

## CHAPTER 2 LITERATURE REVIEW

### 2.1 Oversea 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 out 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.