head of the finance department, and did not submit to the chief risk officer and the risk management department.

At present, a large number of external sources of funds of securities companies have a very short duration and must be maintained through continuous rolling financing. In addition to the difference in the cost of capital, the other important aspect is that the securities industry still faces many policy constraints in foreign financing, which, to a large extent, restricts the means of securities companies to manage liquidity risks and increases the difficulty of dealing with liquidity crises. For example, the banking regulatory authorities do not allow the state-owned banks with abundant capital and securities companies to carry out inter-bank lending, pledge repurchase and other money market businesses. The short-term liquidity adjustment tools of the people's Bank, such as open market operations, SLF, short term liquidity adjustment tools (SLO), have not been opened to non-financial institutions such as securities companies.

begun to stress tests. Pressure testing is a very important and necessary means of liquidity risk management, which not only helps the regulatory authorities to carry out comprehensive risk supervision to the securities industry, but also effectively avoids the overall crisis in the securities industry; it also helps securities companies to fully understand the relationship between potential risk factors and the company's financial situation, and deeply analyze the ability to resist risks. At present, the application of pressure testing is gradually popularized by securities companies. The liquidity pressure testing awareness of securities companies is basically formed, and the specialty of pressure testing is being further strengthened. However, most securities companies are still unable to combine their own assets and liabilities structure, future cash flow, financing channels and other characteristics, more targeted formulation of pressure testing schemes; pressure testing technology and methods need to be further improved, there are still some securities companies lack of inspection of the model, the lack of basis for model parameter estimation and so on. The supporting system for pressure testing needs to be built urgently. With the vigorous development of the innovation business of the securities companies, the complexity of the transmission mechanism and the normalization of the pressure test work, the demand for information system will be higher and higher.

Finally, the liquidity risk management of subsidiaries has also become a new challenge for securities companies' risk management. In recent years, securities companies have set up management, direct investment and alternative subsidiary companies. The number of subsidiaries is increasing, and the business scale is bigger and bigger. The potential risks of the subsidiaries may exceed their capacity. It is difficult for the securities companies to fully grasp the risk situation of the subsidiaries, and the management of the liquidity risk of the subsidiary companies has become one of the urgent problem to be solved by securities companies.