RESEARCH ON LIQUIDITY RISK MANAGEMENT OF SECURITIES COMPANIES UNDER NEW FINANCIAL MARKET SUPERVISION ENVIRONMENT

LI WEI

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THEMATIC CERTIFICATE
To
LI WEI

This independent study has been approved as a partial Fulfillment of the Requirement of International Master of Business Administration in International Business Management.

Advisor: .....Date:.../...../.....
(Doctor Chai Thanichanun)

.....
(Associate Professor Dr. Jomphong Mongkhonvanit)
Acting Dean, Graduate School of Business Administration
Date...29/6/18.....
Siam University, Bangkok, Thailand

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ABSTRACT

Title: Research on Liquidity Risk Management of Securities Companies under New Financial Market Supervision Environment

By: Li Wei

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Advisor: .....
(Doctor Chai Thanichanun)

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Because of the continuous innovation and development of China's financial market in recent years, the domestic securities companies have become more and more comprehensive, diversified and complex in the scope of operation, business structure and product types. In June 2016, China Securities Regulatory Commission made clear the risk control index system at the core of net capital and liquidity and included two liquidity regulatory indicators of "liquidity coverage" and "net stable fund rate" into the four core indicators of risk control. The new regulation has raised liquidity regulation to the same importance as capital regulation. As a result, itis of great theoretical and practical significance to systematically study the liquidity risk management of domestic securities companies.

This paper first combs the relevant literature at home and abroad, then takes risk management as the theoretical basis, and then uses the method of combining normative research with case study to focus on liquidity risk management of domestic securities companies, current situation, characteristics and problems of liquidity risk management in domestic securities companies. Combined with theoretical thinking and related work experience, this paper also puts forward suggestions for improvement. Finally, S securities company is chosen as the object of individual practice research. On the basis of the above research, this paper draws the following conclusions: China's securities companies must establish and consolidate the liquidity risk control system according to their own characteristics, and improve the level of liquidity risk management by using a variety of liquidity risk management tools and techniques while meeting the requirements of the liquidity risk index supervision, and make full preparation for the prevention of liquidity risk.

Key Words: New regulation; Securities company; Liquidity risk

摘 要

题目： 新金融市场监管环境下证券公司流动性风险管理研究

作者： 李玮

学位： 工商管理硕士

专业： 工商管理

导师： （博士. Chai Thanichanun ）

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由于近几年中国的金融市场不断创新发展，国内的证券公司在经营范围、业务结构及产品种类方面变得越来越综合化、多元化、复杂化。2016 年 6 月，中国证监会明确了建立以净资本和流动性为核心的风险控制指标体系，将“流动性覆盖率”与“净稳定资金率”两项流动性监管指标纳入到四个风险控制核心监管指标中。新的监管规定将流动性监管提升到与资本监管同样重要的位置。于是，对国内证券公司的流动性风险管理进行系统的研究具有较强的理论和现实意义。本文首先梳理了国内外的相关文献，然后将风险管理作为理论基础，再使用规范研究和案例研究相结合的方法，采用从整体到个体的思路，通过金融机构来引入，重点研究国内证券公司流动性风险管理，在新的监管环境中，分析国内证券公司流动性风险管理现状、特点及存在的问题，并结合理论思考及相关工作经验，提出针对性的改进建议。最后选择 S 证券公司作为个体实践研究的对象。

在上述研究的基础上，本文得出如下结论：我国证券公司必须根据自身特点，建立、夯实流动性风险控制体系，在满足流动性风险指标监管要求的同时，通过运用多种流动性风险管理工具和技术，提升流动性风险管理水平，为防范流动性风险做好全面准备。

关键词：新监管规定；证券公司；流动性风险

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CHAPTER 1
INTRODUCTION

1.1Research background

Liquidity risk is one of the most important risks in the operation of the securities business, which is the lifeline of the success or failure of the securities institutions to a certain extent and will cause serious negative impact on the financial system and the real economy. In China, at the end of 2003, the risks accumulated by the securities companies in the end of the year were concentrated, the securities companies had the first comprehensive liquidity risk crisis, the 2/3 companies in the whole industry had a crisis, the 1/3 company capital chain was faced with the possibility of breaking up, and finally closed 31 companies that could not resolve the risk of risk insurance. In June 2013 and December, the two "money shortage" events in the interbank market and the abnormal fluctuation of the stock market in 2015 made the securities companies and the regulatory authorities "terrified". Internationally, the global financial crisis triggered by the US subprime crisis in 2008 was the most serious financial crisis since the great depression. During the period, a global liquidity risk crisis had emerged in the world's major financial markets. Some of the famous investment banks in the West were in trouble, and the five largest investment banks in the United States had been bought, bankrupt or transformed.

Financial institutions are highly valued by regulators at home and abroad because of their strong liquidity risk, fast dissemination and strong destructive power. Internationally, the Basel Committee has revised and perfected the Basel Agreement III, bringing liquidity risk management into a unified regulatory standard and putting forward two liquidity regulatory indicators, "liquidity coverage (LCR)" and "net stable fund ratio (NSFR)". In China, the securities industry self-discipline organization - China Securities Association began to implement the guidelines for the liquidity risk management of securities companies on February 25, 2014 and introduced two liquidity regulatory indicators in the Basel Agreement III. On June 16, 2016, the CSRC issued the decision to modify the management measures for the risk control indicators of securities companies. It clearly established the risk control index system at the core of net capital and liquidity, and two liquidity risk regulatory indicators ("liquidity coverage (LCR)" and "net stable fund ratio (N)" SFR) ") from the regulation of industry self-discipline to the regulatory level of the SFC department, included in the four core regulatory indicators of risk control, has been implemented since October 1, 2016. The new regulation will raise the liquidity supervision of securities companies to the same important position as capital supervision and will also have an important impact on the liquidity risk management of securities companies.

1.2Research meaning

The securities industry is an industry of risk trading. The key to management is risk. All

kinds of risk types of securities companies, such as operating risk, credit risk, market risk and operational risk, may eventually turn into liquidity crisis, and the prevention of liquidity risk is an important lifeline for securities companies. At present, through investigation and investigation, the securities companies in our country have basically established the system of liquidity risk management, established or improved the liquidity risk management mechanism, and promoted the attention to the management of liquidity risk, but there are still some problems and shortcomings in practice. No matter from the angle of supervision or from the point of view of the manager of the company, the experience and the practice level of the supervision and management of the liquidity risk are still deficient. From the change of the new regulation, this paper analyzes the current situation and the existing problems of the liquidity risk management of the securities companies in our country, and puts forward some countermeasures and suggestions, which is of theoretical and practical significance.

For securities companies, financial risk management will be the most important part of financial work in the next five years in the 2017 national financial work conference, which mentioned the unprecedented level of risk of the financial institutions. The ever-changing external macro environment such as currency and exchange rate policy will also bring new challenges to the liquidity risk management of securities companies. Through the analysis of the causes of the liquidity risk of securities companies and the present situation, as well as case practice, it will help the securities companies to further improve the level of liquidity risk management and construct the system and structure of liquidity risk management suitable for the company.

1.3Scope

In this paper, we combine theory with practice, and use empirical methods to solve problems. Based on the new requirements for the liquidity risk management of China's securities companies, this paper analyzes the challenges in the liquidity risk management of our securities companies in the near stage and the development of internal business and analyzes the problems of liquidity risk management in China's securities companies and proposes policy recommendations to strengthen the flow of liquidity. Finally, taking China's S securities company as a case, this paper studies its current situation and practice of liquidity risk management, and provides a way to improve the liquidity risk management of China's securities companies.

According to the ideas from definition to methodology and practice, from whole to part, this paper is divided into six chapters.

Chapter 1, Introduction. This chapter mainly introduces the background and significance of research on liquidity risk management of securities companies.

Chapter 2, Literature review. This chapter mainly reviews the literature review on liquidity risk management by scholars both at home and abroad.

Chapter 3. Overview of the theory of liquidity risk management in securities companies.

This chapter is the basis of the theoretical research in this paper. Firstly, it expounds the meaning of liquidity risk, the cause of risk and supervision, and then introduces the development process of the theory of liquidity risk management, which paves the way for the later research.

Chapter 4, Current situation and existing management problems of liquidity risk in China's securities companies under the new regulation. This chapter firstly introduces the new regulations of our country. Under this background, then it analyzes the current situation of liquidity risk of China's securities companies, and deeply studies the liquidity risk characteristics and management problems of China's securities companies.

Chapter 5, Countermeasures for strengthening the liquidity risk management of securities companies in China. On the basis of the one to three chapters, this chapter puts forward some countermeasures to strengthen the liquidity risk management of China's securities companies combining the characteristics of liquidity risk and new requirements of China's securities companies.

Chapter 6, Practice of liquidity risk management in China's securities companies: a case study of A securities company in China. This chapter mainly studies from the whole to individual. Taking the A securities company in China as an example, the liquidity risk management framework and system system, the operating situation of liquidity risk supervision index, the tools and methods of liquidity risk management are introduced, and the current situation of liquidity risk management are fully demonstrated, then corrective actions are proposed.

Chapter 7, Conclusion and Prospect. The conclusions of this study are summarized, and corresponding suggestions are put forward for the risk management of securities companies. Finally, the shortcomings and prospects of this article are expounded.

CHAPTER 2
LITERATURE REVIEW

2.1Oversea literature review

The concept of liquidity is very broad, and different fields have different meanings. The research object of this paper is the liquidity of securities companies in financial institutions. As the financial industry of most countries in the world is mixed operation, securities, banks, and insurance business infiltrate and cross each other, China's financial institutions are also gradually mixed business trend. Therefore, the literature research and the theoretical basis of the next chapter are mainly based on the premise of mixed operation. In the early years, foreign economists focused their attention on what is the root cause of liquidity risk.

Diamond (1983) believed that the intrinsic root of the liquidity risk of commercial banks came from the bank's capital intermediary function. It also reduced liquidity while converting low liquidity assets into liquidity with high liquidity and reduced their liquidity. They also proposed a famous D-D model to consider the multiple factors that affected liquidity in banking system and financial market.

Smithson (1995) believed that liquidity risk was mainly due to the rising cost of cash and uncertainty of the market price caused by the lack of liquidity in the financial market or the assets held.

Rose (1996) believed that the mismatch of assets and liabilities, the influence of interest rate changed and the attempted to maintain public confidence in financial institutions were the three causes of the liquidity risk of financial institutions.

Velasco (1998) pointed out that with the global economic opening and the continuous promotion of international financial integration, the operating environment of financial institutions was more open, and regulations, policies, economic cycles and exchange rate changes would bring liquidity risks to them.

Gale (2000) built a run model, which mainly discussed the causes of the run, and it was believed that the main reason for the run was the shortage of liquidity rather than the traditional panic.

Stephen Morris (2003) focused on the important factors that affected the optimal allocation of bank assets - institutions and market rules. They believed that banks would apply the capital conversion form and apply to the central bank to fulfil the ultimate borrower's duties to alleviate liquidity pressure, reduce bank's own liquidity risk when facing liquidity pressure.

Goldstein (2005) mainly studied the possibility and influence factors of bank runs. They believed that the possibility of a commercial bank run was positively related to the number of bank account customers. When the number of current deposit customers increased, the

possibility of running a run increased; when the number of current deposits was reduced, the possibility of running a run was low.

In addition to the research on run, scholars have also found that information asymmetry is the cause of liquidity risk. For example, Lev Ratnovski (2007) believed that information asymmetry led to an uncertain increase in Bank Solvency, thereby increasing liquidity risk.

The research of Franck (2007) focused on analyzing the factors involved in the liquidity crisis in recent years, the causes of the crisis, and finding the weak links of liquidity risk management in the current financial institutions and paid more attention to the quantitative research of liquidity risk.

Landskroner (2008) held that the structure of assets and liabilities is the primary factor of bank liquidity risk, and the intensification of competition in credit market would increase the liquidity risk of banks, and the intensification of the deposit market competition would result in the liquidity shortage of bank liquidity.

Cornett (2011) pointed out that the freezing of the business market, the mortgage of assets and the collapse of the mortgage-backed securities market in the financial crisis during 2007-2009 resulted in liquidity exhaustion. In the rescue process of the Federal Reserve, only banks that relied on stable sources of capital, such as core deposits and capital, would continue to issue loans.

Acharya (2012) mainly studied the liquidity risk of bank from the two perspectives of internal and external, it was believed that the non-comprehensive assessment mechanism within the bank and the asset bubbles formed by the external macro-economic uplink had caused the hidden liquidity risk.

In response to the liquidity risk method, besides the D-D model proposed by Diamond (1983), Gibson (2001) had studied the application of pressure testing in the liquidity risk management of commercial banks. It was believed that the pressure test could help the banks to understand the possibility of liquidity demand in extreme situations and make up for more factors that traditional statistical tools could not do.

Michiru Sawada (2010) studied the extent to which the liquidity shocks caused by depositors' run behavior in the absence of a deposit insurance mechanism affected the portfolios under the macro financial crisis, it was pointed out that in response, financial institutions should increase liquidity by selling voucher assets in the capital market rather than loaning from banks.

Drehmann (2013) proposed that the measurement of the liquidity risk of financing could be calculated by paying the sum of the multiple premium of a multiple of the expected marginal interest rate by the bank's will.

In the framework of liquidity risk management under the framework of Basel, the

outbreak of the financial crisis had made the liquidity of the financial market and financial institutions an important role to identify, and liquidity risk management brought new problems to financial institutions. The Basel Committee (2010) published the Basel Agreement III, and proposed two liquidity regulatory targets for short-term and long-term liquidity - liquidity coverage (LCR) and net stable fund rate (NSFR).

Jeanne (2010) and Kocherlakota (2010) agreed that the regulatory authorities could increase the tax burden on the liquidity misquotas of various financial institutions and set reasonable tax rates to achieve a reasonable level of liquidity mismatch.

Reuse (2011) believed that the new liquidity regulatory indicators are not particularly significant for solving the problem of liquidity shortage. Through the analysis of the current status of European banking, it was pointed out that banks might increase the financing costs of borrowers in order to meet the regulatory requirements.

Giordana (2011), through the calculation of the number of bank indicators, studied the impact of its implementation on bank lending channels, and pointed out that the net stable fund ratio has greater impact on the bank than the liquidity coverage, and it was found that the impact on large banks was relatively smaller than that of small banks.

According to Maaka (2013), profitability of commercial banks is negatively affected due to liquidity gap and leverage. The borrowing in the repo market helps the banks to keep the negative impact of the liquidity gap within an acceptable range set by the Central Bank. The harmful effects of liquidity to commercial banks be avoided by maintaining sufficient cash reserves.

A study by Sanghani (2014) on non-financial companies listed at the Nairobi Securities Exchange revealed that there was a positive relationship between current ratio, operating cash flow ratio, capital structure and financial performance of non-financial companies listed at the NSE. Thus the study concluded that liquidity positively affects the financial performance of non-financial companies listed on the NSE.

Mwangi (2014) investigated the effect of liquidity on financial performance of deposit taking microfinance institutions in Kenya. The study found out that all the studied factors have a positive correlation with the financial performance of the MFIs. Therefore, liquidity of MFIs has a positive association with their financial performance. The financial performance of the MFIs in Kenya is highly dependent on the level of the institutions' liquidity. There is also a positive association between liquidity and financial performance of MFIs.

According to Ouma (2015) in a study to find out the effect of liquidity risk on the profitability of commercial banks in Kenya, the study found that the liquidity affected profitability of commercial banks positively. There was a significant relationship between liquidity and profitability of commercial bank in Kenya. Liquidity problems if unchecked may adversely affect a given bank's profitability, capital and under extreme circumstances, it may

cause the collapse of an otherwise solvent bank. In addition, a bank having liquidity problems may experience difficulties in meeting the demands of depositors, however, this liquidity risk may be mitigated by maintaining sufficient cash reserves, raising deposit base, decreasing the liquidity gap and profitability of commercial banks.

2.2 Domestic literature review

Due to the late development of the financial market and the capital market and the macro environment of China financial institutions, the research on liquidity risk management in China started relatively late, and there is no systematic liquidity risk management theory. The main research results are mainly focused on the causes, analysis and management of the liquidity risk, measures and other aspects.

Yao Changhui (1997) pointed out that the reason for the liquidity risk on the surface was that the source of bank funds and the use of funds were changeable. The deep reason was that the profitability and liquidity could not be taken into account. The main factors affecting the liquidity risk include the main factors of the liquidity risk: The rationality of assets and liabilities structure, macro monetary policy changes, the perfection of financial market, and the transformation of other risks. Liu Haihong (1999) studied the microcosmic factors affecting the liquidity risk in the context of the Asian financial crisis in 1998, such as the lack of liquidity in the bank's own assets, the low capital adequacy ratio and the high rate of non-performing loans. Guo Jinghua (2000) believed that China's commercial banks had a single form of assets and poor quality of credit assets and other factors to promote mismatch. Liao Min (2008), Chen Jingyuan (2013) all believed that the development of the financial market made the liquidity supervision face new pressure. It is necessary to strengthen the mismatch management of bank assets and liabilities and introduce the pressure test model in the study.

The following are the main points and elaboration of the liquidity risk research of securities companies.

Peng Zhongming (2000) believed that the risk of securities companies, in addition to their own management and internal control errors, was also derived from the financial instruments and types of business development inherent in their business operations. Zhu Xiaochuan (2003) points outed that, when market risk, credit risk, operational risk and other kinds of risks were accumulated to a certain extent, the liquidity risk of securities companies would be triggered. Zhu Yi (2004) believed that liquidity risks were associated with the business of securities companies. It was required to be vigilant and take precautions against them. Dai Qi (2013) thought that the financial leverage ratio of China's securities companies was relatively high, and the high debt operation would bring profits, as well as liquidity risk to the company. Pang Jiemin (2013) had studied various factors that affected the liquidity of securities companies and pointed out the deficiencies and limitations of risk regulation. Lin Hongzhen (2014) had conducted an analysis and study of the advanced experience of liquidity risk management in the US investment bank for reference from the industry. Wang Jianping (2016) borrowed from Europe and America to deal with the liquidity rescue mechanism of the financial crisis and

proposed to build a multi-level liquidity rescue system and expand the means of security companies to resist liquidity risk. Zhang Lihua (2016) introduced the main programmes and objectives of the International Monetary Fund's macro stress test for domestic financial industry. Chen Hao and Chen Boqiang (2016) had analyzed the variations of the new risk regulation issued by the regulatory authorities and pointed out the impact and countermeasures for the Chinese securities industry.

In the *Guidelines for liquidity risk management of securities companies* drafted by China Securities Association (China Securities Association), the definition of liquidity risk, management methods and liquidity management indicators also draw lessons from the international Basel Protocol III related practices and were basically consistent with the definition of banking supervision.

Domestic scholars studied the liquidity risk management of securities companies in two stages: first of all, before the comprehensive management of the securities industry, that is, before 2003, the main cause of the liquidity crisis of the securities companies was the serious failure of corporate governance and internal control, which showed that the shareholders misappropriated the company's assets, the financial information was false, and the customer funds were appropriated for illegal financing, and so on; secondly, after the 2012, the innovation and development stage of the securities industry, with the business innovation and the growth of the securities companies, the liquidity risk had new characteristics, especially with the development of the capital consuming business, such as the development of financing and investment business, and the increasing complexity and importance of the liquidity risk management in the industry. In the industry itself, there was a problem of short borrowing and mis-allocation of funds, and the internal demand and external supervision department supervision and guide, and the research of liquidity risk management around securities companies was increasing.

CHAPTER 3
OVERVIEW OF THE LIQUIDITY RISK MANAGEMENT THEORY OF SECURITIES COMPANIES

3.1Liquidity and liquidity risk of securities companies

Liquidity means how quickly you can get your hands on your cash. In simpler terms, liquidity is to get your money whenever you need it.Cash is the most liquid asset. However, some investments are easily converted to cash like stocks and bonds. Since stocks and bonds are extremely easy to convert to cash, they're often referred to as liquid assets. Liquidity for companies typically refers to a company's ability to use its current assets to meet its current or short-term liabilities. A company is also measured by the amount of cash it generates above and beyond its liabilities. The cash left over that a company has to expand its business and pay shareholders via dividends is referred to as cash flow. Although, this article won't delve into the merits of cash flow, having operating cash is vital for a company both in the short-term and for long-term expansion.

The technical committee of the International Securities Regulatory Commission (IOSCO) defines the liquidity of the securities company as the risk that the company may suffer economic losses due to the uncertainty of the company's asset changes. In "Liquidity risk management guidelines for securities companies", "liquidity risk" refers to the risk that a securities company cannot obtain adequate funds at a reasonable cost in time to pay due debt, perform other payment obligations and meet the capital needs of normal business. " From the above definition, the liquidity risk of securities companies can also be divided into asset liquidity risk and debt liquidity risk. The company must operate with moderate leverage, which inevitably brings about the requirement of liquidity risk management. The development of securities companies has led to increasing financing demand. On the one hand, in order to pursue profits, securities companies always focus on short term funds with short term and low interest rates; on the other hand, the financing channels of securities companies are relatively simple and their dependence on the inter-bank market is high. In order to maintain a reasonable liquidity to avoid liquidity risk, securities companies must have sufficient liquidity to cope with the liquidity needs in the business process.

According to the length of the term, liquidity demand is divided into short-term demand and long-term demand. Liquidity management should do a good job in calculating the demand for long and short-term funds in advance, and make reasonable plans for the time, time limit, way and cost of raising funds. The sources of liquidity demand include the repayment of borrowed funds, the payment of tax and operating expenses, the pay of the employees, the payment of payment to the exchange, the payment of cash dividends to the shareholders, and the financing of the customers. Liquidity management should calculate the liquidity gap in advance according to the nature of the business.

A liquidity crisis can on occasions lead to what is commonly known as a “bank run” when

depositors make a beeline for the bank to withdraw their money and such occasions can easily aggravate the situation. It is for this reason that full-service banks such as J.P. Morgan, Morgan Stanley, and all other banks are required proactively to maintain their liquidity risk in order to remain in a healthy condition. It is essential for every bank to maintain adequate levels of liquidity failing which the bank would have to deal with the crisis mentioned within this discussion. Banks are required to make adequate provisions for the money they advance as loans along with the deposits they receive. Banks also have the option of borrowing short-term loans from other financial institutions to cover any shortfall they may be facing. However, at no time can bank afford to overlook their depositor base and advance loans far in excess of the deposits they have.

The liquidity supply of securities companies refers to the way companies can obtain funds. According to the channel division, including shareholder investment, issuing companies, corporate bonds, interbank market access, service income, the sale of non cash assets. As a result, securities companies always have "congenital deficiency" in external financing, and financing channels are single, resulting in short term financing in the industry.

When the liquidity supply of securities companies is greater than demand, securities companies need to increase the effective use of the remaining liquidity and improve the efficiency of fund utilization; when the liquidity demand of a securities company is greater than that of supply, securities companies need to increase their holdings of high liquidity assets or reduce their business scale and maintain liquidity. The essence of liquidity risk management of securities companies is to take comprehensive measures to maintain liquidity demand and supply balance.

3.2Causes and supervision of the liquidity risk of securities companies

3.2.1Causes and influencing factors of liquidity risk

Generally speaking, the liquidity risk of a securities company is always accompanied by other risks, such as credit risk, legal risk, reputation risk and so on, which may eventually induce liquidity risk. As a whole, the factors affecting liquidity risk are not only affected by the internal management, but also mainly by the external macroeconomic and financial market factors and other risk transformation.

The risk types of securities companies include business risk, credit risk, operational risk, liquidity risk, compliance risk, settlement risk, information system risk, financial risk, reputation risk and so on. Liquidity risk and other kinds of risks are not isolated. All kinds of risks have the possibility of forming liquidity risk. Usually, the deterioration of other risks will trigger the chain reaction of the company's ability to pay and the deterioration of financing capability and turn it into a liquidity risk outbreak under certain conditions. Although liquidity risk is a small probability event, it will be extremely destructive once it occurs. Therefore, liquidity risk is still the most critical risk that should be taken seriously.

3.2.2Basel Agreement III capital requirements for liquidity risk

Internationally, the Basel Commission issued the "prudent liquidity risk management and supervision principles" in 2008, and the Basel Agreement III: international framework for liquidity risk measurement, standards and monitoring issued in 2010 officially established a comprehensive framework for the liquidity risk management and supervision of investment banks. A unified global liquidity risk quantitative regulation standard was put forward to improve the liquidity risk management level of investment banks worldwide. In January 2013, the Basel Commission also released the Basel Protocol III: liquidity coverage and liquidity risk monitoring standards, , which increased capital requirements for liquidity risks and proposed two international standards for liquidity risk measurement: one is liquidity coverage rate (LCR), it is used to measure the liquidity of a single investment bank in short-term pressure situations, so as to improve the ability of investment banks to deal with liquidity interruption in the short term; the other is Net stable financing ratio (NSFR), it is used to measure the ability of investment banks to solve the mismatch of funds in the middle and long term. It covers the entire balance sheet and aims to motivate investment banks to use stable sources of funds as far as possible. And the global unified quantitative measurement is required to increase the high liquidity reserve level of the global investment banking system in order to reduce the probability of liquidity crisis.

These two indicators complement each other in terms of deadlines. The Basel Agreement III promoted the liquidity supervision of investment banks to the same important position as capital supervision, and broke through the liquidity risk management which had only emphasized the operation of investment banks under normal circumstances and introduced how to ensure the liquidity safety of investment banks in the future and under certain stressful situations. Meanwhile, it also considered the inter - and out of - balance business, as well as liquidity risk and credit risk and interest rate risk, which was more scientific and prudent, and of great significance.

3.3Development of liquidity risk management in securities companies

The liquidity risk management of securities companies is mainly to manage the end of assets and liabilities. Through the use of modern management strategies and technical tools, the relative unity of liquidity and profitability is constructed, and liquidity risk is reduced to acceptable level.

Before 60s of the last century, the most basic theoretical source of liquidity risk management in western commercial banks was asset management theory, which focused on the bank's asset management. The reason was that the early banking industry had a single capital channel, a limited amount of funds and lack of stability. The bank had a low degree of initiative in its management. It could only put the focus of management on the use of assets and optimize the capital structure of the bank. In order to satisfy the demand of customers' withdrawals at any time, it was reasonable to guarantee the proportion of the liquidity in the total assets, so as to improve the profit level and competitive advantage of the bank. It played a positive role in the early development of banking industry, but it was no longer suitable for

the banking industry which is developing continuously.

At the end of the 1950s, with the prosperity of the world economy and the increasing demand for capital in the field of production, the banks only depended on their own capital to meet the demand of funds. Thus, the bank loan management had been increased. And the theory of debt management had been produced. The core of the theory is to turn the focus of bank management from asset management to debt management, which could increase the liquidity of the bank. The leverage effect of debt management could increase the level of bank income and increase the scale of business. Thus debt management has created a new way to maintain bank liquidity from another perspective.

From 70s to 80s in twentieth Century, asset liability comprehensive management theory which had advantages of assets and liabilities appeared. The theory took into account the balance of assets and liabilities, adjusted the ratio of assets and liabilities in time, and avoided the contradiction between excessive weight of assets or excessive liabilities, so that the management of banks was more scientific.

In 1980s, with the further development of the economy, financial control in various countries was relaxed and financial liberalization began to rise. Frequent cross-border transactions made the bank liquidity risk management more difficult, a large number of out of statement operations were produced, the management theory of banks expanding financial services to increase profits, focusing on services came into being.

It is visible that the evolution of the liquidity management theory of commercial banks is adjusted with the changes of social change, economic development, financial rise and other external factors. The basic principle is to pursue profit maximization on the basis of balancing the balance of liquidity and safety. The theory of liquidity risk management is the inner theoretical core of the concrete practice of liquidity risk management, and also the theoretical basis for the quantitative analysis following.

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.

CHAPTER 5
COUNTERMEASURES FOR STRENGTHENING THE LIQUIDITY RISK MANAGEMENT OF SECURITIES COMPANIES IN CHINA

This chapter, combined with the analysis of the status quo of the previous chapters and the summary of the problems, and the new concept of supervision, puts forward some corresponding countermeasures and suggestions on the liquidity risk management of China's securities companies. The risk assessment will help each agency determine the acceptable level of risk and the resulting security requirements for each system. The agency must then devise, implement and monitor a set of security measures to address the level of identified risk. For a new system the risk assessment is typically conducted at the beginning of the System Development Life Cycle (SDLC). For an existing system, risk assessments may be conducted on a regular basis throughout the SDLC and/or on an ad-hoc basis in response to specific events such as when major modifications are made to the system's environment or in response to a security incident or audit. In the process of preventing the financial crisis, the management of the securities companies should continue to optimize the governance structure, strengthen the risk management system comprehensively, avoid the individual risk crisis of the financial institutions. On the other hand, in order to prevent the systemic risk of the whole securities industry, the government supervision departments should also maintain macro prudence and pay high attention to the importance of the system, and the liquidity risk of institutions.

5.1 Internal management of securities companies

5.1.1Strengthening risk management culture, organizational structure and institutional system construction

The securities companies should truly make the internal risk management as an important part of the corporate culture. In addition to meeting the regulatory requirements, it should put forward higher and more stringent requirements for risk management.

The implementation of strong and effective risk management and controls within securities firms promotes stability throughout the entire financial system. Specifically, internal risk management controls provide four important functions:

- to protect the firm against market, credit, liquidity, operational, and legal risks;
- to protect the financial industry from systemic risk;
- to protect the firm’s customers from large non-market related losses (e.g., firm failure, misappropriation, fraud, etc.); and
- to protect the firm and its franchise from suffering adversely from reputational risk.

5.1.2Tools and methods to improve the management of liquidity risk

Securities companies should use various monitoring methods for the first time to find liquidity risk events, and to establish various emergency measures and sufficient liquidity

reserves to cope with temporary and long-term liquidity crises, and to avoid the loss of assets and the reputation risk of the company because of liquidity events. The management of liquidity risk in securities companies mainly include asset liability management, high quality liquidity reserve management, cash flow gap management, risk limit management, pressure test and so on.

The term mismatch between assets and liabilities is the most fundamental underlying factor that triggering the liquidity risk of securities companies. The shorter the debt maturity, the larger the average monthly maturity of the debt, the greater pressure on the debt sustainability, and the greater the amount of cash and high-quality assets required to ensure liquidity coverage. Securities companies should optimize asset liability management, from the company's overall and long-term analysis of the capital demand, and the fund strategy includes an assessment of the overall characteristics of the non-liquidity of the company's assets under the expected holding period and the bad environment.

In case of unexpected business, the company needs sufficient cushions and "life-saving money" - the high-quality liquid assets reserve pool. The core high quality liquidity reserve aims to satisfy the company's debt outflow in the next 1 months and ensure the solvency of the company even if the financing channel is disrupted. The demand for temporary large amount of funds in the period of market volatility and new stock is large, and the continuous target of liquidity coverage will be ensured, and the index of the monthly debt scale increases gradually. Liquidity reserve pool assets choose liquidity and security as the core requirement and ensure profitability under high liquidity and high security. In accordance with the business development strategy, risk preference and market conditions, the securities companies should determine the composition of the high quality and liquidity assets at all levels and the asset management scheme, and continue to track, monitor and adjust the quality and changes of the high-quality liquidity assets to ensure the possession of sufficient and high-quality liquidity assets.

Cash flow gap management is the key to ensure continuous and adequate liquidity of the company. Such as the delamination management of the treasurer: Daytime and overnight liquidity only includes cash positions, and reserve bonds are used to meet longer term funds; cash outflows are fully considered, and cash positions are reserved for futures, management, etc. on the basis of ensuring payment of maturity debt. 7 days, 14 days, 30 days of cash flow.

The company should establish a liquidity risk limit system and measure the liquidity and risk from different dimensions. It includes cash flow index, liquidity portfolio ratio, asset liability term gap index, concentration index, other asset liability indicators, etc., in the link of daily liquidity risk monitoring, through the strict monitoring and management of the liquidity ratio based on the balance sheet and the index of the concentration of assets and liabilities, the reasonable evaluation and early warning of liquidity risk are realized, and sufficient time is provided to the management to take appropriate measures.

With the development of business, liquidity risk management system will become a

necessary tool for risk management of securities companies. Sufficient, accurate and timely information is the basis for effective risk management. Sound and effective risk management and controls promote both securities firm and industry stability which, in turn, inspires confidence in the investing public and counterparties. Securities firms have economic and commercial incentives to employ strong risk management internal control systems. Without such controls, a firm is vulnerable to risk. It is required to maintain sufficient IT input and build an efficient information system, thereby ensuring the coverage of risk measurement and the efficiency of risk analysis.

5.1.3Widening the financing channels of securities companies

As mentioned in the previous problem, most of our securities companies can only obtain 1-7-day lending funds provided by small banks or other non-silver financial institutions by participating in the inter-bank market by the inter-bank market; In the existing financing channels of securities companies, there is a lack of medium and long-term financing channels, and the mismatch of capital maturity of securities companies also increases the liquidity risk of securities companies. In the new situation that the capital strength of the securities company has been significantly improved, the standard operation degree is obviously improved and the financial market is mixed, the securities companies should continue to coordinate the relevant departments to moderately relax the financing restrictions on the securities companies, allow the securities companies to lend to the banks, relax the restrictions on the mortgage loan, and relax the securities. The amount, time limit and limitation of use of the company's fund borrowing and lending will expand the ability of the securities company to deal with the liquidity crisis and win the pilot qualification when necessary.

5.1.4Reducing the dependence of the short-term capital market

Although the inter-bank market in China has developed into a large scale after decades of practice, the market base is still weak and lack of diversity, and there is a serious characteristic of convergence and homogenization of the trade direction. Commercial banks are the main body of the inter-bank market, but their functions and properties are almost similar. Their trading direction is basically the same in a specific period. There will be no sufficient funds to be disassembled at a specific time of transaction, resulting in the outbreak of liquidity crisis. Therefore, China's securities companies must fully understand the characteristics of the inter-bank market and prepare carefully to avoid misinterpretation of the overall liquidity and liquidity of the financial system. Their own liquidity is not sufficient to meet the liquidity needs, which may lead to the chain reaction, causes panic to customers and endanger the stability of the whole capital market.

5.1.5 Improving pressure testing application technology

The research on pressure testing in China's securities industry is still in its infancy. The research is not enough. The model and method of pressure testing are not scientific and mature. Therefore, the securities companies must combine the actual conditions of our country and the

characteristics of the securities industry to strengthen the research and practice of pressure testing according to their own operating conditions and establish a real precaution. The early warning mechanism of systemic risk provides a scientific method for securities companies' own risk management. In addition to the unified situation stress test conducted by industry organizations, securities companies should conduct stress tests on other subjects and other methods, for example, reverse stress test shall be carried out on the regulatory indicators to calculate the maximum scale of business supported by high quality liquid assets and stable funds. Suppose that the company has a significant reputation risk, the external financing channels are closed, and the company's shortest survival time is calculated. It is required to assess the cash flow gap caused by pressure and the operation of liquidity monitoring indicators (LCR, NSFR) under each stress scenario, and formulate the corresponding liquidity management strategy.

5.2 Macro management

5.2.1Building a macro prudential regulatory framework

Under the new economic situation, it is particularly important to strengthen the prevention of systemic financial risks and avoid the "gray rhinoceros" effect. After the international financial crisis in 2008, all countries in the world have realized that the risk management system dominated by micro Prudential Management has not adapted to the needs of the development of the financial industry. It has pushed forward the reform of the financial regulatory framework with macro prudence as the main line. The Basel Capital Agreement III, the Dodd Frank act of the United States and the EU "pan" European financial supervision act. The main contents of the reform reflect the concept of macro Prudential Management. The central bank has significantly strengthened systemic risk management, and most central banks have taken on the supervision of systemically important financial institutions. At the present stage, there is no specialized department for systematic research and demonstration on how to build a complete macro prudential regulatory framework, because the financial industry is divided into separate management and separate supervision. In practice, the banking, securities and insurance sectors will put forward the regulatory requirements of their own departments, to a certain extent, there is lack of communication and collaboration between departments, and it does not constitute a complete system. Based on the current decentralized regulatory model and the different regulatory standards for financial risks by the various regulatory departments, the market bodies seem to have found the way to survive and develop in the economic downturn, and to make use of the non-unified regulatory standards to carry out the so-called financial innovation. The essence is to seek regulatory arbitrage in the financial industry and the financial system in the financial system. The internal self-circulation and continuous leverage behavior deviate from the mission of the financial industry's own development, and also accumulate risks that cannot be ignored. For example, abnormal stock market volatility in 2015, although the SFC has mastered the scale of the two financing businesses in the field, it is unable to find out a large number of over-the-counter funds allocated to banks, insurance and financial products, resulting in lagging behind the drastic cumulative financial risk.

In the national "13th Five-Year plan", we pointed out that we should reform and improve

the financial regulatory framework to adapt to the development of modern financial market, so as to achieve full coverage of financial risk regulation. "China's financial stability report (2016)" issued by the people's Bank of China (2016) pointed out that "it is required to strengthen financial supervision, perfect the macro Prudential policy framework, improve the construction of financial risk monitoring, assessment, early warning and disposal system, and comprehensively investigate the risks. Strengthen the analysis and study of cross industry, cross market risk and risk contagion, carry out the supervision responsibility, prevent the supervision blank and supervision arbitrage, strengthen the bottom line thinking, take effective measures in time, and firmly keep the bottom line not to have systemic regional financial risk." It is reported that the people's Bank of China, the China Banking Regulatory Commission, the China Securities Regulatory Commission and the China Insurance Regulatory Commission are making positive and policy attempts. The unified design of the overall regulatory framework of the management of management is being carried out closely, including the formulation of unified standards and regulatory plans for cross industry and cross market financial businesses, and establishment of joint inspection system for related businesses and cross businesses.

5.2.2Exploration and establishment of industry liquidity relief system

Looking back on the transmission of the subprime mortgage crisis in 2008, Lehman brothers, in the United States, was forced to apply for bankruptcy protection without timely and effective relief, then triggered the Domino effect and passed the crisis to other companies. The US Treasury Secretary, Geithner, realized that although the people hated the government's emergency rescue of those stupid financial beasts, if he had been hated by the government, The creditors or the whole market lost their confidence in fulfilling their obligations, and the global financial system would collapse completely, leading to a more serious economic crisis, and the US government was forced to take large-scale relief measures to prevent the financial crisis from spreading to the real economy. Since then, the EU has launched the largest relief operation in history. From the actual effect, the liquidity relief for the market subjects in the United States and Europe helps many financial institutions to survive, to a certain extent, to limit the spread and expansion of the crisis, and to pull the country back from the edge of the economic collapse. Therefore, at the beginning of the crisis, the necessary relief to the companies in crisis can weaken the destructive force of the crisis to a certain extent and greatly reduce the possibility of the evolution of the individual crisis into a market crisis.

The liquidity risk management level of China's securities companies is still relatively weak, limited to the financing channels and the liquidity risk events are abrupt. Therefore, it is an urgent need to explore the construction of liquidity relief system while strengthening the liquidity risk management of securities companies. Concrete forms include: Firstly, the establishment of industry relief mechanism. At this stage, we can establish a liquidity risk emergency mechanism based on the securities investor protection fund and risk funds. When a securities company has insufficient liquidity, the securities investor protection fund and venture capital fund can provide temporary liquidity support for the first time. Secondly, establishment of emergency response mechanism. The current settlement system should be optimized through the clearing of two cities to settle accounts, widening the path of multiple

market exchange, and realizing the direct process of drawing through funds to improve the efficiency of the fund. Thirdly, establishment of mutual aid financing mechanism between securities companies. If setting up a mutual fund for settlement, a securities company may temporarily finance the mutual insurance fund management institution when there is a temporary shortage of funds. Fourthly, to encourage securities companies and insurance companies and other financial institutions to explore commercial insurance and other relief mechanisms to provide commercial banks with liquidity support.

CHAPTER 6
PRACTICE OF LIQUIDITY RISK MANAGEMENT IN CHINA'S SECURITIES COMPANIES: A CASE STUDY OF S SECURITIES COMPANY IN CHINA

With regard to liquidity risk, institutions mostly distinguish between

• liquidity risk in the narrower sense (insolvency risk), is the danger that a bank will be unable to meet its present and future payment obligations completely or on time;

• refinancing risk, is the danger that additional refinancing can be obtained only at higher market interest rates;

• and market liquidity risk, is the danger that, owing to exceptional circumstances, assets can be liquidated in the market only at a haircut. Market liquidity risk under this definition is almost always considered to be part of market risk management rather than liquidity risk management.

In terms of the time dimension, institutions mostly distinguish between structural and non-structural liquidity, which largely corresponds to a distinction between medium and long-term liquidity, on the one hand, and short-term liquidity, on the other. This reflects the classic distinction between capital market and money market activities, which at most banks are performed by separate organizational units. For non-structural liquidity, institutions also use such terms as situational, tactical or operational liquidity. Some institutions, however, use the term operational liquidity to refer solely to intraday liquidity.

The time threshold between structural and non-structural liquidity, for most institutions, is at 12 months; for a very few institutions, however, it can be as soon as six months or as late as two years.

6.1 S A brief introduction to S securities company

6.1.1 S Introduction of S securities company

China's S securities company was established in 1988 as a comprehensive joint-stock securities company approved by the China Securities Regulatory Commission. Its registered capital is 6 billion 200 million yuan. The company's main business is divided into five parts: brokerage, investment banking, credit business, investment management business and asset management business.

Brokerage business is the main source of the company's traditional advantages and business income. According to the data released by the Shanghai and Shenzhen Stock Exchange, in 2017, the share market share of the company was 2.3%, down 6% from 2016, ranking twelfth in the industry, and remained unchanged compared to 2016. In 2017, the company realized the net income of the agent buying and selling securities business at 2 billion 800 million yuan, down 62% compared with 2016, and ranked eleventh in the industry. The company actively promotes the option brokerage business, with a total of 10621 options account at the end of the term, and a market share of 5.3% and ranking the seventh position in the industry; 2 million 870 thousand pieces of total turnover in the year, market share

(excluding market making, self-employment) at 3%, ranked eleventh in the industry, gaining a customer equity of 124 million 390 thousand yuan.

Investment banking mainly includes equity financing and debt financing. The A share market issued a total of 1033 equity financing projects in the whole year, down 4.79% compared to the same period last year, and the amount of financing was RMB 19756 yuan, a 27.81% increase over 2016. In 2017, the company undertook 14 A share issuing projects, totaling 16 billion yuan. Among them, there were 7 IPO underwriters, 4 billion 400 million yuan in total, 7 for refinancing underwriters, 11 billion 500 million yuan for total financing, 57 for the main underwriting bond issue and 55 billion 900 million yuan in total financing.

The company has the qualification of credit business, such as margin financing, transfer, negotiable securities trading, stock pledge repo transaction, and listed company equity incentive financing. At the end of the report, the margin balance of the company was 23 billion 600 million yuan, of which the financing balance was 23 billion 300 million yuan, the margin balance was 200 million yuan, the margin market share ranked twelfth position, the net income of the credit account was 500 million yuan, the interest income was 1 billion 800 million yuan, and the total income was 2 billion 300 million yuan.

According to the different types of investment, the self-operated securities business of the company is divided into the self-operating business of equity securities, the self-operating business of fixed income securities and the self-operating business of the securities derivatives. In 2017, the self-generated business of fixed income securities earned 480 million yuan, and the scale of bond investment was 21 billion yuan. In 2017, the company made use of financial derivatives to hedge the risk of equity products by digging up the investment opportunities in the financial market with the advantage of the advantage of risk income and realized the income of 9 million 160 thousand yuan for the self-employed business of derivative securities.

As of December 31, 2017, the total assets management products of the company were 64, the net asset value was 59 billion 700 million yuan, there were 286 active management products, the entrusted management scale was 83 billion 800 million yuan, and 303 channel-oriented asset management products, the entrusted management scale was 90 billion 200 million yuan.

Companies adhere to the bottom line of compliance and establish a multiple-level risk prevention mechanism. Through the construction of customer information system, the whole life cycle management monitoring from product redemption, investment management, capital valuation, asset clearing and other links is realized to ensure the efficient, accurate and safe operation of the customer's assets.

6.2 S Liquidity risk status of S securities company

6.2.1 S Assets and liabilities structure of S securities company

At the end of 2017, the total assets of the company were 123 billion yuan, down at 12 billion 900 million yuan, a 9.5% decline. Among them, monetary fund, settlement reserve and

deposit margin amount reached 47 billion 400 million-yuan, accounting for 38.5%, a year-on-year decrease of 11 billion 600 million yuan, a decrease of 19.6%. In the above funds, its own funds were 6 billion 800 million-yuan, accounting for 14.4%, and 2 billion 200 million yuan, mainly the decrease of liquidity reserve funds, and 40 billion 500 million-yuan, accounting for 85.5%, 9 billion 400 million yuan and 18.8%. The main reason was the market downturn and the reduction of customer transaction settlement funds. The sum of financing funds was 24 billion 900 million-yuan, accounting for 20.3%, representing a decrease of 5 billion 800 million yuan and a decrease of 18.8%. The financial assets measured in the fair value and its change into the profit and loss of the current period were 39 billion 200 million-yuan, accounting for 31.9%, the increase was 1 billion 800 million yuan at 4.8%, it was mainly due to the increase in the scale of the bond investment. The return on sale of financial assets was 2 billion 400 million-yuan, accounting for 1.9%, representing a decrease of 400 million yuan and a decrease of 14.4%. Long term equity investment was 500 million-yuan, accounting for 0.4%, an increase of 80 million yuan, an increase of 17%, it was mainly due to increased investment by subsidiaries. Fixed assets and other assets were 8 billion 300 million-yuan, accounting for 6.8%, showing an increase of 2 billion 900 million yuan at 54.6%, it was mainly due to the increase of interest receivable, receivable financing lease, and so on.

At the end of 2017, the total liability of the company was 90 billion 200 million yuan, 13 billion 600 million yuan and 13.1%, which was 40 billion 500 million-yuan, accounting for 44.9%, and 9 billion 400 million yuan and 18.8%. The main reason is the market downturn and the reduction of customer transaction settlement funds; The sale of repurchase financial assets amounted to 14 billion 700 million-yuan, accounting for 16.3%, representing a decrease of 6 billion 900 million yuan, or a decrease of 31.9%, mainly due to the reduction of the scale of transfer of assets income rights; The funds from other banks were 5 billion 500 million yuan, 6.1%, 4 billion 400 million yuan, an increase of 438%. The main reason was that the subsidiary increased the funds, and the short-term financing was 2 billion 200 million yuan, 2.5%, 3 billion 900 million yuan, and 63.5% reduction. Short term financing was 2 billion 200 million-yuan, accounting for 2.5%, 3 billion 900 million yuan and 63.5% reduction, 2 billion yuan, 2.2%, 400 million yuan, 18.6%, 19 billion 700 million yuan to deal with 21.8%, and 4 billion 800 million-yuan, accounting for 19 billion 700 million yuan, and 21.8%. The interests of other holders of structured subjects increased. At the end of the year, the assets and liabilities of the parent company (assets and liabilities were all deducted by agent buying and selling securities, the same below) was 57%, the proportion of net assets to liabilities was 73%, and the structure of assets and liabilities conformed to the characteristics of the securities industry. From the above data, with the release of license, foreign capital, banking, insurance, public fund and other financial institutions and large Internet enterprises, such as financial institutions and large Internet enterprises have stepped into the field of securities, the subject of competition will continue to increase intensifying competition in the industry. On the other hand, the acceleration of cross-border capital flows, risk-free interest rate uplink, and the hidden regional political risk may aggravate the fluctuation of capital market and raise higher requirements for the company's assets operation ability and risk management ability. The structure of assets and liabilities of China's securities companies is also changing. Firstly, the size of the company's own capital keeps steady growth. Secondly, the increase or decrease of company liabilities is

closely related to the category of credit business. Thirdly, although the assets in the table have dropped somewhat, the liquidity demand caused by the excessive development of off balance sheet business has also increased liquidity risk.

6.2.2 S Current situation of liquidity risk of S securities company

By the end of 2017, S securities company's high-quality liquidity assets totaled 11 billion 900 million yuan, a year-on-year reduction of 6.86%, and the next 30 days' net cash outflow was 5 billion yuan, 76.74% from the same year, and the company's "liquidity coverage (LCR)" was 237.13%, up 33.04% over the same period. The total amount of stable funds was 43 billion 600 million yuan, which was reduced by 16.31% over the same period, of which the remaining duration was more than equal to 1 years' loan and debt scale of 13 billion 100 million yuan, 42.04%, and further decreased compared to the same period. The amount of stable funds needed was 28 billion 100 million-yuan, 17.08% decline of the same period. The company's net stable capital ratio (NSFR) increased by 155.29%, up 0.92% from the same period last year, and two indicators met 100% regulatory requirements. In the reporting year, the company actively expanded financing channels and financing methods to meet the demand for capital in the course of the company's operation. But the two indicators of the company were lower than the average level of the industry. From the long-term trend of change, the company's "liquidity coverage rate (LCR)" index fluctuated greatly, and the "net stable fund rate (NSFR)" had been tightening for a long time.

Table 6.1; LCR analysis table

Items	2017 End of 2017	2016 End of 2016	2016 The rate of change compared to 2016
High quality liquidity assets (*100,000,000 yuan)	119	128	-6.86%
30 Cash outflows for the next 30 days (*100,000,000 yuan)	53	85	-37.20%
30 Cash inflows for the next 30 days (*100,000,000 yuan)	3	13	-77.54%
30 Net cash outflow for the next 30 days (*100,000,000 yuan)	50	216	-76.74%
=/30	237.1	178.2	33.04%

Liquidity coverage = high quality liquid assets / net cash outflow in the next 30 days	3%	4%	

Source: statistical data from industry associations

Table 6.2 NSFR analysis table

	() Amount (*100,000,000 yuan)			Proportion		
Items	2017 End of 2017	2016 End of 2016	2016 The rate of change compared to 2016	2017	2016	Change
Stable funds	436	521	-16.31%	100%	100%	-
Adjusted net assets	305	295	3.36%	70%	57%	13%
2.1Borrowing and liabilities for the remaining duration greater than 1 year	131	226	-42.04%	30%	43%	-13%
All other liabilities and interests	0	0	0.00%	0%	0%	0%
Stable funds needed	281	339	-17.08%	64%	65%	-1%
Net stable fund rate	155.29%	153.87%	0.92%			

Source: statistical data from industry associations

At present, from the data statistics, S securities company's liquidity risk supervision index meets 100% regulatory requirements and has not touched 120% of the early warning line. In order to further calculate the pressure of the liquidity risk supervision index under the extreme situation of S securities company, the following pressure testing technology tools are used to calculate the company risk. Test purpose and object

With September 30, 2017 as the base period, the risk control index and financial index of securities companies are measured in the extreme case of large fluctuation in stock index, a large increase in bond yield and a rapid rise in bond default rate in the next quarter. Specific indicators include: net capital, risk coverage, capital leverage, liquidity coverage, net stable capital ratio, net profit and so on. Unified scenario hypothesis the stress tests refer to the unified situation template of the supervision department, in which the Shanghai Composite Index, the SME board index, the gem index, the bond default rate and the daily average turnover are selected from the unified regulatory standard. The variables such as the benchmark interest rate

and interest rate debt rate, the bond default loss rate, the decline in the underwriting business income and the decline in the assets management revenue are judged internally by the company. The specific strategy is not detailed here.

Table 6.3: Stress test unified scenario hypothesis for securities and futures business institutions

Risk factors	mild	medium	severe
Shanghai Composite Index	-10%	-20%	-30%
SME board stock index	-10%	-20%	-35%
Growth Enterprise Index	-10%	-25%	-40%
Bond default rate	2.00%	4.00%	6.00%
Benchmark interest rate and interest rate increase margin	0.20%	0.30%	0.40%
AAA Credit spreads rise (credit rating AAA credit bonds)	0.30%	0.40%	0.50%
AAA AA Spread of credit spreads (credit rating below AAA level, AA class (above) credit bonds).	0.40%	0.50%	0.60%
AA BBB Spread of credit spreads (credit rating below AA level, BBB class (above) credit bonds).	0.50%	0.60%	0.70%
BBB Credit spreads rise (credit rating below BBB credit bonds)	0.70%	0.80%	1.00%
Bond default loss rate	0.40%	1.60%	3.60%
Default asset recovery rate	80.00%	60.00%	40.00%
A A share market daily average turnover	-30%	-40%	-50%
Decline in the income of underwriting business	5%	10%	15%
Decline in the income of asset management business	5%	10%	15%
Daily average decline in financing margin	5%	10%	15%

Decline of collateral in the course of forced liquidation of financing businesses	5%	10%	20%
Unrestitution rate of financing customers with bad creditor's rights	15%	30%	40%

Source: statistical data from industry associations Pressure test results statistics

According to the pressure test template, with the increase of the pressure, the company's loss continues to expand. Under the influence of the above factors, the net capital and liquidity of the company, such as the equity securities and its derivatives / net capital, have been optimized, but the other indicators tend to deteriorate, but all the other indicators are deteriorating. Risk control indicators met the regulatory standards under mild, moderate and severe pressure scenarios, and no early warning indicators were found.

6.3 S Living example of liquidity risk management of S securities company

6.3.1 S General situation of liquidity risk management of S securities company

During the reporting period, the company actively promotes the implementation of comprehensive risk management, and effectively controls all kinds of risks, such as market risk, credit risk, operational risk, liquidity risk, reputation risk and so on. The overall risk of the company can be measured, controllable and bearable. Firstly, a sound comprehensive risk management organization structure is set up. The company has established a comprehensive risk management organization, including the board of directors, the board of supervisors, the manager, the various departments, the branches, and the subsidiaries.

Secondly, a professional risk management talent team is set up. The company is equipped with sufficient professional personnel for the risk management department, including 21 personnel in risk management department, and 8 in capital operation management department (liquidity risk management) , all risk managers meet the corresponding post quality requirements. Thirdly, an operational risk management system is set up. During the reporting period, the company has combed, adjusted and optimized the risk management system. The work mechanism of the subsidiary company risk information delivery is established, and the risk information of the subsidiary company is incorporated into the range of the company's risk daily, so that the company manager can understand the risk status of the subsidiary in time and fully. For all kinds of business management systems, the company has further clarified the risk points of the key links of various business processes, strengthened the review, guidance and supervision functions of the management staff of each unit, and further tamped the whole business process embedding mechanism of risk management.

Fourthly, an effective risk response mechanism is set up. According to the results of risk

assessment and early warning, the company chooses strategies to deal with risk avoidance, reduction, transfer and acceptance, which are compatible with the company's risk preference. Through the formulation of Company risk control index pressure test emergency response plan, Company network and information security event emergency plan, Emergency plan for the company's emergency maintenance, Contingency plans for major emergencies in branches of the company, all kinds of business risk plans, such as consignment of financial products, margin trading system, counter trade, securities investment consulting business, etc., the principles, procedures and reporting paths of business emergencies are defined. Each risk management unit and risk management department regularly summarize and analyze the effectiveness and rationality of the risk response and control measures through continuous monitoring of the implementation of risk response and control measures and improve the risk management system and process in time to ensure the content of the risk management system and process according to the changes in the management and risk factors, so as to keep its integrity and effectiveness. Fifthly, information technology system for liquidity risk management is set up. The company has established a liquidity risk management information system adapted to the business complexity and risk index system, including the front-end control module, the centralized monitoring system, the risk control index dynamic monitoring system and so on, and realized the automatic control function of the key risk. And through the regular organization of self-examination and evaluation, it provides technical support for the liquidity risk management of the company, and realizes the functions of financing liabilities management, cash flow management, high quality liquidity reserve, risk limit monitoring and so on. And the company also constantly optimizes the business development and regulatory requirements, so that the company can timely cope with and control liquidity risk. Sixthly, liquidity risk emergency mechanism is set up. The company has established a liquidity risk emergency plan to review and test the emergency plan regularly, constantly update and improve the emergency treatment plan, so as to ensure that the company can respond to the liquidity needs in emergency situations. Corporate financing channels mainly include corporate bonds, subordinated debt, short-term financing bonds, innovative financing tools and other short-term debt instruments, pledge repurchase, lending and so on. During the reporting period, the company continuously optimizes its own debt structure and its maturity by issuing corporate bonds, short-term financing vouchers, short-term corporate bonds and income vouchers, and reduces the impact of the mismatch of assets and liabilities on the liquidity of the company. It can basically meet the funds needed for the daily operation of the company and financing. With the rapid development of the business, such as the margin financing, the agreed repurchase securities transaction, the stock pledge type repo transaction and so on, the convective activity is put forward higher with the market maker's innovative business. In order to meet the challenges brought by the above situation, the company will constantly improve the system construction of liquidity management, the construction of the risk prevention mechanism, and within the scope of supervision, we will strive to broaden the financing channels, rationally arrange the debt structure, strive to maintain a strong solvency, and actively improve the profitability, sustainability, and continued development ability of businesses.

In addition, the company's capital operation and management department, together with the risk management department, is responsible for effective management of the overall

liquidity risk. The means adopted include: Liquidity management tools such as credit borrowing or short-term investments, scenario analysis, stress testing, liquidity coverage and net stable fund rate monitoring. As to the risk of financial instruments, the company mainly adopts centralization control, trade quota control and the market liquidity condition on monitoring the financial instruments. The stock investment of the company is based on the principle of dispersing investment and pays attention to the management of liquidity risk. The proportion of all the stock in circulation is small and the liquidity risk is small. Bond investment is mainly based on interest rate products and highly rated credit bonds, with scattered positions, reasonable distribution of remaining time and less liquidity risk.

6.3.2 S Shortage of liquidity risk management in S securities company

To sum up, S securities company has established and perfected the system of liquidity risk management system according to the regulation, and has done it seriously in the actual work, but there is still a gap due to the short practice time and perfect distance. There are still shortcomings in the management of liquidity risk. Firstly, organizational structure responsibilities are still not clear enough. From the operational results, the company's risk management responsibilities are not centralized enough, clear and independent. The risk management committee of the company has not been set up or performed completely, the management layer has not set up an independent risk management committee, the risk control decision-making function is scattered, the risk control committee has no normal working mechanism, and it has not been completely independent.

Secondly, the staffing of risk control is still insufficient. S securities company cannot meet the needs of comprehensive risk management in risk control full-time staffing. The risk quantification skills and professional risk management skills of the risk control personnel need to be further strengthened, and there is a lack of quantitative model professionals. As a result, the system training for various risk identification measures needs to be strengthened.

Thirdly, the strength of capital is slightly weaker. The net capital of S securities company is 24 billion 900 million yuan, it ranks sixteenth in the industry, the core net capital is 16 billion 600 million yuan, and it ranks eighteenth in the industry. The proportion of its business scale is lower than that of the industry, and its liquidity reserve is decreasing. Statistics on assets composition during the reporting period have showed that the amount of self-financing decreased by 2 billion 200 million yuan compared with the previous year, it is mainly due to the decrease in liquidity reserve funds.

Fourthly, the index system of risk control is not fully optimized. As of December 31, 2017, the company has 13 bonds with a scale of more than 16% of their overall scale, of which 8 are over 20% of the regulatory standards.

6.3.3 S Improvement measures for the liquidity risk management of S securities company

In the future, it is recommended that the company should continue to strengthen liquidity

risk management in the following aspects:

Firstly, to firmly establish the risk awareness of all members. It is required to cultivate staff own risk control culture, constantly improve the risk management system, improve risk management and control mechanism, and implement risk responsibility, so as to achieve full coverage of risk control, whole process risk control, and full business chain. Secondly, to further thicken the scale of high quality liquidity reserve. In accordance with the relevant regulations of the articles of association of the company and the regulatory requirements of the regulatory authorities, it is required to further replenish shareholders' capital investment to ensure that the high-quality liquid assets, as a security cushion for corporate funds, it can meet the liquidity needs in emergency situations. Thirdly, to optimize the structure of assets and liabilities and balance the scale of debt maturity. In the financing planning stage, the company carries out reasonable planning of debt maturity to ensure that it meets the requirements of liquidity risk regulatory indicators continuously and avoids the risk of debt centralization.

Fourthly, to continuously widen the financing channels and reduce the risk of financing. The company has not yet been listed, the company financing channels are relatively narrow, on the one hand, the company should seize the opportunities for the development of the A stock market in recent years, actively prepare for the listing, in addition, it is also required to deploy funds to solve the possible cash flow gap in advance and reduce the financing risk. Fourthly, to strengthen the monitoring of the convective index, ensure the continuous standard, improve the ability of risk identification and early warning, and make the corresponding emergency treatment mechanism according to the pressure test, and further enhance the company's ability to resist the risk.Sisthly, to speed up the training and introduction of risk management talents. We should apply first-rate talents to risk control, solve the problem of treatment of risk control personnel, improve the professional ability of risk management and control, and improve the quality of risk management team.

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