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Contents

List of Figures.....	I
List of Tables.....	II
Abbreviations.....	III
1 Introduction.....	1
2 The theoretical background of Financial Innovation	3
2.1 Overview	3
2.2 Introduction of various genres of financial innovation theory	4
2.2.1 Technical financial innovation	4
2.2.2 Bound and inductive financial innovation.....	4
2.2.3 Systematic financial innovation	5
2.2.4 Evasive financial innovation	5
2.2.5 Transaction cost theory.....	6
2.2.6 Wealth effect theory	6
2.2.7 Monetary factor theory.....	7
3 Brief Introduction to China's Financial System.....	8
3.1 Overview	8
3.2 Financial Institutions	10
3.2.1 Banks.....	10
3.2.2 Non-bank financial intermediaries	13
3.3 Regulatory agencies	14
4 Financial Innovations in China.....	20
4.1 Financial Institutional Innovation	20
4.2 Financial Market Innovation	27
4.2.1 Money Market Innovations	28
4.2.1.1 Inter-bank market development.....	28
4.2.1.2 Commercial paper market development.....	33
4.2.1.3 Short-term government bond market development.....	34
4.2.1.4 CD market development.....	36
4.2.1.5 Repo market development.....	37
4.2.2 Capital Market Innovations.....	39
4.2.2.1. Bond market development.....	39
4.2.2.1.1 Emergence of a primary market	40
4.2.2.1.2 Emergence of a secondary market.....	41
4.2.2.1.3 Recent Development of bond market	42
4.2.2.2. Stock market development	44
4.2.2.2.1 The reviving and starting stage 1980 - 1991	45
4.2.2.2.2 The expanding and growing stage 1992 - 1999.....	47
4.2.2.2.3 The standardization and perfection stage 2000 - present.....	48
4.2.3 Foreign Exchange Market Innovations	52
4.3 Financial Instrument/Product Innovation	54
4.3.1 Derivatives	54
4.3.2 Fund products innovation.....	55
4.3.3 Payment instruments innovation	58

4.3.3.1 Bill.....	60
4.3.3.2 Bank card.....	62
4.3.3.3 Mobile payment.....	63
4.3.3.4 Fixed Telephone payment.....	64
4.3.3.5 TV set-top box payment	65
4.3.3.6 Online payment	66
4.3.4 Trust Products Innovation	68
4.4 Financial Service/Business Innovation	72
4.4.1 Liability Business Innovation.....	72
4.4.2 Assets Business Innovation	73
4.4.3 Intermediate Business Innovation	74
4.5 Restricting factors and advantages of Financial Innovation in China	75
4.5.1 Restricting factors because of market environment	76
4.5.2 Restricting factors because of financial regulation.....	77
4.5.3 Advantages in China's financial innovation	77
5 Summary	79
Abstract (English)	83
Abstract (Deutsch)	84
Lebenslauf	85
Literature	86

List of Figures

Figure 1: Overview of China's financial System.....	9
Figure 2: Outline of financial system reform in China.....	21
Figure 3: Number of Branches and Employees of SOCBs (at end of year)	26
Figure 4: Comparison of Turnover of Inter-bank Repo and Exchange Repo	39
Figure 5: Growing bond market - historic annual issuance (unit trillion)	42
Figure 6: Issuers and Investors (2007)	44
Figure 7: Proportion of CFETS Membership as of the end of March, 2006	53
Figure 8: Transaction <i>volume</i> Distribution among payment systems for 2006	60
Figure 9: Distribution of payment transaction <i>value</i> of bill business for 2006	61
Figure 10: Distribution of payment transaction <i>volume</i> of non-cash payment instruments for 2006...	62
Figure 11: Payment with a mobile in super market.....	63
Figure 12: Procedure of phone payment.....	65
Figure 13: Procedure of TV set-top box payment	66

List of Tables

Table 1: Comparison of Assets Held by China's Banks and Non-Bank Intermediaries	14
Table 2: The functions, supervisory focuses and regulatory objectives of CBRC	15
Table 3: The main functions of SAFE	16
Table 4: Major Responsibilities of CSRC	17
Table 5: Major Responsibilities of CIRC	19
Table 6: Major Arrangements for the Structural Reform of SOCBs Since 2003.....	25
Table 7: Overview of China's Inter-bank market	31
Table 8: Lenders and Borrowers in the Inter-bank Money Market	32
Table 9: Trading volume of Inter-bank market, 2007	32
Table 10: Reform timeline of Primary bond market.....	41
Table 11: Bond Issue Statistics	43
Table 12: Statistics of China's Stock Trading in year 2007	51
Table 13: Fund Product Innovations, 1998 - 2006	57
Table 14: Features of bill business innovation	61
Table 15: Analysis of Development Stages of China's E-Payment Market.....	68
Table 16: Big Events of Trust Industry in 2006 and 2007	71

Abbreviations

ABC	Agricultural Bank of China
ABS	Account Booking System
AMC	Asset Management companies
BEPS	Bulk Electronic Payment System
BOC	Bank of China
BOCOM	Bank of Communications
CBRC	China Banking Regulatory Commission
CCB	China Construction Bank
CCPC	City Clearing Processing Centre
CD	Certificate of Deposit
CFETS	China Foreign Exchange Trade System
CFFE	China Financial Futures Exchange
CIRC	China Insurance Regulatory Commission
CIS	Cheque Image System
CITIC	China International Trust and Investment Company
CNAPS	China National Advanced Payment System
CPC	Communist Party of China
CSRC	China Securities Regulatory Commission
CUP	China Union Pay
CVCRI	China Venture Capital Research Institute
ETF	Exchange Traded Fund
FDI	Foreign Direct Investment
HSBC	The Hongkong and Shanghai Banking Corporation Limited
HVPS	High Value Payment System
ICBC	China Industrial and Commercial Bank
ICT	Information and Communications Technology
IPO	Initial Public Offerings

JSCB	Joint-stock Commercial Bank
JVE	Joint Venture Enterprise
LOF	Listed Open-ended Fund
LP	Limited Partnership
NDF	Non-Deliverable Forward
NPC	National Processing Centre
NPC	National People's Congress
NPLs	Non-performing loans
OMO	Open Market Operation
OTC	Over the Counter
PBOC	People's Bank of China
PICC	People's Insurance Company of China
PIS	Payment Information System
QDII	Qualified Domestic Institutional Investors
RCC	Rural Credit Cooperative
SAFE	State Administration for Foreign Exchange
SAS	Settlement Account System
SITIC	Shenzhen International Trust & Investment Company
SME	Small- and Medium- Enterprise
SOCB	State-owned commercial bank
SOE	State Owned Enterprise
SSE	Shanghai Stock Exchange
STAQ	Securities Trading Automated Quotation
POS	Point of Sale
TICs	Trust and Investment Companies
TVEs	Township and Village Enterprises
UCC	Urban Credit Cooperative

1 Introduction

In modern society all significant new value is related to the term innovation. One of the classic definitions of the term “innovation” is “the introduction of something new”¹. “In some fields, - something new - must be substantially different, not an insignificant change, e.g., in the economics, business and government policy; in economics the change must increase value, customer value, or producer value with the goal to make something better.”² Innovation has been described as the source of efficiency, the power of development and the engine of progress.

According to Tufano, financial innovation is “the act of creating and then popularizing new financial instruments as well as new financial technologies, institutions and markets”³. A Chinese scholar in Tianjin University of Finance & Economics defines that, financial innovation refers to recombination of various factors in financial field; it also refers to creative revolutions and development activities that financial institutions and financial management bureaus conduct on financial instruments, financial business, financial market as well as financial system arrangement based on the thought of micro-interest and macro-benefit. This concept contains four aspects: *the main body* of financial innovation is financial institution and financial management bureau; *the purpose* of financial innovation is profit and efficiency; *the essence* of financial innovation is recombination of financial factors, namely recombination of fluidity, profitability and risk; *the expressing form* of financial innovation is innovation on financial instruments, financial businesses, financial markets and financial institutions.⁴

Through financial innovation, participants in the financial market could realize benefits such as lower costs of raising funds, better investment returns, more precise control of

¹ Source: Merriam-Webster Online.

² Source: <http://en.wikipedia.org/wiki/Innovation>.

³ Tufano (2002), Volume 1a, p. 310.

⁴ Tianjin University of Finance & Economics, slid 11 of 36.

financial risks, and improved financial processes, services, products etc. Therefore financial innovation is viewed as the “central mechanism propelling the financial system toward its goal of providing more efficient resource allocation in the economy”⁵.

The new China (People’s Republic of China) was founded in 1949. “Since all of the pre-1949 capitalist companies and institutions were nationalized by 1950, in the period between 1950 and 1978, China’s financial system consisted of a single bank - the People’s Bank of China (PBOC), a central government owned and controlled bank under the Ministry of Finance, which served as both the central bank and a commercial bank, controlling about 93% of the total financial assets of the country and handling almost all financial transactions.”⁶

In 1978, when Deng Xiaoping ascended to power, China started an incomparable far-reaching economic reform⁷. “A socialist country started a tentative step from equalitarianism to market economy.” Since then, China’s economy has been significantly modernized and kept rapid economic growth at the annual average rate of 9.36%⁸ for 25 years. Along with the development process of the economic reform, a brand-new era of Chinese financial industry with various significant financial innovations unfolded. The purpose of this paper is to review the historical path of financial innovation in China in the past three decades (1978 – 2008), to describe its recent development, to overview its features and to recognize its problems.

⁵ Cavanna et al. (1992), p. 1.

⁶ Allen et al. (2004), p. 6.

⁷ The reforms to the Chinese economic system implemented after the Third Plenum of the Eleventh Central Committee of the Communist Party of China (CPC) in December 1978, which decided to shift the focus of the Party’s work to socialist modernization, have been carried out gradually and pragmatically. At first there was no clearly defined goal, and the reform objectives have been cautiously readjusted step by step to move the country from the “planned economy supplemented with some market elements” to the “socialist market economy,” gradually becoming more market-oriented, differentiated, and cosmopolitan in accordance with the economic development and social acceptability of the country. Source: Shi (2001).

⁸ Liu et al. (2004).

2 The theoretical background of Financial Innovation

2.1 Overview

Financial innovation theory developed gradually since the Second World War especially after 1970s. The concept of innovation was first suggested by a famous economist Joseph Alois Schumpeter in 1912 in his work *The Theory of Economic Development* and was systematically completed in his work *Economic Cycle* in 1939. According to Schumpeter innovation is to construct a new production function - a process introducing a new combination mode of production factors and production conditions that has never existed before into the social production system. Financial innovation theory is a sort of application of innovation theory in financial field. Following Schumpeter's statement about innovation, financial innovation is to construct a new production function in financial field which is a new combination mode of all financial factors. Economists developed Schumpeter's innovation theory and gradually formed the theoretical system of financial innovation. Due to theoretical discussions and various analyses about the causes of financial innovation in the economics world, many different genres emerged forming the financial innovation theory system.

2.2 Introduction of various genres of financial innovation theory⁹

2.2.1 Technical financial innovation

Technical financial innovation genre represented by *T. Hannon* and *J. M. McDowell* thinks that the wide application of high tech in the finance industry provides material and technical assurance to financial innovation and triggers various financial innovations characterized by computerization and networking, greatly shortening the spatial and time distance in financial activities. Such financial innovations make the costs sink and enable people to take new measures to better scatter risks among economic operations.

2.2.2 Bound and inductive financial innovation

W. L. Silber explores the origin of financial innovation mainly from the supply perspective. Silber started to research into the most active phenomenon that financial companies innovated in order to seek for profit maximization, from which he induced that financial innovation is a self-defense behavior adopted by micro financial organizations to seek for profit maximization and to alleviate external financial suppression. Silber thinks that the financial suppression comes from two aspects. The one is suppression generated from changes of external conditions (e.g. government's regulation). This makes the efficiency of financial institutions lower and makes them pay increasingly more and more opportunity cost. Financial institutions have to put efforts to make up this loss through innovations to improve their efficiency. And meanwhile innovation can also evade suppression and reduce the loss generated from increased opportunity cost. The other is suppression imposed from inside. To ensure the

⁹ The 7 genres of financial innovation theory are extracted from the books (in Chinese) of Chen and Li "History of the international financial theory" (1991), Xu "Financial Innovation" (1994) and He "Financial Innovation and Development" (2000).

asset liquidity as well as certain debt coverage to avoid operational risk and ensure the security of asset operation, financial enterprises adopt a series of asset and liability management systems. These rules and systems, although on one hand ensured the operation stability of financial enterprises; on the other hand formed internal financial suppression. Financial suppression from these two aspects, especially the one generated from changes of external conditions induces financial institutions which implement optimum management and pursue profit maximization to seek for furthest financial innovation from the perspective of opportunity cost and from financial enterprises' management of the difference between shadow prices and practical prices. This is the inducement of financial innovation carried out by micro financial organizations.

2.2.3 Systematic financial innovation

Scholars represented by *S. Davis, R. Sylla, North and R. West* believe that as a component of economic system, financial innovation should be a systematic reform mutually influenced and mutually caused by economic system. Under *planned* economic system although there are factors such as inflation, wealth growth and internal and external restrictions which can trigger financial innovation, due to high centralization and serious controls, financial innovation cannot be carried out. Under *liberalized* economic system types of financial innovations are few and it is impossible that those financial innovations evading regulations emerge. Only in *regulated market* economic system can the all-round financial innovation appear. Based on this point, in regulated market economy, any changes in financial system due to systematic reforms could be regarded as financial innovation.

2.2.4 Evasive financial innovation

E. J. Kane suggested evasive financial innovation theory. Evasion means to evade restrictive measures of various rules and regulations. Evade innovation is the behavior to evade various financial controls and regulations. This means when external market

power and market system encounter internal institutional requirements, evading various financial rules and regulations generates financial innovation. Evasive innovation to some extent is a compromise to Silber's inductive innovation and systematic innovation. Kane devised a framework of formulating rules and regulations. In this framework, the procedure that regulators establish economic rules and regulations is interactive with the process that people under restrict evade the rules and regulations. Between the regulator and people to be regulated exists a process of confronting gaming. Through constant confronting gaming of both parts, mature and practical rules and regulations are gradually formed.

2.2.5 Transaction cost theory

J. R. Hicks and J. Niehans think that the governing factor of financial innovation is to reduce transaction cost. The connotation of transaction cost is complicated, but Hicks combines transaction cost and monetary demand with financial innovation and concludes the following logic relation: transaction cost is an important factor influencing monetary demand; different demands raise requirements for different types of financial instruments; the level of transaction cost makes economic individuals change their demand expectations. The development trend of reducing transaction cost enables the currency to evolve and develop towards a superior form with generating new exchange mediums and new financial instruments. Constant reduction of transaction cost stimulates financial innovation and improves financial service. It could be said that the process of financial innovation is the one constantly reducing transaction cost. The reduction of transaction cost in turn constantly promotes financial innovation. Therefore financial innovation and reduction of transaction cost are mutually complementary.

2.2.6 Wealth effect theory

S. I. Greenbum and C. F. Haywood in researching historic development of American

financial industry think that wealth growth brought by high speed economic development after Second World War is the major factor determining the demand for financial asset and financial innovation. The rapid wealth growth enlarges the demand for financial assets and financial transactions, and changes people's preference for financial services. People's motive to hold financial assets becomes diversified that encourages financial industry to meet these demands through innovations.

2.2.7 Monetary factor theory

Representative personage of this genre *Milton Friedman* believes: Unprecedented characters of international monetary system and its initial influence are the major causes of continuous emergence of financial innovations and the requirement of releasing regulation pressures to financial market. Inflations and frequent fluctuation of interest rate and exchange rate in 1970s caused instability in economy, enhancing people to protect their interest by financial innovations, such as money market Mutual Funds, yield securities and index securities. They were exactly created to evade interest rate fluctuation and resist inflations.

3 Brief Introduction to China's Financial System

3.1 Overview

Since the adoption of economic reform in 1978 and the opening-up¹⁰ in 1979, China has carried out a series of significant reforms in its financial system. Consequently, the financial industry has gained great progresses. According to the report of Xinhua News Agency at January 12, 2008, by the end of 2007, the *RMB deposit balance* was 38.94 trillion Yuan¹¹; the *M2* - a broad measure of money supply, which indicates the monetary demand of the whole country and possible inflation - grew by 16.72% from a year ago to 40.34 trillion Yuan; the *RMB loans* increased by 3.63 trillion Yuan in 2007, 1.14 times of the growth in 2006; and China's *foreign exchange reserve* had reached 1.53 trillion U.S. dollars¹² - up 43.3% from 2006.¹³

“Now China has basically formed a financial system under the regulation, control and supervision of the central bank, with the state banks as the mainstay, featuring the separation of policy-related finance and commercial finance, and the cooperation of various financial institutions, and mutual complementarily in terms of functions.”¹⁴

Figure 1 presents the main structure of china's modern financial system as follows.

¹⁰ Open Door policy: China's late leader, DENG Xiaoping, initiated a major reform, known as the Open Door policy, to open up the once closed Chinese economy to the world and introduced market forces to the centrally-planned economy.

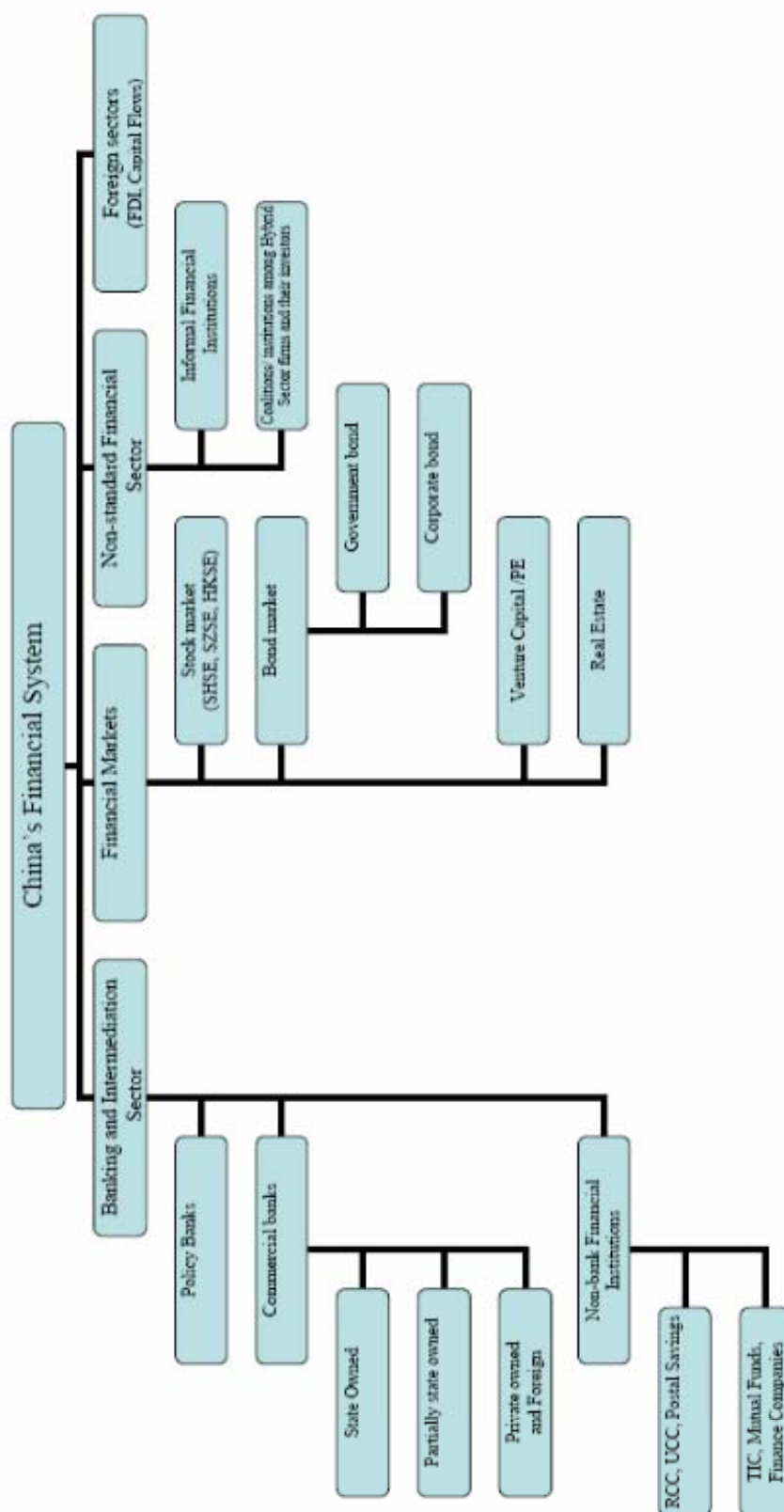
¹¹ Yuan is the basic unit of China's currency – RenMinBi (RMB).

¹² The central parity rate of the RMB was 7.2672 to the U.S dollar at Friday, January 11, 2008.

¹³ Source: Xinhua News Agency January 12, 2008

¹⁴ Source: www.china.org.cn, Financial System.

Figure 1: Overview of China's financial System



Source: Franklin Allen, Jun Qian, Meijun Qian (2005).

3.2 Financial Institutions

3.2.1 Banks

Banks in China may be approximately divided into the following categories: the central bank (People's Bank of China), the "Big Four" state-owned commercial banks¹⁵, three state-owned policy banks¹⁶, joint stock banks¹⁷, subsidiaries of foreign banks and other commercial banks.¹⁸ The major banks which play the most important role in China's banking system are the PBOC and the "Big-Four". Together the Big-Four hold 55%¹⁹ of the Chinese credit volume.

The **People's Bank of China** (PBOC) is the central bank and under direct guidance of the State Council. *"The Law of the People's Republic of China on the People's Bank of China"* provides that the PBC performs the following major functions: issuing and enforcing relevant orders and regulations; formulating and implementing monetary policy; issuing Renminbi (RMB) and administering its circulation; regulating inter-bank lending market and inter-bank bond market; administering foreign exchange and regulating inter-bank foreign exchange market; regulating gold market; holding and managing official foreign exchange and gold reserves; managing the State treasury; maintaining normal operation of the payment and settlement system; guiding and organizing the anti-money laundering work of the financial sector and monitoring

¹⁵ The "Big-Four" have an absolute dominant position in terms of asset scale, staff size and number of outlets. They are: The Bank of China (BOC); The China Construction Bank (CCB); The Agricultural Bank of China (ABC); The Industrial and Commercial Bank of China (ICBC)

¹⁶ China Development Bank (CDB), Agricultural development Bank of China (ADBC), The Export-Import Bank of China (Chexim). These banks are responsible for financing economic and trade development and state-invested projects. ADBC provides funds for agricultural development projects in rural areas; the CDB specializes in infrastructure financing, and Chexim specializes in trade financing.

¹⁷ e.g. Hua Xia Bank, China Minsheng Bank, Guangdong Development Bank, Shenzhen Development Bank, The Bank of Communication etc. The second tier banks are generally healthier in terms of asset quality and profitability and have much lower non-performing loan ratios than the big four.

¹⁸ Source: CIEC, 2002.

¹⁹ Source : <http://www.chinasuccessstories.com>

relevant fund flows; conducting financial statistics, surveys, analysis and forecasts; participating in international financial activities in the capacity of the central bank; performing other functions specified by the State Council.”²⁰



The **Bank of China** (BOC) was founded in 1912 and is the oldest bank in China. In 1949, BOC became the state-designated specialized foreign exchange bank and substantially contributed to development of foreign trade, allocating the country’s foreign exchange reserves, setting exchange rates for China’s currency, arranging foreign loans, and generally carrying out all financial transactions with foreign firms and individual.²¹ “BOC is the most internationalized commercial bank in China; BOC London Branch, the first overseas branch of the Chinese banks, was established in 1929.”²² “In 1994 and following the entrenchment of the reform of the financial sector, BOC was converted into a wholly state-owned commercial bank; currently, the BOC owns over 10000 domestic operations and over 600 overseas operations and its businesses cover commercial banking, investment banking and insurance.”²³



The **Agricultural Bank of China** (ABC) was founded in 1949 to facilitate financial operations in the rural areas. “ABC provided financial support to agricultural units, issued loans, handled state appropriations for agriculture, directed the operations of the rural credit cooperatives and carried out overall supervision of rural financial affairs.”²⁴ ABC’s operational networks spread throughout China’s urban and rural areas making it a bank with the largest number of domestic branches and the widest scope of business radiation in China. Its business has developed from the initial rural credit and settlement

²⁰ Source: PBOC (<http://www.pbc.gov.cn/>)

²¹ Source: BOC (<http://www.boc.cn>) and <http://www.chinasuccessstories.com>

²² Source: BOC (<http://www.boc.cn>)

²³ Source: BOC (<http://www.boc.cn>)

²⁴ Source: <http://www.chinasuccessstories.com>

business to various general domestic and abroad financial businesses with full range of varieties. By the end of 2007, ABC has set up 24,452 branches in the mainland of China with 447,519 employees.²⁵



The **China Construction Bank (CCB)** was founded on October 1, 1954. At the beginning the bank checked the activities of loan recipients and ensured that the funds were used for their designated construction purpose.²⁶ Now the CCB is ranked as the second largest bank in China.²⁷



The **China Industrial and Commercial Bank (ICBC)** is the youngest one of the “Big-Four” but is the largest bank in China and one of the world’s top ten banks by assets. “Since its foundation in 1984, ICBC has fully undertaken industrial and commercial credits and savings businesses which were originally transacted by PBOC, therefore it has taken on the responsibility of accumulating the social wealth and supporting the national construction.”²⁸ The first bank card in China was issued by ICBC in 1989.²⁹ The ICBC has been listed in 2006 in Shanghai and Hong Kong Stock Exchange. “By the end of 2007, its total market value rose to 338.934 billion U.S. dollars; it has the largest market value among listed banks in the world.”³⁰

According to the news of Shanghai Daily, at the end of 2007, profits for Chinese banks grew to 298.7 billion Yuan; the total assets of Chinese banks’ topped 52.6 trillion yuan; the average bad loan ratio for major Chinese banks dropped to 6.7% compared with

²⁵ Source: ABC (www.abchina.com)

²⁶ Source: <http://www.chinasuccessstories.com>

²⁷ South China Morning Post. 29 May 2008.

²⁸ Source: ICBC (<http://www.icbc.com.cn>)

²⁹ Source: <http://www.chinasuccessstories.com>

³⁰ Source: ICBC (<http://www.icbc.com.cn>)

23.6% five years ago.³¹

3.2.2 Non-bank financial intermediaries

In the process of social capital flow a non-bank financial institution plays a role that it collects funds from the end borrowers and lends funds to end debtors through issuance of indirect bonds. Such intermediary activities through non-bank financial institutions can reduce the unit cost of investment; can through diversification reduce investment risks, and adjust the period structure to minimize the liquidity crisis; can normally predict the situation of reimbursement requirements, making it even possible to freely deal with the asset structure with relatively less liquidity.³²

The main forms of non-bank financial intermediaries in China are insurance companies, securities companies, trust and investment companies (TICs), rural credit cooperatives (RCCs), financial leasing companies, and finance companies etc. China's **TICs** developed as providers of credit and services not offered by the banking system; their range of activities is wide, including encompassing deposit taking, merchant banking, investments in industrial companies, real estate, securities brokerage services and underwriting, and many TICs are offshoots of banks, and some of the large TICs have close ties with provincial governments, where their key role is local development project financing.³³ **RCCs** refer to rural cooperative financial institutions approved by the PBOC, composed of shares of members, implementing democratic management, and mainly providing financial services to their members. **Financial leasing** is a new type in the financial industry which integrates capital and material financing, trade and technological update into a whole.³⁴ China's **finance company** is not a subsidiary of a commercial bank; it is a non-bank financial institution affiliated to a large enterprise group; its purpose and mission is raising funds and conducting financial intermediation

³¹ Zhang (2008) and <http://www.mofcom.gov.cn/>

³² Source: <http://baike.baidu.com/>

³³ Kumar et al. (1997).

³⁴ Source: <http://wiki.mbalib.com/>

for all enterprises within the enterprise group to promote their technological innovation and technological progress.³⁵ The finance company of an enterprise group could be said as a product of China's financial system reform and enterprises reform. Table 1 presents a volume structure of assets held by banks and non-bank intermediaries during the period 1995-2003.

Table 1: Comparison of Assets Held by China's Banks and Non-Bank Intermediaries

(Total assets in RMB 100 Million)

Year	State-owned Banks	Other Commercial Banks	Foreign Banks (branches)	RCCs	UCCs	Insurance Companies	TICs	Non-deposit Intermediaries
1995	53,733.4	5,369.1	42.9	6,791.0	3,039.2	--	4,586.0	489.7
1996	65,827.4	7,699.8	55.3	8,706.6	3,747.8	--	5,637.0	820.2
1997	79,144.1	9,486.1	75.8	10,122.0	4,989.4	--	6,364.0	1,004.2
1998	88,609.3	11,281.8	118.4	11,431.1	5,606.3	--	8,025.0	1,209.7
1999	99,706.3	13,768.9	191.4	12,392.4	6,301.5	2,604.1	9,075.0	1,370.8
2000	107,937.3	18,282.6	379.2	13,930.6	6,784.9	3,373.9	9,759.0	1,608.2
2001	111,882.2	22,557.0	341.8	16,108.0	7,800.2	4,591.3	10,883.0	2,236.7
2002	135,496.0	29,977.2	317.9	22,052.1	1,192.3	6,494.1	15,441.0	4,081.0
2003	--	--	--	26,746.2	1,487.2	9,122.8	--	4,955.8

Source: Franklin Allen, Jun Qian, Meijun Qian (2005).

3.3 Regulatory agencies

1. China Banking Regulatory Commission (CBRC): The CBRC was established on April 28, 2003 to take over the regulatory function of the banking sector from the PBOC in order to leave it free to concentrate on monetary policy matters.³⁶ The main

³⁵ Source: <http://wiki.mbalib.com/>

³⁶ Hansakul (2004).

functions, supervisory focuses and regulatory objectives are listed in table 2 as follows.

Table 2: The functions, supervisory focuses and regulatory objectives of CBRC

The main functions of the CBRC	
➤	Formulate supervisory rules and regulations governing the banking institutions;
➤	Authorize the establishment, changes, termination and business scope of the banking institutions;
➤	Conduct on-site examination and off-site surveillance of the banking institutions, and take enforcement actions against rule-breaking behaviors;
➤	Conduct fit-and-proper tests on the senior managerial personnel of the banking institutions;
➤	Compile and publish statistics and reports of the overall banking industry in accordance with relevant regulations;
➤	Provide proposals on the resolution of problem deposit-taking institutions in consultation with relevant regulatory authorities;
➤	Responsible for the administration of the supervisory boards of the major State-owned banking institutions; and Other functions delegated by the State Council;
The supervisory focuses of the CBRC	
➤	Conduct consolidated supervision to assess, monitor and mitigate the overall risks of each banking institution as a legal entity;
➤	Stay focused on risk-based supervision and improvement of supervisory process and methods;
➤	Urge banks to put in place and maintain a system of internal controls;
➤	Enhance supervisory transparency in line with international standards and practices.
The regulatory objectives of the CBRC	
➤	Protect the interests of depositors and consumers through prudential and effective supervision;
➤	Maintain market confidence through prudential and effective supervision;
➤	Enhance public knowledge of modern finance through customer education and information disclosure;
➤	Combat financial crimes.

Source: CBRC (<http://www.cbrc.gov.cn>)

2. State Administration of Foreign Exchange (SAFE): SAFE was established in 1979 with the purview of managing foreign exchange activities of China's financial institutions. The main functions of SAFE are listed in table 3 as follows.

Table 3: The main functions of SAFE

Major functions of SAFE	
(1)	Designing and implementing the balance of payments (BOP) statistical system in conformity with international standards, developing and enforcing the BOP statistical reporting system, and collecting relevant data to compile the BOP statement;
(2)	Analyzing the BOP and foreign exchange positions , providing policy proposals with aim to achieving an equilibrium BOP position, and conducting feasibility study on the convertibility of the Renminbi (RMB) under capital account;
(3)	Drafting rules and regulations governing foreign exchange market activities , overseeing the market conduct and operations, and promoting the development of foreign exchange market ; analyzing and forecasting the foreign exchange supply/demand positions and providing the People's Bank of China (PBOC) with propositions and references for the formulation of exchange rate policy;
(4)	Promulgating regulatory measures governing foreign exchange transactions under current account and supervising the transactions accordingly; monitoring and regulating the foreign exchange account operations both in China and abroad;
(5)	Supervising and monitoring foreign exchange transactions under capital account, including inward and outward remittance and payments;
(6)	Managing foreign exchange reserves of the country in accordance with relevant rules and regulations;
(7)	Drafting foreign exchange administration rules, examining the domestic entities' compliance with foreign exchange administration rules and regulations , and penalizing institutions engaging in illegal practices;
(8)	Participating in relevant international financial activities;
(9)	Performing other duties and responsibilities assigned by the State Council and the PBOC.

Source: SAFE (<http://www.safe.gov.cn>)

3. China Securities Regulatory Commission (CSRC): The CSRC was established together with State Council Securities Commission (SCSC) in October 1992. The SCSC is the State authority responsible for exercising centralized market regulation, and the CSRC is the SCSC's executive branch responsible for conducting supervision and regulation of the securities markets in accordance with the law.³⁷ The major responsibilities of CSRC are listed in table 4 as follows.

³⁷ Source: CSRC (<http://www.csrc.gov.cn/>)

Table 4: Major Responsibilities of CSRC

Major Responsibilities of CSRC	
(1)	Studying and formulating policies and development plans regarding securities and futures markets; drafting relevant laws and regulations on securities and futures markets; and working out relevant rules on securities and futures markets;
(2)	Supervising securities and futures markets and exercising vertical power of authority over regional and provincial supervisory institutions of the market;
(3)	Overseeing the issuance, trading, custody and settlement of equity shares, convertible bonds, and securities investment funds; approving the listing of corporate bonds; and supervising the trading activities of listed government and corporate bonds;
(4)	Supervising the listing, trading and settlement of domestic futures contracts; and monitoring domestic institutions engaged in overseas futures businesses in accordance with relevant regulations;
(5)	Supervising the behavior of listed companies and their shareholders who are liable for relevant information disclosure in securities markets;
(6)	Supervising securities and futures exchanges and their senior management in accordance with relevant regulations, and securities associations in the capacity of the competent authorities;
(7)	Supervising securities and futures companies, securities investment fund managers, securities registration and settlement companies, futures settlement institutions, and securities and futures investment consulting institutions; approving in conjunction with the People's Bank of China, the qualification of fund custody institutions and supervising their fund custody business; formulating and implementing rules on the qualification of senior management for the above-mentioned institutions; and granting qualification of the people engaged in securities and futures-related business;
(8)	Supervising direct or indirect issuance and listing of shares overseas by domestic enterprises; supervising the establishment of securities institutions overseas by domestic institutions; and supervising the establishment of domestic securities institutions by overseas organizations;
(9)	Supervising information disclosure and proliferation related to securities and futures and being responsible for the statistics and information resources management for securities and futures markets;
(10)	Granting, in conjunction with relevant authorities, the qualification of law firms, accounting firms, asset appraisal firms, and professionals in these firms, engaged in securities and futures intermediary businesses, and supervising their relevant business activities;
(11)	Investigating and penalizing activities violating securities and futures laws and regulations;
(12)	Managing the foreign relationships and international cooperation affairs in the capacity of the competent authorities; and
(13)	Any other duties as commissioned by the State Council.

Source: CSRC (<http://www.csrc.gov.cn>)

4. China Insurance Regulatory Commission (CIRC): The CIRC was established on November 18, 1998. It is authorized by the State Council to conduct administration, supervision and regulation of the Chinese insurance market, and to ensure that the insurance industry operates stably in compliance with law.³⁸ The State Council upgraded the CIRC from a semi-ministerial institution to a ministerial institution directly under the State Council in 2003.³⁹ The major responsibilities of the CIRC are listed in table 5 as follows.

³⁸ Source: CIRC (<http://www.circ.gov.cn/>)

³⁹ Source: CIRC (<http://www.circ.gov.cn/>)

Table 5: Major Responsibilities of CIRC

Major Responsibilities of CIRC	
(1)	The CIRC formulates policies, strategies and plans regarding the development of the insurance industry, drafts relevant laws and regulations regarding insurance supervision and regulation, and makes relevant rules for the insurance industry.
(2)	It examines and approves the establishment of insurance companies and their branches, insurance groups and insurance holding companies; approves in conjunction with relevant authorities the establishment of insurance asset management companies; examines and approves the establishment of representative offices by overseas insurance organizations within the territory of the People's Republic of China; examines and approves the establishment of insurance intermediaries such as agencies, brokerages, loss-adjusting companies and their branches; examines and approves the establishment of overseas insurance organizations by domestic insurance and non-insurance organizations; examines and approves the merge, split, alteration and dissolution of insurance organizations; decides whether or not to take over an insurance company or designates an organization to take it over; organizes or participates in the bankruptcy and liquidation process of insurance companies.
(3)	It examines and confirms the qualifications of the senior managerial personnel in all insurance-related organizations; establishes the basic qualification standards for insurance practitioners.
(4)	It examines and approves the clauses and premium rates of insurance lines related to the public interests, statutory insurance lines and newly developed life insurance lines; files the insurance clauses and premium rates of the other insurance lines.
(5)	It supervises the solvency and market conduct of insurance companies according to law; manages the insurance security fund, and monitors the insurance guarantee deposits; formulates rules and regulations on insurance fund management on the basis of laws and relevant policies of the State, and supervises insurance fund management according to law.
(6)	It supervises the business operation of public-policy-oriented insurance and statutory insurance; supervises organizational forms and operations such as captive insurance and mutual insurance; conducts administration of societies and organizations such as China Insurance Association and China Insurance Society.
(7)	It conducts investigation into the following irregularities and imposes penalties accordingly: unfair competition and other irregularities by insurance organizations and practitioners, direct engagement or disguised engagement in insurance business by non-insurance organizations.
(8)	It supervises overseas insurance organizations established by domestic insurance and non-insurance organizations according to law.
(9)	It lays down standards for the information system of the insurance industry; establishes insurance risk-assessment, risk-warning and risk-monitoring systems; follows, analyzes and predicts the operation of the insurance market; compiles the statistics and report forms of the insurance industry and discloses them in accordance with relevant regulations of the State and other duties commissioned by the State Council.

Source: CIRC (<http://www.circ.gov.cn/>)

4 Financial Innovations in China

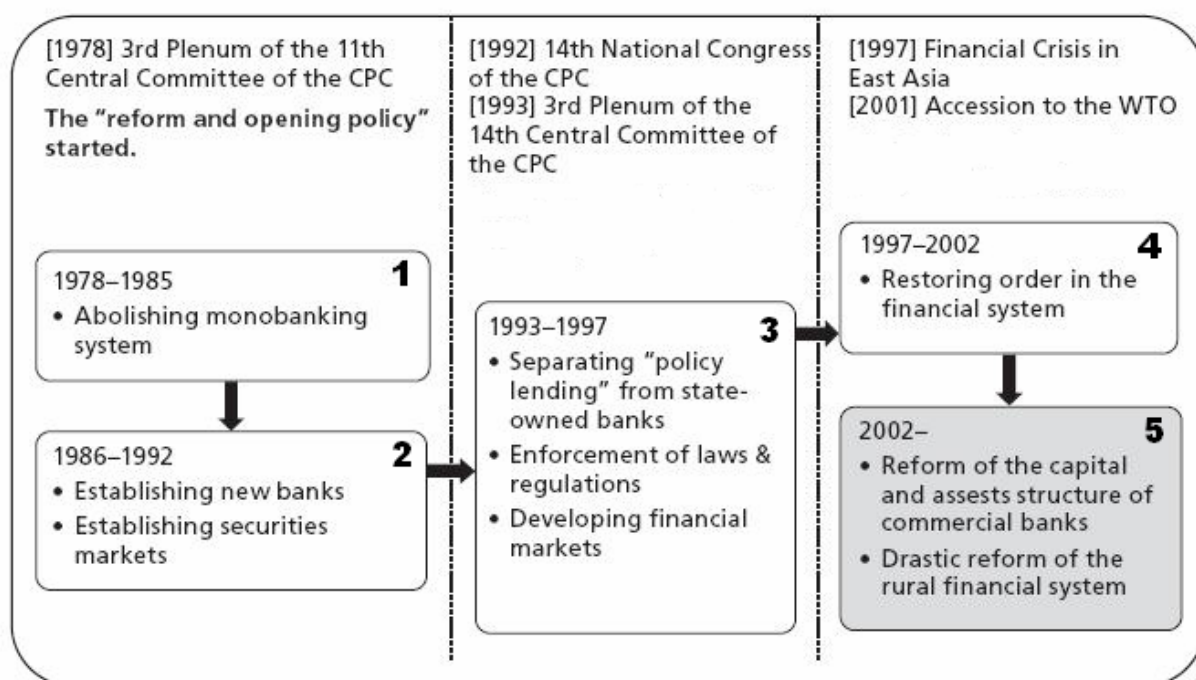
One of the major achievements of the economic reform since 1978 is the development of China's financial sector. "Banks and other financial institutions - as well as the financial infrastructure, including the payments system - need to be established; a range of financial instruments need to be developed and to be made available to market participants to invest and trade."⁴⁰ New financial services/businesses need to be devised to meet the increasing demand of financial operations. This chapter reviews the development and innovations of four elements in China's financial sector: institutions, markets, instruments and services/ businesses.

4.1 Financial Institutional Innovation

Financial institutional innovation refers to the development and reform of organizational form and regime of financial institutions. Chronologically, China's financial institutional innovation can be approximately divided into 5 phases (or 3 stages according to Okazaki) since the economic reform in 1978 (see figure 2).

⁴⁰ Mehran and Quintyn (1996), p. 18-19.

Figure 2: Outline of financial system reform in China



Source: Shang (2000), Dai (2001), Chen (2002), Wu (2005) and Okazaki (2007).

The *first* phase (1978 - 1985) was characterized by the breakup of the mono-bank⁴¹ system, making PBOC the central bank and creating ICBC to handle urban commercial banking, thus joining other specialized institutions for large scale construction (CCB), foreign exchange transactions and international trade (BOC), and rural lending (ABC).⁴²

The *second* phase (1986 - 1992) was marked by a reduction in administratively governed specialization among institutions, a rapid growth of non-bank financial intermediaries, the establishment of the first joint-stock universal bank (Bank of Communications) in 1986, the establishment of People's Insurance Company of China (PICC) and China International Trust and Investment Company (CITIC), and the beginnings of a capital market by the introduction of secondary market trading in government securities.⁴³ "At the end of 1992, there were 12 insurance companies, 387 trust and investment companies, 87 securities companies, 29 finance companies, 11

⁴¹ PBOC was the mono-bank before 1984.

⁴² Bhattasali (2002) and Okazaki (2007).

⁴³ Bhattasali (2002) and Okazaki (2007).

leasing companies, 59,000 rural credit cooperatives, and 3,900 urban credit cooperatives in China.”⁴⁴

The *third* phase (1993 - 1997) was marked by even greater and deeper diversification in the financial market and the market-oriented policies were widely introduced. During this period, the “Big Four” were gradually really commercialized. The inter-bank market developed, some interest rates became flexible, and life and non-life insurance licenses were extended to foreign firms, but with tighter product and geographical restrictions than for domestic providers.⁴⁵

In the *fourth* phase of financial institutional reform (1997 - 2002), the emphasis shifted to addressing the portfolio problems of the commercial banks and governance of the financial market as a whole.⁴⁶ For a long time the policy lending⁴⁷ and other mandatory loans made the state-owned commercial banks have accumulated a large number of non-performing assets, which results in a very high potential financial risk. The Asian financial crisis in 1997 made the central government greatly raise the vigilance for financial risks. To reduce financial risks, the central government took two important measures of carrying out relief to the state-owned commercial banks: first, in 1998, 270 billion Yuan of special treasury bonds was issued to supplement the capital funds of state-owned commercial banks; second, in 1999 and 2000 the central government set up four asset management companies (AMC), and stripped 1.4 trillion of non-performing assets off the Big-Four.⁴⁸ During this period the preparations for WTO accession also effectively started. In November 1997, the CPC Central Committee and the State Council put forward that by 2000 a modern financial organization system, financial market system and financial regulation and monitoring system that adapt to

⁴⁴ Shang (2000).

⁴⁵ Bhattasali (2002) and Okazaki (2007).

⁴⁶ Bhattasali (2002).

⁴⁷ Policy lending may be defined as that part of bank lending that is made at the request of (or strongly encouraged by) the government to promote its economic, industrial, and sectoral policies and to assure funding for priority activities. Such lending may or may not be made at subsidized interest rate (Mehran et al, 1996).

⁴⁸ Lin and Li (2005).

socialist market economy should be initially established.

In March 1998, Ex-Premier Zhu Rongji announced at the NPC press conference that China's financial system reform is bound to be basically completed in three years. Then a new round of financial system reform started: to reform the management regime of PBOC, in order to improve bank supervision and the recognition of bad loans in the portfolios of state banks; to establish divided operation, divided monitoring system in banking, insurance, and securities industry and strengthen financial supervision; clarification of the roles of CSRC and CIRC; according to the operating principle of "entrusted by the customer, representing to conduct financial management", to re-define, standardize the business scope of TICs and conduct divided operation and divided monitoring in the trust and securities industry; and the diversification of financial instruments to meet the emerging needs of savers.⁴⁹ Moreover, the PBOC abolishes the geographical restrictions on foreign banks and allows foreign banks to set up branches in all central cities of China.

From 2002 to present can be regarded as the *fifth* phase. After WTO accession, the financial institutional innovation was characterized by reform of the capital and asset structure of commercial banks and drastic reform of the rural financial system.⁵⁰ Soon after the WTO accession, the CPC and the central government held in February 2002 the Second National Financial Work Conference to discuss how to establish a stable, efficient, and competitive financial system while under intense pressure to further open the country's economy.⁵¹ "The conference pointed out several serious problems in the financial sector: the incomplete supervisory system, the unsustainable and loose management mechanism of financial institutions, weak mechanisms for protecting the legal rights and interests of financial institutions, a lack of staff with specialized financial knowledge and skills, financial institutions' lack of business innovation, and

⁴⁹ Zhou (2007) and Bhattasali (2002).

⁵⁰ Wu (2005) und Okazaki (2007).

⁵¹ Okazaki (2007).

disorder in parts of the financial market.”⁵² Soon one year after the conference the CBRC was established. In October 2003, the central government decided to change the ownership structure of the SOCBs (ICBC, ABC, BOC, CCB and BOCOM). Major arrangement of reforming SOCBs is showed in table 6 as follows. During this period the organizational restructuring of the SOCBs is also energetically unfolded; the number of branches and employees has diminished a lot (see figure 3). “From June 2005 to May 2007, BOCOM, CCB, BOC, and ICBC undertook successful IPOs and were listed on stock exchanges; that is the last step of the SOCBs’ ownership structure reform - public listing of bank securities.”⁵³

⁵² Source: People’s Daily, February 8, 2002.

⁵³ Okazaki (2007).

Table 6: Major Arrangements for the Structural Reform of SOCBs Since 2003

Bank	Date of Reorganization	Capital Injection ^a		Issuance of Subordinated Bonds (RMB billion [date]) ^b	Disposal of NPLs (RMB billion) ^c	Investment by Foreign Strategic Investors (RMB billion)	Foreign Investors' Share in Capital as of June 30, 2006 (%)	Capital Increase (%)	Initial Public Offerings	
		Institution	Amount (RMB billion)						Location	Date
ICBC	Oct. 28, 2005	Huijing ^d	124.0	Apr. 2005	705.0	30.5	8.4	44	Hong Kong	Oct. 2006
ABC	Plan under discussion.								Shanghai	Oct. 2006
BOC	Aug. 26, 2004	Huijing	186.4	Dec. 2003	308.1	43.0	14.1	46	Hong Kong	June 2006
CCB	Sept. 17, 2004	Huijing	186.2	Dec. 2003	185.8	32.8	14.4	36	Shanghai	July 2006
BOCOM	June 20, 2004	MOF	5.0	June 2004	53.0	14.5	19.9	81	Hong Kong	June 2005
		Huijing	3.0	June 2004						
		Social Security Fund	10.0	June 2004					Shanghai	May 2007
Totals			514.6		1,251.9	120.8				401.0

SOURCES: Bank annual reports; Web sites of the Cinda AMC, Dongfang AMC, PBC, CBRC and MOF; and author's estimates (regarding the disposal of NPLs).

^a Funding sources: Foreign exchange reserves (RMB 496.6 billion) and other public funds (RMB 18.0 billion)

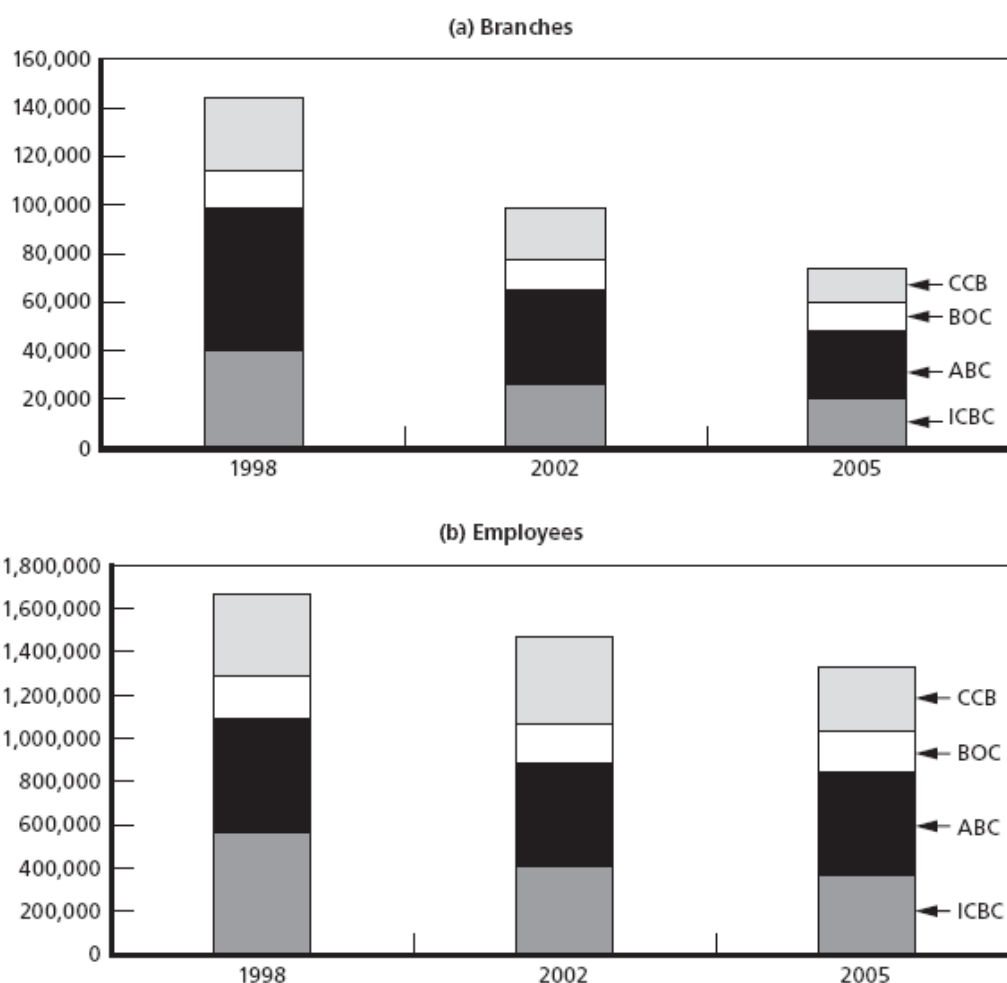
^b Issued in the interbank market.

^c The MOF gave receivables to ICBC (RMB 246.0 billion) and CCB (RMB 65.5 billion) and waived the paid-in capital of BOC (RMB 141.1 billion) and CCB (to a maximum of RMB 56.9 billion), for a total of RMB 509.5 billion. The PBC provided AMCs with loans amounting to RMB 619.3 billion to purchase banks' doubtful NPLs. Simultaneously, it sold bills to the four banks in amount of RMB 616.4 billion to offset the impact of the disposal.

^d MOF also keeps its original invested capital, amounting to RMB 124.0 billion.

Source: Okazaki (2007), p. 42.

Figure 3: Number of Branches and Employees of SOCBs (at end of year)



SOURCES: *Almanac of China's Finance and Banking* for the data for 1998 and 2002, SOCB's annual reports for the data for 2005.

NOTE: The number of employees at the end of 2005 is not comparable across the banks, since the definition of an employee is not unified across the banks' annual reports; for example, CCB includes short-term contract employees, while ICBC only counts medium- and long-term contract employees.

Source: Okazaki (2007), p. 52.

Initially in August 1996, the State Council promulgated the *Decision of the State Council on the Rural Financial System Reform* suggesting greatly reforming the rural financial system, and determined the focus of the rural financial system reform on the reform in RCCs. Since 2003, this policy has become an increasingly obvious trend and been reinforced continuously, such as loosening the floating range limit of lending interest rate of RCCs, increasing national financial investment to solve the problem of non-performing assets of RCCs, vigorously promoting and deepening the reform pilot work of RCCs and so on.⁵⁴ In May 2003, approved by the State Council, the reform

⁵⁴ Chu and Liu (2004).

pilot of RCCs expanded to eight provinces and cities (Jilin, Shangdong, Jiangxi, Zhejiang, Shanxi, Chongqing, Guizhou and Jiangsu) from the original one province (Jiangsu). The State Council requested in accordance with the general requirement “clearing ownership structure, strengthening regulation mechanism, strengthening the service function, appropriate supporting from the State and local government taking charge of the responsibilities” to speed up the reform in management system and ownership structure of RCCs, to develop the RCCs into a local community financial institution composed of shares farmers, rural industrial and commercial enterprises and various economic organizations with providing services for the development of farmers, agriculture and rural economy in order to better support rural economic restructuring, help farmers increase income and promote the coordinated development of urban and rural economy.⁵⁵ But until now there are still lots problems with the rural financial system and the status quo is not optimistic. In the National Financial Work Conference in January 2007, Premier Wen Jiabao emphasized again facilitating rural financial reforms and made it one of the six reform targets for the next few years.

4.2 Financial Market Innovation

“Financial market is a mechanism that allows people to easily trade financial securities (such as stocks and bonds), commodities (such as precious metals or agricultural goods), and other fungible items of value at low transaction costs and at prices that reflect the efficient market hypothesis.”⁵⁶ The principles of financial market innovation are to improve efficiency in financial service, to make full use of legal rules, to make profit maximization and fastest realization, to keep sustained development, and replication vs. counter replication.⁵⁷ Generally speaking, financial market innovations include innovations in market pattern, market organization form and market regulation. *Innovations in financial market pattern* are closely related to that in types of financial instruments. With new financial instruments, there inevitably needs new financial

⁵⁵ Cheng (2008).

⁵⁶ Source: http://en.wikipedia.org/wiki/Financial_markets

⁵⁷ Luo(2003), slid 13 of 227.

markets to conduct transactions. *Innovations in market organization form and market regulation* are output of the transformation of economic system and development of trading technologies. From segmented market to unified one, from centralized market to scattered one, from tangible market to intangible one, and emergence of new market regulations; all reflect the development of economic system and trading technologies. This section is an introduction to the development of several important financial markets in China.

4.2.1 Money Market Innovations

“Money Market is a financial market for short-term debt securities, such as banker's acceptances, commercial paper, repos, negotiable certificates of deposit, and Treasury Bills with a maturity of one year or less and often 30 days or less, providing short-term liquid funding for the global financial system.”⁵⁸ Money Market contains of different sub-markets, including the inter-bank market, commercial papers market, short-term government bonds (treasury bills) market, CD market, Repo market etc.

4.2.1.1 Inter-bank market development

“The purpose of inter-bank market is to efficiently allocate liquidity among financial institutions and regions, shift funds to institutions and regions that need it most, and allow for a smooth working of the payment system.”⁵⁹ China’s inter-bank market first appeared in the 1980s but it was not until in January 1996 that the inter-bank market was officially established.

“At the beginning of 1980s, the Chinese inter-bank funding market came into being through “underground” lending and borrowing by township and village enterprises

⁵⁸ Source: <http://www.investorwords.com>

⁵⁹ Imam (2004), p. 1.

(TVEs) in Jiangsu and Zhejiang provinces in order to overcome shortage of funds.”⁶⁰ Since 1984 various financial institutions including non-banking institutions were founded and from then on reserve requirement has been imposed for commercial banks as an indirect management measure of the PBOC.⁶¹ This situation made the inter-bank borrowing and lending more and more demanded so that the financial institutions could adjust their short-term cash positions with each other.

Till 1985 the PBOC finally officially allowed inter-bank lending and borrowing among state-owned specialized banks.⁶² However, encouraged by possible profits and the need for funds in order to develop the domestic economy, these banks soon used their excess reserves to engage in a variety of “illegal” inter-bank transactions: bypassing imposed restrictions on credit ceiling management, and realizing investment in prohibited investment areas and modes through transfer of funds.⁶³ In addition, because of lack of other money market instruments and immature capital markets at that time, financial institutions in coastal special economic zones (Zhejiang, Jiangsu, Fujian etc.) borrowed large sums of money with long-terms of maturities to make up for local fund shortages.⁶⁴ Thus the inter-bank lending and borrowing served as a way of balancing the surplus and shortage of medium-term and long-term funds instead of its real function – short-term funding.

At the beginning of the 1990s, the atypical use of inter-bank lending and borrowing became more and more deteriorated; at that time it not only fueled inflation but also helped to create a bubble economy.⁶⁵ Such unhealthy development of the inter-bank funding reached their peak in 1995 and posed a threat to financial stability. Consequently the central bank reacted to the turmoil in the Chinese inter-bank market

⁶⁰ Imam (2004), p. 3.

⁶¹ Shi (2001), p. 8.

⁶² Li and Peng (2002).

⁶³ Imam (2004), p3.

⁶⁴ Xie (2002), p. 29.

⁶⁵ Li and Peng (2002).

and started a reform package.⁶⁶ In January 1996, a unified national inter-bank market was officially established.

After the establishment of the official inter-bank market, qualifications of financial institutions within the market have been clarified, and starting from June 1996 all trading must be conducted through the electronic trading system⁶⁷ provided by Shanghai-based national inter-bank market.⁶⁸ Additionally, the PBOC has regulated the term of maturity and the amount of loans for all financial institutions in order to prevent excessive or long-term inter-bank funding. That is, “the maximum term of lending and borrowing among commercial banks should not exceed four months and the amount of lending or borrowing should be fixed in proportion to the balance of deposits; the term of lending or borrowing by non-banking financial institutions should be less than seven days and the amount of lending or borrowing should be fixed according to the level of capital”.⁶⁹

After two decades development since its establishment, the inter-bank market has become more and more mature and effective for solving short-term funding problems among banks and is playing an increasingly important role in Chinese financial system. Table 7 summarizes the main structural characteristics of the inter-bank markets as follows. Table 8 presents the trading volume among different financial institutions over the last four years. Table 9 shows the current trading volume in various maturities of the whole inter-bank market in the year 2007.

⁶⁶ Lu and Liu (1999)

⁶⁷ This trading system is known as the Network of the China Foreign Exchange Trading System (CFETS).

⁶⁸ Imam (2004), p. 4.

⁶⁹ Xie (2002), p. 30.

Table 7: Overview of China's Inter-bank market

Market	Maturities	Interest rate	Restrictions	Participants
National interbank (funding) market controlled by CFETS*	up to 4 months	Liberalized/Market rate	Only "emergency lending" - not allowed to use for customer loans or making investment	Chinese banks, foreign banks**, securities companies and funds, other financial institutions
National interbank repo market	up to 9 months	Liberalized/Market rate	Limited to the adjustment of liquidity; not accessible for non-financial institutions	Chinese banks, foreign banks, securities companies and funds, other financial institutions, insurance companies
Bilateral interbank market	up to 12 months	Liberalized/Bilaterally agreed rate	Only foreign banks are allowed to borrow from Chinese banks	Chinese banks, foreign banks

Note: *CFETS: China Foreign Exchange Trading System. ** Foreign banks may borrow max 1.5 time their registered capital in RMB.

Source: Imam (2004).

Table 8: Lenders and Borrowers in the Inter-bank Money Market

	(100mn RMB)			
	2003	2004	2005	2006/1-9
State-run Commercial Banks	▲75,150	▲51,254	▲94,270	▲92,780
Other Commercial Banks	45,361	27,486	35,277	40,122
Other Financial Institutions	17,341	9,892	23,522	14,605
Insurance Companies	605	1,941	9,956	10,010
Securities and Fund Asset Management Companies	11,561	11,156	18,630	18,249
Foreign Financial Institutions	282	779	6,885	9,794

Source: China Finance, Vol.3, 21, 2006.

Table 9: Trading volume of Inter-bank market, 2007

Maturity	Trading Volume
	(sum of 12 Month over 2007)
	Unit: RMB 100 Million
Overnight	80304.69
7 Days	21780.10
14 Days	2735.86
20 Days	501.62
30 Days	341.56
60 Days	279.43
90 Days	318.01
120 Days	133.42
6 Months	30.61
9 Months	23.99
1 Year	16.40

Source: PBOC (2008).

4.2.1.2 Commercial paper market development

“Commercial paper is unsecured obligation issued by a corporation or bank to finance its short-term credit needs, such as accounts receivable and inventory, with a maturity typically less than 270 days.”⁷⁰ Commercial paper market refers to circulation and transaction market of commercial papers. It is of great importance for the liquidity of money market.

Generally, issuers of commercial papers raise funds from the commercial paper market to solve the temporary funding needs. When it can be expected that in the near future they can use some upcoming funds to repay, they do not have to borrow from bank in a higher interest rate; instead they raise funds through the commercial paper market, because the cost of commercial paper is generally lower than that of the short-term loans of bank. When the commercial paper is due, the company may also issue new papers to repay to ensure continuous and massive borrowing. The development of China’s commercial paper market is gradually progressive which is roughly divided into three stages:⁷¹

1982 - 1994 – the stage of use promotion: In May 1982, the PBOC decided to pilot the commercial paper acceptance and discount business in Chongqing, Shenyang, Hebei and other areas. After that in December 1984, the *Interim Rules for the Acceptance and Discount of Commercial Bills* - a decision that from 1985 the paper business would be run across the country - was promulgated.⁷² Although this means that the government began to actively involve the process of establishment and transformation of China's commercial paper market, the development of the market was still tumbling.

1995 - 1999 – the stage of forming regulation framework: In 1995, the *Laws of the People's Republic of China on Negotiable Instruments* was promulgated, thus

⁷⁰ Source: <http://www.investorwords.com>

⁷¹ Ou (2004).

⁷² Zhang (2007).

establishing the formal regulations on commercial paper market. Later the PBOC also promulgated in sequence eight management measures on bills, basically forming the legal framework for the development of Chinese commercial paper market. As the formal regulation system on commercial paper market is established, the development pace of the commercial paper market gradually accelerates.

1999 - Present – the stage of sustainable development: At present, the commercial paper market are mainly expressed with a series of distinctive features such as the rapid expansion of the market scale, the increasing types of commercial papers, the professional development in business operation, the initial formation of regional market, the flourishing development of commercial paper innovation, the developing business variety series, the increasingly maturing macro-control and the widening financing channels of enterprises, thus it plays an important role in China's money market.⁷³ In 2006 there were 242 commercial paper issues which raised a total of US\$39.3 billion.⁷⁴

4.2.1.3 Short-term government bond market development

Short-term government/treasury bond is also called Treasury Bill. It is a short-term debt certificate for the government to make up the temporary shortage of funds for the state treasury. Generally it has the following characteristics: short duration and strong liquidity; usually the issuance of treasury bills adopts indirect distribution underwritten by financial institutions; sound safety, reasonable yield and tax-free.⁷⁵

Treasury bill is one of the most important components in the money market with very large issuance and trading volume playing an important role in meeting the government's need for short-term cash flow. The activities in treasury bills market include the issuance and circulation of treasury bills. Treasury bills market is not only

⁷³ Zhang (2007).

⁷⁴ Source: www.businessweek.com, china

⁷⁵ Source: <http://wiki.mbalib.com>

an ideal place for investors, the major channel for the commercial banks to adjust secondary reserves, but also the important base for the government to adjust the balance of the state treasury and an important place for the central Bank to carry out open market operations.⁷⁶ Categorized by the duration, there are three months, six months, nine months and 12 months treasury bills.

After the foundation of People's Republic of China in 1949, treasury bonds issuance undergoes two periods: the 1950s and after the 1980s.⁷⁷ In 1950s there were totally six times of national uniform issuance of government bonds. Initially was the issuance of "people's victory parity bonds" in 1950 with the purpose to balance financial revenue and expenditure, to curb inflation and stabilize market prices. From 1954 on, in order to raise construction funds for the national economy, for five consecutive years the government issued "national economic construction bonds". In 1968 after repaying the principal and interest, the state didn't issue any domestic government bond until 1981.

After 1981, government bonds were issued annually. The first batch of issued government bonds was all medium and long-term (10-year basis during the period of 1981-1984, 5-year basis during the period of 1985-1987; 3-year basis in 1988).⁷⁸ It was not until 1994 that the Ministry of Finance initially issued the half-year/1-year/2-year basis government bonds achieving the diversification in the variety of government bonds. The emergence of the short-term government/treasury bonds (treasury bills) greatly promoted the development of the money market because of its strong liquidity⁷⁹. In March 1996 China for the first time issued a three-month treasury bills and it is seven years later when it for the second time issued the three-month treasury bills which is December 2003.⁸⁰ The issuance and circulation of short-term government bonds can

⁷⁶ Source: <http://wiki.mbalib.com>

⁷⁷ Source: <http://baike.baidu.com/>

⁷⁸ Zhang (1989).

⁷⁹ As short-term government bond is with low-risk and high credibility, industrial and commercial enterprises, financial institutions and individuals are willing to invest short-term capital into treasury bills, and thus to adjust their liquidity structure and create a very convenient and developed secondary market for short-term government bonds.

⁸⁰ Guo (2004).

solve the balance shortfall of temporary funds for the government; to investors, provide an ideal investment instrument for their short-term funds. But among the government bonds issued in China, the treasury bills/short-term government bonds (maturity less than one year) take an excessively lower proportion which is not conducive for investors to improve their capital structure by use of them.

4.2.1.4 CD market development

The negotiable Certificates of Deposit (CD) business has experienced in China a rough development course because of constant changes of relevant policies. The first CD in China emerged in 1986, originally issued by the central Bank and Bank of Communications.⁸¹

In 1989 other specialized banks were also allowed by the central bank to start this business. In the same year the central Bank for the first time promulgated *Management Measures on Negotiable Certificates of Deposit* stipulating that the issuers of CDs were limited to various banks, and non-bank financial institutions shall not issue CDs; the targets of CDs purchasers, namely investors, were individuals, enterprises and institutions; the funds for the purchase of CDs should be individual funds and the self-owned funds of enterprises and institutions. The central bank stipulated the denomination of 500 Yuan or its integral multiple for CDs purchased by individuals, that of 50,000 Yuan or its integral multiple for CDs purchased by enterprises. At that time the duration of CDs was respectively one month, 3 months, 6 months and 1 year; the interest was not paid on quarterly basis; the deposit shall not be withdrawn in advance and would be paid with interest one time upon the expiration, and for the overdue period the interest was not counted and paid; all CDs would be issued by counters of banks to the investors without the operation of intermediaries.⁸² The interest rate level of CDs was generally 1-2% plus to that of regular savings in the same

⁸¹ Source: <http://wiki.mbalib.com>

⁸² Source: <http://baike.baidu.com>

period.

To deal with the malady based on that all specialized banks issued CDs with excessively high interest rate resulting in “big movement” of deposits, which increased the capital cost of banks, the PBOC once exerted restrictions on the interest rates of CDs; coupled with that China had not formed a complete secondary circulation market, the CDs massively issued in 1980s almost disappeared after 1996 when the whole market stagnated.⁸³ In 1997 CDs were suspended due to a variety of problems.

In recent years as China’s market mechanism further improves, in order to broaden the funding channels and gather social idle funds to support national economic construction, approved by the PBOC, CDs which once were stopped are competitively issued again by all specialized banks.

4.2.1.5 Repo market development

“A more accurate and descriptive term for Repo is Sale and Repurchase Agreement, since what occurs is that the cash receiver (borrower/seller) sells securities to the cash provider (lender/buyer) now in return for cash, and agrees to repurchase those securities from the buyer for a greater sum of cash at some later date, that greater sum being all of the cash lent and some extra cash (constituting interest, known as the Repo rate).”⁸⁴

Before 1990, inter-bank lending dominated China’s money market; securities repo did not appear until 1991, begun with the STAQ system on a trial basis in order to increase the liquidity of the securities.⁸⁵ The securities Repo market in China firstly appeared in Wuhan Securities Exchange, and in turn, the Shanghai Stock Exchange also started Repo business on December 19, 1993. Since then Repo as a new financial instrument

⁸³ Pan (2006).

⁸⁴ Source: <http://en.wikipedia.org>

⁸⁵ Zheng (2007).

officially entered China's financial market and developed rapidly. However, because Repo was newly introduced, many problems appeared since 1994. "Thus in August 1995 China began the rectification of the securities Repo market, because there were serious financial risks in the Repo business in the Wuhan Securities Exchange, the Tianjin Securities Exchange, and the STAQ system, they were shut down by the authorities."⁸⁶ After the rectification and before June 1997, most of the securities Repo business was conducted on the Shanghai Stock Exchange making a unified securities Repo market (Exchange Repo market) began to take shape.⁸⁷

In the early stage of the securities Repo market, the main participants were the non-bank financial institutions.⁸⁸ Along with the development of the securities Repo market more and more commercial banks were involved into the Repo business. Therefore, some securities companies and institutional investors obtained large amounts of capital from commercial banks and invested this capital in the stock market, which caused high risk for the banking system.⁸⁹ Thus in 1997, to stop the flow of bank capital into the stock market, the PBOC decided to prohibit commercial banks from the exchange Repo business and start another Repo business exclusively for banks; then an inter-bank Repo market was established and China began to have two parallel Repo market: the Exchange Repo market and the Inter-bank Repo market.⁹⁰

Since 2000 the members of the Inter-bank Repo market were not only the commercial banks, but also securities companies; fund management companies and other non-bank financial institutions began to enter this market making the Inter-bank Repos develop swiftly and exceed the Exchange Repos (see figure 4 as follows).

⁸⁶ Zheng (2007).

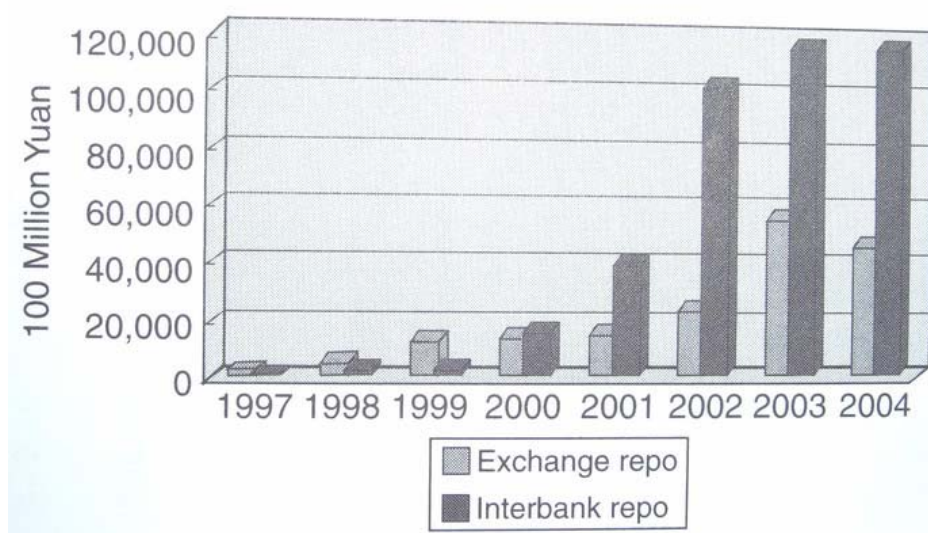
⁸⁷ Zheng (2007).

⁸⁸ Chang, Chen and Li (2000).

⁸⁹ Zheng (2007).

⁹⁰ Zheng (2007).

Figure 4: Comparison of Turnover of Inter-bank Repo and Exchange Repo



Source: Zheng (2007), p. 55.

4.2.2 Capital Market Innovations

“Capital market is a financial market for long-term debt obligations and equity securities, such as stocks, bonds and etc., with a maturity of more than one year.”⁹¹ The most important sub-markets of capital market are bond market and stock market. Since mid-1980s, China’s capital market began to develop rapidly.

4.2.2.1. Bond market development

“Bond is a debt instrument issued for a period of more than one year with the purpose of raising capital by borrowing with a promise to repay the principal along with interest (coupons) on a specified date (maturity).”⁹² The sellers/issuers of bonds may be countries, local governments, corporations, and many other types of institutions. “When an investor buys a bond, he or she becomes a creditor of the issuer; however, the buyer

⁹¹ Source: <http://www.teachmefinance.com>

⁹² Source: <http://www.investorwords.com>

does not gain any kind of ownership rights to the issuer, unlike in the case of equities.”⁹³ The bond market is a very important component of the financial market. Each mature financial market in the world, without exception, has a well-developed bond market. “Well-functioning bond markets are prerequisites for relaxing capital controls and are channels of transmission for an interest rate-led monetary policy.”⁹⁴ The government bonds⁹⁵ market dominates China’s bonds market. So the emergence of primary and secondary market for treasury bonds marked the beginning of the development of the whole bond market in China.

4.2.2.1.1 Emergence of a primary market

Before the economic reform and opening up, excepting for the special period in the early 1950s, China had adopted “neither domestic debt, nor foreign debt” as whose basic principle for financial operations all the while. After the economic reform, China began to resume issuing treasury bonds (T-bonds) since 1981 signaling the emergence of China’s primary bond market. In 1981 a significant budgetary deficit occurred; in order to ensure a balanced budget, the State Council, after a serious debate, decided to issue T-bonds and employ the local financial resources to make up the budgetary deficit on the legal basis for this move - *Regulations on the Treasury Bills of the People’s Republic of China*.⁹⁶ At that time, the issuance of T-bonds mainly took the form of political mobilization and administrative apportion, and targeted on the state-owned enterprises and institutions as well as there existed interest rate differences among different subscription subjects.⁹⁷ And within rather long time, the scale of treasury bonds issuance invariably remained at very low level.

Since 1991, a new era of bond market innovation has unfolded. In this year, a pilot

⁹³ Source: <http://www.investorwords.com>

⁹⁴ Aglietta (2007).

⁹⁵ Including Treasury Bonds, State Key Construction Bonds, State Construction Bonds, Fiscal Bonds, Special State Bonds, and Index Bonds. They are all issued by the China’s Ministry of Finance.

⁹⁶ Gao (2007), pp. 103 - 143.

⁹⁷ Zhang (2000).

underwriting syndication was successfully carried out by financial intermediaries.⁹⁸ In the following years a series of innovations were also launched in succession in the issuance/primary market for treasury bonds (see table 10).

Table 10: Reform timeline of Primary bond market

<i>Year</i>	<i>Reforming Activities</i>
1993	The book-entry form of government bond was introduced on a trial basis.
1994	Treasury bond certificates targeted at individual investors were introduced.
1996	Government securities issued through market-oriented auction method rather than by the State Council; scripless bonds gradually replaced paper securities.
1998 - 2001	The State Council resumed its power to set the coupon rate of government securities Treasury bonds were issued mainly to banks, and the issuance of market-oriented treasury bond gradually decreased.

Source: Gao (2007).

4.2.2.1.2 Emergence of a secondary market

The secondary market refers to the place where the bonds are traded. As more bonds were consecutively issued since 1981, their lack of liquidity caused T-bond holders to feel inconvenienced and increasingly unhappy, which, in turn, made it increasingly difficult to execute T-bond issuance.⁹⁹ In 1985, in order to solve this liquidity problem, the PBOC launched a T-bond discount procedure. However, because the discount rate was not market based and thus lack of liquidity, this procedure did not heal the poor liquidity shortcoming of T-bonds. From then on, the establishment of a secondary T-bond market became more and more imperative. Until 1988 – a landmark year in the development history of China's bond market, the treasury bonds issued in 1985 and

⁹⁸ Gao (2007), pp. 103 - 143.

⁹⁹ Gao (2007), p. 225.

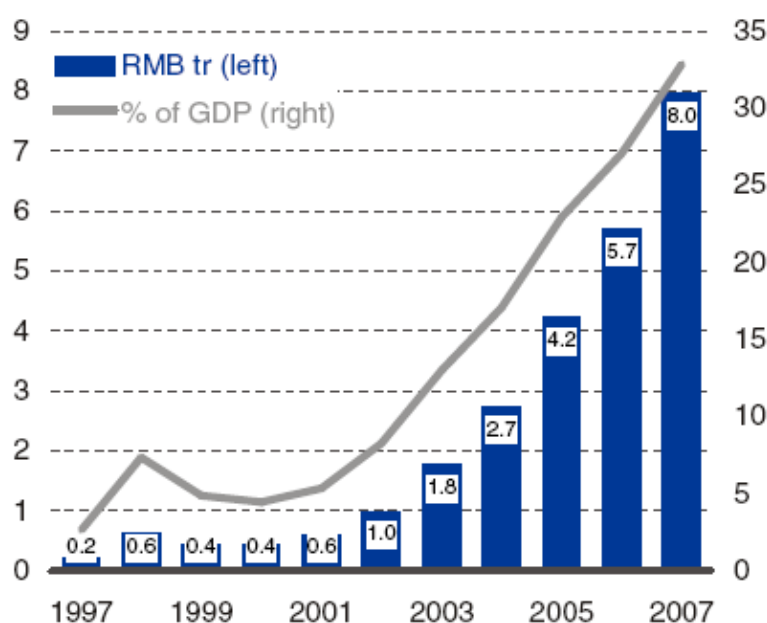
1986 were firstly allowed to be traded in Shanghai, Shenyang, Shenzhen and four other cities on an experimental basis, and later in the same year, this spread to 61 cities.¹⁰⁰ This signaled the emergence of China's secondary bond market. Since then the bond market grew swiftly.

4.2.2.1.3 Recent Development of bond market

In recent years, China's bond market has experienced fairly rapid development seen from the following aspects:¹⁰¹

1. The scope of the bond market: The bond issuance volume increased from 0.2 trillion Yuan in 1997 to 8.0 trillion Yuan in 2007 (see figure 5). RMB bonds outstanding grew from 0.2343 trillion Yuan in 1993 to 12.33 trillion Yuan in 2007.¹⁰² Table 11 summarizes the total issuance tranches and market outstanding value of different bonds.

Figure 5: Growing bond market - historic annual issuance (unit trillion)



Source: Chinabond

¹⁰⁰ Shi (2001).

¹⁰¹ Shen (2006).

¹⁰² Source: Chinabond (www.chinabond.com.cn)

Table 11: Bond Issue Statistics

Products	Issue Frequency (tranche)	Market Outstanding Volume(RMB100million)
Government Bond	148 (from 1998)	36998.40
Policy Bank Bond	349	25999.08
Financial institution Bond	56	3234.39
Corporate Bond	204	3339.30
Corporate short-term bill	517	2837.60
Structured Products	10	145.97

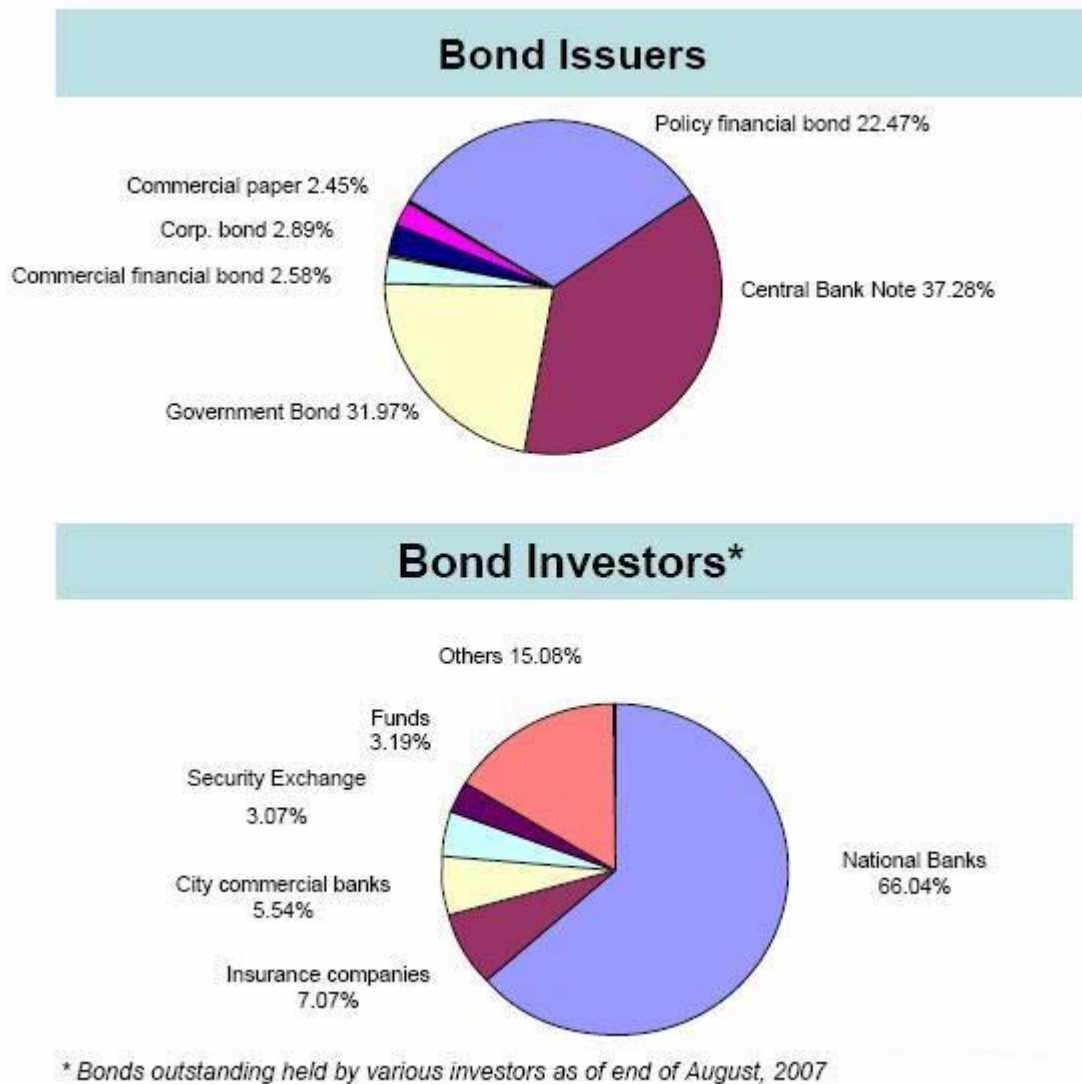
Source: CITICS, Wind System, till the end of August, 2007

2. The transaction volume in the bond market: The repurchase transaction volume increased from 1.4 trillion in 1998 to 18.2 trillion in 2005; the average annual growth rate is 44%. The cash bond transaction volume in 1998 was 0.6 trillion, increased to 6.3 trillion in 2005; the average annual growth rate is 40 %.

3. Numbers of the bond market participants: For example, in the inter-bank bond market, there were only 16 enterprises in 1997. By the end of August 2006, this number increased to 6016.

The current structure of China's bond market in terms of proportion of various bonds and holding by different investors is illustrated in figure 6 as follows.

Figure 6: Issuers and Investors (2007)



Source: Chinabond and CITIC Securities Corporation Ltd. (2007).

4.2.2.2. Stock market development

After the economic reform and opening up, China's stock market development can be divided into three stages, namely reviving and starting stage from 1980 to 1991, expanding and growing stage from 1992 to 1999, standardization and perfection stage from 2000 to present.¹⁰³

¹⁰³ Tao and Song (2003).

4.2.2.2.1 The reviving and starting stage 1980 - 1991

Before the People's Republic of China was founded in 1949 and in the early stage after her foundation there was stock market for stock issuance and circulation existent. But because of politics reasons it was shut down for more than twenty years. The viewpoint concerning when and where the first issuance of stocks after the economic reform since 1978 in China's mainland appeared was divergent. However, the recorded first issuance of stock was in 1980. In August 1980, in order to solve the contradictions between two brick factories in Liaoning province, the PBOC Fushun City branch office reached an agreement with the two brick factories, that the PBOC issued "red brick stock" worth of 2.8 million Yuan on behalf of the brick factories, voluntarily subscribed by the relevant enterprises, to expand the production capacity of red bricks with the capitals attained by issuing the stocks.¹⁰⁴ At the end of that month, all "red brick stocks" were subscribed completely and received very ideal results. In the same year and the subsequent few years, the cases as raising fund through stock issuing appeared in succession in Wuhan, Beijing, Shenzhen, Xi'an and other cities.

However, during this period, the issuance of stocks was rather nonstandard which mainly showed in: stock issue had not been experienced the rigorous assets assessment, had not been plotted out into equal shares; issuing object primarily aimed at internal employees, basically public issuance was not adopted; implemented voluntary subscription for issued stocks; freedom for withdrawing the stocks; maintaining principle and paying interest.¹⁰⁵ That was almost no difference with bond.

In November 1984, the PBOC Shanghai Branch approved that, Shanghai Feilo Acoustics Co., Ltd. established and issued not refunding stock 1 million shares to the social public. With par value of 50 Yuan per share, the total sum was 500,000 Yuan. The stock issue at this time improved a lot in term of the normative level comparing with the previous issuance. Such as it was stipulated that withdrawing was not allowed once

¹⁰⁴ Zhao (1989).

¹⁰⁵ Wang (2003).

buying the shares; the company suspended pay the interest and dividends of the unit principal when it was in no profit or in loss state; individuals and enterprises shareholders assumed common economic responsibilities and enjoyed equal rights.¹⁰⁶ Just from this sense, it was regarded as the *first real stock issue* after the economic reform and opening-up.

But as soon as the stocks were issued, a black-market with illegal stock transactions between individual holders emerged. “In order to eliminate the black-market trading and fulfill public liquidity requirements, the Shanghai Branch of PBOC decided to allow security transfers on a public basis with the proposal that the sellers and buyers met each other individually before they went to the Shanghai Trust and Investment Company to legalize and record the transaction of the bonds, or went to the original issuing agency to transfer the accounts of the stocks, and the price of a security was set by the Shanghai PBOC branch.”¹⁰⁷ Such official trading was very restrictive. Actually, this measurement of PBOC reacted not much and the black-market trading was still popular.

September 26, 1986, approved by the PBOC Shanghai Branch, Shanghai trust and investment companies Jing'an branch set up a special department for securities transaction business. This department undertook officially stock trading in public as an intermediate agency. Stock holders could consign this business department to realize buying and selling the stock other than having to find assignee in person. Only two shares were traded that day with trading value about 90,000 Yuan. This was the first stock trading counter since the economic reform signaling the emergence of the OTC market in China, and it was called at that time “the smallest stock exchange in the world”. But since then, the counter transactions began to develop rapidly. As Shanghai for the example, less than one year after the establishment of “Jing'an stock transaction counter”, the number of stock trading counters increased to nine. The transaction price as well evolved from the original restrictive price to fully liberalized floating price in

¹⁰⁶ Tao and Song (2003).

¹⁰⁷ Ma (2004).

November 1987. However, because of un-complete market and the asymmetrical information, besides the over-the-counter (OTC) transactions, there were still a lot of stock transactions in the black-market; in the second half of 1990, the stock transaction in private outside the counter reached a peak, which impelled the government to make some intensive and unified institutional arrangements for the stock transactions.¹⁰⁸

September 28, 1990, approved by the PBOC, China Securities Trading Automated Quotation System was set up. December 19 in the same year, Shanghai Stock Exchange officially opened, which become the first Stock Exchange after the economic reform and opening-up. April 11, 1991, Shenzhen Stock Exchange was formally established. The establishment of Shanghai and Shenzhen Stock Exchanges marked the end of the counter transactions in China making the most crucial step towards the modernized securities market.

4.2.2.2.2 The expanding and growing stage 1992 - 1999

In early 1992, the speech by Deng Xiaoping during his southern tour excluded inwardly the hindrance from the development of China's stock market. The function of the stock market was recognized by more and more people, a large number of state-owned enterprises listed in succession after restructuring. Stock listing approach, initially implemented "quota system" that was the listing of enterprises were recommended by the provincial governments, which lowered the quality of many listed companies as well, "rent-seeking" phenomenon was very serious.¹⁰⁹

After the promulgation of *Securities laws* in 1999, the "quota system" was cancelled and was substituted by "checking system". That was, securities institutions inspected the company which applied for listing and recommended it to the CSRC on this basis, and finally it was determined by the CSRC whether the company can be listed. In this

¹⁰⁸ Wang (2003).

¹⁰⁹ Lin and Li (2003).

new system, the quality of listed companies improved to a certain extent and the proportion of non-state-owned listed company also increased. By the end of 1999, the number of listed companies in the two Stock Exchanges in Shanghai and Shenzhen had reached 949; the total market value of the listed company in the two cities achieved 2647.117 billion Yuan accounting for 32.496% of China's GDP; circulation market value reached 821.397 billion Yuan, accounting for 9.97% of GDP.¹¹⁰ These data indicated that the status of the stock market increasingly upgrades in the national economy. The emergence of the stock market has changed China's enterprises which used to simply rely on fiscal appropriation and bank loans to raise funds opening a new channel of fund-raising with low costs.

4.2.2.2.3 The standardization and perfection stage 2000 - present

After 2000, China's stock market entered into an in-depth development period featuring the whole system continuously improving and standardizing. February 2000, the PBOC and CSRC jointly issued the *Management Approach Upon stock collateral loans of the stockjobber*, allowing qualified securities companies to loan from commercial bank in virtue of their own stocks, securities and investment fund certificate etc. as mortgage. March 15, 2000, at the Third Session of the Ninth National People's Congress (NPC), Ex-Premier Zhu Rongji pointed out to further standardize and develop securities market, to increase the proportion of direct financing, to perfect the system for stock issuing and listing, to support and encourage large state-owned enterprises and high-tech enterprises to list in the stock market for fund-raising.¹¹¹

April 30, 2001, CSRC issued *Interim measures of public recruiting shares from the society for listed companies*, allowing four types of listed companies to increase and recruit shares; July, the number of the listed companies in Shanghai and Shenzhen Stock Exchanges broke through 1000 and reached 1004, and the total market value in the two

¹¹⁰ Tao and Song (2003).

¹¹¹ Source: China Security (Newspaper) 2000.

cities broke through 4 trillion Yuan and reached 4.068984 trillion Yuan.¹¹²

December 1, 2002, *Provisional Measures on Administration of Domestic Securities Investments of Qualified Foreign Institutional Investors (QFII)*, which was jointly promulgated by CSRC and PBOC, formally came into effect, which signalled that China's QFII system officially launched.¹¹³

May 8, 2005, CSRC issued *Notice on the related problems of trial sites for Share-trading Reform of Listed Companies*, marking the start of the shares reform in China's capital market. It began to break up the top difficult problem which had feazed the healthy and regular development of China's stock market for rather long time. The full name of "Shares Reform" is *Share-trading Reform*. This was the most frequently appeared term as well as the most popular term in China's stock market in recent years. At the beginning of the establishment of China's capital market, the state-owned enterprises were the prime listing targets, while the controlling shareholders of the state-owned enterprises were the state or various state-owned assets management departments on behalf of the state. Under this circumstance, emerged unique state-owned shares and legal-person shares in China's securities market, which can not be listed in circulation as the same as the ordinary shares. Among the state-owned shares, legal-person shares and ordinary shares, "same shares with different rights, same shares with different benefits" was widely regarded as the top difficult problem feazing the development of China's stock market - namely the Share-trading problem.

The so-called "shares reform" was to enable the state-owned shares and legal-person shares, as all ordinary shares, to participate in market circulation, and realize "the same shares enjoy the same rights, the same shares enjoy the same benefits" through the full circulation.

September 2006, the program of shares reform for Sino-Pec was adopted after a vote,

¹¹² Fan and Qiang (2002).

¹¹³ Tao and Song (2003).

among which the overall approval rate reached 99.96%. The completion of shares reform in Sino-Pec marked that the non-tradable shares reform which lasted for nearly one year and a half was drawn to close.¹¹⁴ In 2007, the Chinese stock market was extremely hot and reached its historical peak - 6124 points (Shanghai composite index) on October 16. Table 12 presents the trading volume of China's stock market in 2007 as follows.

¹¹⁴ Source: China Security (Newspaper) 2007.

Table 12: Statistics of China's Stock Trading in year 2007

全国股票交易统计表																
Statistics of Stock Trading on Nationwide Basis																
时期	发行总股本(亿股) Volume Issued (100 Million Shares)		市价总值(亿元) Total Market Capitalization (100 Million Yuan)		成交金额(亿元) Turnover of Trading (100 Million Yuan)		成交量(百万股) Trading Volume (One Million Shares)		最高综合股价指数 High Composite Index				最低综合股价指数 Low Composite Index			
	上海 Shanghai	深圳 Shenzhen	上海 Shanghai	深圳 Shenzhen	上海 Shanghai	深圳 Shenzhen	上海 Shanghai	深圳 Shenzhen	上海Shanghai		深圳Shenzhen		上海Shanghai		深圳Shenzhen	
									A股 A Share	B Share B Share	A Share A Share	B Share B Share	A股 A Share	B Share B Share	A股 A Share	B Share B Share
2006年累计	10279.54	2375.83	71612.38	17791.52	57816.60	32652.31	1028393.40	586129.24								
2007.01	10513.74	2406.74	84092.26	21551.22	17199.39	8360.95	231775.59	113643.38	3145.46	181.65	736.80	531.92	2753.12	130.57	566.46	434.34
2007.02	10589.95	2420.20	88536.11	24334.35	11648.09	5807.53	147302.99	73776.89	3202.86	190.48	811.95	539.41	2668.33	156.30	655.16	441.17
2007.03	10654.66	2440.40	100289.91	27743.44	21085.01	10931.41	243632.26	124151.50	3441.19	181.18	883.14	526.36	2861.18	157.43	734.17	453.27
2007.04	11038.64	2492.80	124450.65	36478.91	32006.87	17115.77	291100.30	130779.43	4045.77	232.24	1116.59	628.21	3359.73	177.46	863.88	523.28
2007.05	11361.96	2536.42	137056.67	40682.83	39282.52	19662.42	291427.06	141428.34	4545.60	381.30	1353.09	803.61	4029.90	237.90	1115.41	642.03
2007.06	11515.42	2576.49	128892.79	37340.00	35332.30	18747.53	265041.88	138239.13	4523.30	314.20	1349.10	744.64	3570.80	243.30	1008.03	594.08
2007.07	11662.46	2612.19	153767.46	45424.05	21587.99	11467.87	169538.03	86809.24	4695.15	328.20	1352.33	794.98	3739.50	241.90	1040.97	643.64
2007.08	11678.69	2666.36	179745.20	53341.93	35597.70	19046.61	240793.67	120304.83	5497.34	331.71	1536.11	802.83	4494.21	299.06	1290.81	670.85
2007.09	11933.45	2684.62	196493.86	56663.15	30463.12	15825.03	191902.95	96113.93	5836.24	367.46	1614.72	790.10	5275.70	321.50	1446.56	717.60
2007.10	12127.42	2722.73	225022.75	55212.86	24102.41	11036.49	134066.49	60731.42	6429.68	394.21	1646.80	798.51	5734.09	347.65	1414.81	728.71
2007.11	13787.46	2743.17	242677.82	47206.71	17393.60	7785.48	100764.52	46498.01	6304.86	380.20	1536.31	798.22	5015.93	315.99	1271.84	626.14
2007.12	14173.10	2781.72	269838.87	57302.02	19735.08	9334.84	125172.37	55360.66	5600.45	369.00	1531.54	735.90	5034.41	341.41	1286.64	662.25
2007年累计	141036.94	31083.84	1930864.35	503281.47	305434.30	155121.93	2432538.12	1207836.76								

Source: PBOC

4.2.3 Foreign Exchange Market Innovations

No official foreign exchange market existed in China for a very long time, because after the foundation of People's Republic of China in 1949 the central government adopted a centralized foreign exchange administration system. Before the economic reform and opening-up, only state-owned foreign trade companies could import or export and only the BOC was authorized to conduct foreign exchange business.¹¹⁵

In 1980, the BOC was authorized to operate a foreign exchange swap business for institutions and domestic companies could buy or sell their foreign exchange or quotas at the BOC with the price allowed to move within a 10% range above or below the official price (official rate = 2.80 against one U.S. dollar; the upper limit was 3.08, while the lower limit was 2.52).¹¹⁶ Because of the price limits and other restrictions the development of the foreign exchange business was very slow.

In 1988, the first public foreign exchange swap market emerged in Shanghai; the price limits were removed and more institutions, even individuals were allowed to trade in the market.¹¹⁷ The market evolved to an auction market which could be regarded as “an embryonic form of foreign exchange market” but not a real one.

In the early 1990s, the reform of China's foreign exchange administration system had become relatively stagnant and increasingly became the restricting factor impeding the economic reform. In view of this, at the end of 1993, the State Council issued a notice of speeding up the reform of foreign exchange administration system. Then, the PBOC promulgated *Announcement on Further Reforming Foreign Exchange Administration System* deciding to carry out significant reforms on foreign exchange administration system from January 1, 1994. The most important contents in this announcement were to establish inter-bank foreign exchange market on the basis of original foreign

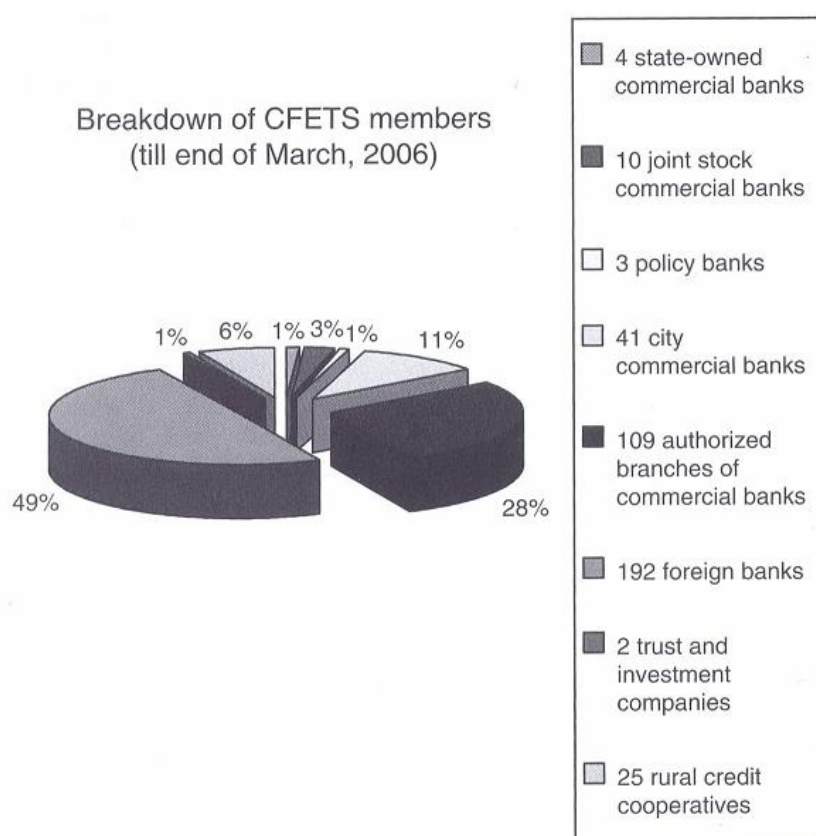
¹¹⁵ Le (2007), p. 115.

¹¹⁶ Le (2007), p. 120.

¹¹⁷ Le (2007), p. 120.

exchange swap market, to abolish foreign exchange retention, to abolish mandatory plan on foreign exchange balance, to implement bank settlement and sales system on foreign exchange, to realize conditional convertibility under RMB current account, to achieve uniform official foreign exchange rate and to implement a single, market-based, and manageable floating exchange rate system.¹¹⁸ On April 4, 1994 China Foreign Exchange Trade System (CFETS)¹¹⁹ started operation in Shanghai signaling the emergence of a unified national foreign exchange market and since then the main structure of this foreign exchange market has not changed much. The partition of current CFETS participants is illustrated in figure 7 as follows.

Figure 7: Proportion of CFETS Membership as of the end of March, 2006



Source: Le (2007), p. 122.

¹¹⁸ Xu (2001).

¹¹⁹ The system is fully computerized, and all 24 major regional trading centers have been linked to the center through satellite and land-based connections. The CFETS offers trading and settlement services to its members, which comprises domestic banks, foreign banks, and a number of non-bank financial institutions. Source: Shi (2001).

4.3 Financial Instrument/Product Innovation

Financial instrument denotes any form of funding medium and can be thought of as easily tradable packages of capital, each having their own unique characteristics and structure.¹²⁰ Various kinds of financial instruments have different financial risks. Generally, financial instruments can be divided into two categories: cash instruments¹²¹ (primary instruments) and derivative instruments¹²². As financial instrument is the carrier of transactions conducted in financial market, its richness, to some extent, represents the development level of a financial market. “The wide array of financial instruments in today’s marketplace enables the efficient flow of capital amongst the world’s investors.”¹²³

Financial instrument/product innovation is the core content of financial innovation. It denotes the process that new financial instruments or products are derived and developed from traditional basic ones with technical development support and changes in collocation of financial factors so as to maximize profits and minimize risks. It is mainly formed through de-bonding and re-allocation of different characters of financial instruments such as profitability, risk, liquidity, exchangeability, maturity, size of amount, rights and obligations and so on.

4.3.1 Derivatives

Derivative financial instruments are simply called derivatives. Derivatives are in itself a kind of innovation. “Advanced investors sometimes purchase or sell derivatives to manage the risk associated with the underlying security, to protect against fluctuations

¹²⁰ Source: www.answers.com/topic/financial-instrument.

¹²¹ Cash instruments (primary instruments) are financial instruments whose value is determined directly by markets. They can be divided into securities, which are readily transferable, and other cash instruments such as loans and deposits, where both borrower and lender have to agree on a transfer. From <http://en.wikipedia.org>

¹²² Derivative instruments are financial instruments which derive their value from some other financial instrument or variable, typically a commodity, bond, equity or currency. From <http://en.wikipedia.org>

¹²³ Source: <http://financial-dictionary.thefreedictionary.com>.

in value, or to profit from periods of inactivity or decline.”¹²⁴ There are a wide range of derivatives. Based on forms, they can be divided into four categories: futures, options, forwards, and swaps. According to primary instruments, there are derivatives for stocks, interest rates, exchange rates and commodities.

The introduction of derivatives to China was in the mid-1980s. At that time, some enterprises after borrowing debts suddenly found themselves facing huge risks in exchange rate and interest rate, and then as the specialized bank for foreign exchange and foreign trade - the BOC took the lead in providing hedge business on medium and long-term debts to these enterprises helping them to use the emerging various derivatives in international financial markets to avoid risks in interest rate and exchange rate.¹²⁵ These enterprises with initial use of derivatives had received satisfactory results. Entering the 1990s, the economic situation had undergone great changes and the domestic derivatives markets had been established swiftly one after another. The most popular derivatives in Chinese financial market are futures, interest rate derivatives and foreign exchange rate derivatives. In recent years stock derivatives become more and more liked by the investors. “On the whole, China’s financial derivatives market just starts off, and despite that the progress achieved, there are still some drawbacks: firstly, the types of derivatives in China are not rich enough; secondly, the investor scope of China’s financial derivatives is not wide enough; thirdly, there is no unified master agreement document.”¹²⁶

4.3.2 Fund products innovation

In retrospect of the process of fund products development, innovation ran through the whole development process of fund industry. From the first close-end fund going public in 1998 to the fund product scale exceeding 600 billion RMB in 2006, the innovation in fund product has never stopped.

¹²⁴ Source: www.investorwords.com

¹²⁵ Guo (2003).

¹²⁶ Source: Market Avenue 2008-03-18. <http://www.marketavenue.cn>

Generally speaking, fund products innovation could be divided into fund variety innovation and fund investment target innovation. On the fund variety innovation side, since 2001 till 2007, a great number of innovative varieties have been gradually launched, such as open-end fund, bond fund, principal guaranteed fund, index fund, fund family, money market fund, listed open-ended fund (LOF), exchange traded fund (ETF) etc.¹²⁷ From fund investment target, the investment scope gradually expands from stocks to many other investment varieties, such as bond, short-term financing bill, deposit, warrant or asset-backed securities. Table 13 summarizes several significant innovation events in fund industry for the past few years.

¹²⁷ CSRC (2007), Report.

Table 13: Fund Product Innovations, 1998 - 2006

<i>Time</i>	<i>Innovation Events</i>
<i>April, 1998</i>	"Fund JINTAI" and "Fund KAIYUAN" successfully went to public unveiling the prelude of Chinese fund development.
<i>September, 2001</i>	"HUA'AN Innovation Fund" was set up successfully, thus from then on open-end fund grows rapidly.
<i>October, 2002</i>	"HUAXIA Bond Fund" was set up successfully becoming the first low-risk product.
<i>November, 2002</i>	"HUA'AN Shanghai Stock Exchange (SSE) 180 Enhanced Index Fund" was issued introducing the idea of passive investment.
<i>April, 2003</i>	The first fund family "XIANGCAI-HENGZE value-optimized Industry Fund Family" was launched.
<i>June, 2003</i>	The first principal guaranteed fund "Southern risk-evasion and value-added Fund" hit a new record in fund issuance scale reflecting a huge demand of investors for low-risk products.
<i>End of 2003</i>	The first generation of social security fund managers emerged starting a trial of entrusted financing services.
<i>Early of 2004</i>	The first batch of money market funds "HUA'AN Cash Abundance Fund", "Merchants Cash Plus Fund" and "Bosera Cash Income Fund" were issued filling in a blank of fund varieties.
<i>October, 2004</i>	The first listed open-ended fund (LOF) "Southern Active Allocation Fund" was issued successfully starting a new mode of fund issuance and trading.
<i>End of 2004</i>	The first exchange traded fund (ETF) "HUAXIA SSE 50 Fund" was issued successfully realizing the innovation in security trading system.
<i>August, 2005</i>	The first medium/short-term bond fund "Bosera Stable Value Fund" was successfully issued realizing the first fine subdivision in bond fund varieties.
<i>July, 2006</i>	"Fullgoal TIANYI Value Fund" split realizing innovation in fund sales mode.

Source: CSRC (2007).

Additionally, in 2006, Ultrashort-term bond funds, life cycle funds and clone funds become new achievements of fund product development.¹²⁸

The following are several noticeable innovations for the year 2007 in Chinese fund industry:¹²⁹ (i) in April, the first clone fund successfully split; (ii) in June, the first innovative fund – “UBS SDIC RUIFU Classified Stock Fund” was approved to be issued; (iii) in July, “Trial Measures for the Administration of Securities Investment outside the Territory of China by Qualified Domestic Institutional Investors” was officially put into practice, with the approval of QDII issuing qualification of HUAXIA and Southern Fund, QDII fund business starts completely and public offering fund thus went to the blank area of global investment; (iv) in September, the first stock QDII fund – “Southern Global Enhanced Balanced Fund” - was approved to be issued; (v) in November, “Trial Measures for Fund Management Companies to Provide Asset Management Services for Specific Clients” was officially promulgated; (vi) in December, two open-end funds affiliated to China International Fund Management Co., Ltd.¹³⁰ initially started raising funds from targeted sources for old funds.

4.3.3 Payment instruments innovation

The payment system is the vital infrastructure of financial market and economic operation. An safe and efficient payment system is of great significance for the smooth transmission of monetary policy, the close organic links of all financial markets, the speed-up of social capital turnover, the improvement of the efficiency of recourses allocation and the prevention of financial risks, but also is conducive to promoting the innovation of financial tools, fostering social credit and safeguarding the public's confidence in money and its transfer mechanism.¹³¹ In the last few years, remarkable

¹²⁸ Yang (2007).

¹²⁹ Source: www.chinagate.com.cn, news at 2007-12/24

¹³⁰ China International Fund Management Co., Ltd. is co-founded by Shanghai International Trust & Investment Co., Ltd. (51% holding shares) and J.P.Morgan Asset Management (UK) Ltd (49% holding shares).

¹³¹ Xie (2005).

progress has been made in China's payment system, which has generated increasing benefit for economic and financial development.

Before 1990s the transfer of funds was mainly through manual processing and the payment information was transmitted by the channel of postman. Since the inter-institution channel was obstructed, it took about one week to transfer a sum of money. In the early 1990s, the PBOC decided to build an electronic inter-bank settlement system supported by satellite communications network to uniformly deal with the inter-bank money transfers and payment liquidation.

After more than 10 years of construction and development, the electronic inter-bank system has played an important role in the national financial activities and has made tremendous contributions to the development of the national economy. Nowadays in China, a network of payment systems with the central bank's *China National Advanced Payment System (CNAPS)*¹³² as the core, banking institutions' *intra-bank payment*¹³³ as the base, *bill payment system* and *bankcard payment system*¹³⁴ as important component has taken shape.¹³⁵ Taken the year 2006 for example, CNAPS, bill payment system, intra-bank payment systems of commercial banks and bankcard payment system all together processed 3,818,200,000 transactions (see figure 8), involving RMB552.76 trillion Yuan, which is 26.4 times of GDP that year.¹³⁶

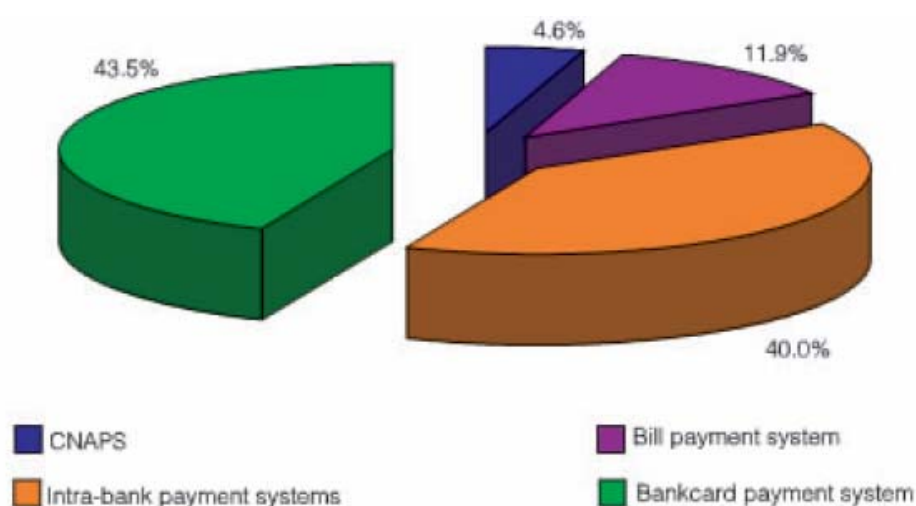
¹³² CNAPS is a common platform developed by PBOC utilizing computer network and Information and Communications Technology (ICT) to provide clearing services for banking institutions and financial market. Source: PBOC (2006).

¹³³ Intra-bank systems are the most fundamental payment systems as they represent channels for internal funds transfer and clearing as well as import and facilities that help banks expand the payment service market and sharpen competitive edge. Source: PBOC (2006).

¹³⁴ Bankcard payment system consists of inter-bank card payment system and issuer's intra-bank card payment system. Today China has put into place a payment network of bankcards based on inter-bank payment system of China Union Pay (CUP) which connects the issuers' intra-bank card payment systems. Source: PBOC (2006).

¹³⁵ PBOC (2006).

¹³⁶ PBOC (2006).

Figure 8: Transaction *volume* Distribution among payment systems for 2006

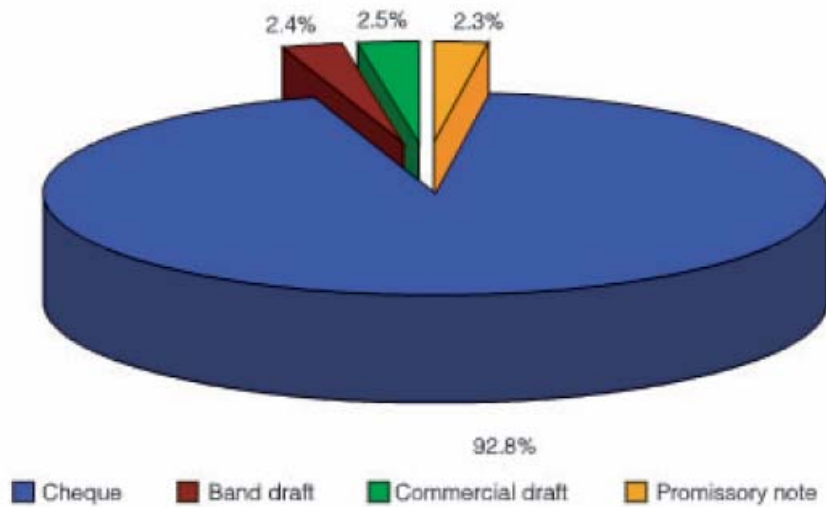
Source: PBOC

4.3.3.1 Bill

On the whole, the most used bills in China are cheque, bank draft, commercial draft and promissory note.¹³⁷ “With the rapid economic development, the scale of bill use and circulation in China has grown steadily; as for the composition (see figure 9) of bill business, *cheque* payments numbered 1,166.27 million in 2006, valued at RMB208.50 trillion Yuan, accounting for 97.9% by volume and 92.8% by value of the bill business total; for *bank draft* 13.32 million in volume and RMB5.31 trillion Yuan in value, accounting for 1.1% and 2.4% respectively; for *commercial draft* 5.88 million in volume and RMB5.51 trillion Yuan in value, accounting for 0.5% and 2.5% respectively; and for *promissory not* 5.65 million in volume and RMB5.28 trillion Yuan in value, accounting for 0.5% and 2.3% respectively.”¹³⁸ As the payment system gradually matures innovation in bill business sped up with following features in table 14.

¹³⁷ PBOC (2006)

¹³⁸ PBOC (2006).

Figure 9: Distribution of payment transaction *value* of bill business for 2006

Source: PBOC (2006).

Table 14: Features of bill business innovation

Features	Description
<i>Market participants diversify.</i>	With proper policy guidance, usage scope of bills has expanded in recent years and bill market participants have diversified to include more small and medium-sized banking institutions and enterprises.
<i>Product innovations set up.</i>	Banks now provide corporate clients with customized bill services, including bill discount service with the buyer paying discount interest etc. The improvement of competitiveness through bill service innovation has become an important means for banking institutions to expand their shares in the bill market.
<i>Bill business begins to get centralized.</i>	The emergence of two types of specialized agencies within commercial banks, namely bill operation departments and bill discount window, has helped bill market to prosper.

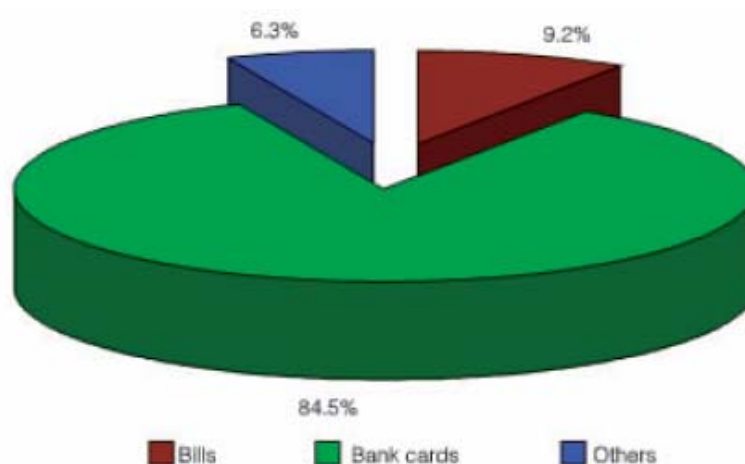
Source: PBOC (2006).

4.3.3.2 Bank card

In recent years, with the rapid development of the finance industry and further integration of computer technology and finance, the status of non-cash payment instruments in China's payment system rises increasingly playing more and more important role in people's life. Currently bank card is the most widely used non-cash instrument by Chinese citizens (see figure 10). The issuance scale and transaction size of bank cards continues to increase annually.

Xu Luode, president of China UnionPay said, "by the end of 2007, China has accumulated the issuance of bank cards of over 1.5 billion, which according to the total population of 1.3 billion is averaged into one card per capita; during these seven years from 2001 to 2007, the average annual growth rate of the total inter-bank transactions and total amount via bank cards has respectively reached 50% and 80%; the fast-growing data shows that China has entered the period of popularizing payment and consumption via bank cards".¹³⁹

Figure 10: Distribution of payment transaction *volume* of non-cash payment instruments for 2006



Source: PBOC (2006).

Whether to go shopping, to remit or withdraw for cash and whether for booking for

¹³⁹ Source: <http://www.jrj.com>

business trip or in daily payment for water, electricity or gas, people can all enjoy the convenience in paying by bank card. In addition to the ATM and POS machines that can be seen everywhere, various other payment methods that people could never imagine in the past, such as telephone payment, online payment, mobile payment and payment by digital TV set-top box, etc. have also become to reality, and are soon popularized in a wide scope.

4.3.3.3 Mobile payment

There are two ways of mobile payment:¹⁴⁰ first, direct deduction from mobile fee which due to limits of financial policy control is only able to provide micro-payment solutions (see figure 11); second, binding credit card with bank card through mobile phone which during the payment process the amount is directly deducted from the user's bank account, and mobile operators only serve as the role of information access. The current mobile payment means mostly adopts the second method centering at "wallet phones" provided by China Mobile and "phone bank" provided by China Unicom that mainly realize the payment via SMS, WAP, voice and other means.

Figure 11: Payment with a mobile in super market



Source: Financial Computer of Huana

¹⁴⁰ Source: HEXUN net

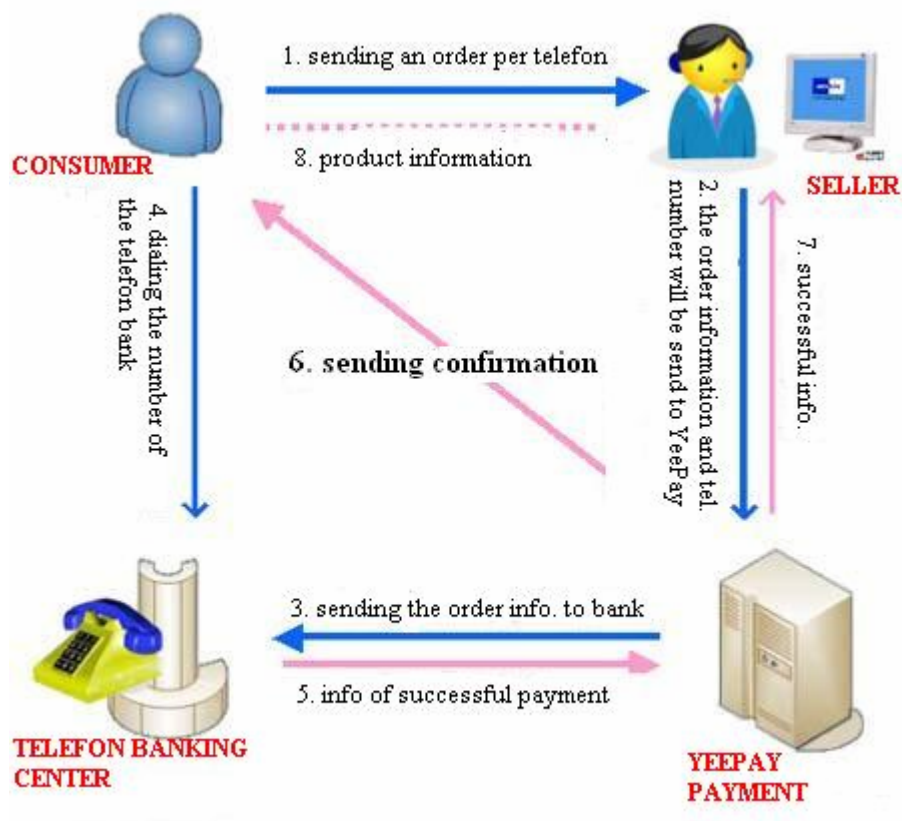
4.3.3.4 Fixed Telephone payment

Fixed Telephone payment was initially launched by YeePay in June 2005 whose application are based on phone banking developed by all major commercial banks.¹⁴¹ After a consumer sends an order by the seller with opening the function of phone payment, he or she can simply call a uniform number for customer service of corresponding phone banks to check the pending order and complete the payment according to voice prompting (the procedure is illustrated in figure 12). Phone payment integrates internet, mobile phones and fixed telephone into a single platform turning each ordinary telephone into virtual POS terminals for consumption thus to truly realize electronic payment from the restrictions of internet. The business can simply get access to pay phone business to provide consumers with integrated purchase and payment service and expand the multidimensional market space. As an effective complement of online payment, telephone payment structures a highway to the electronic payment for more traditional sectors and becomes the best weapon by which e-commerce enters traditional commercial areas.¹⁴²

¹⁴¹ Source: YAHOO news

¹⁴² Source: www.sohu.com

Figure 12: Procedure of phone payment



Source: <http://www.sohu.com/>

4.3.3.5 TV set-top box payment

Payment by digital TV set-top box is a new generation digital TV payment product facing individuals and families, co-developed by China Union Pay, Qingdao Broadcast and TV Bureau and other partners. It is the first set of digital TV payment product realized by card-swiping remote control in the country and even the world to combine the exchange network via bank card with the broadcast and TV networks allowing users at home through the TV remote control to swipe the bank cards to easily realize multiple kinds of financial business and service, such as query of bank card, payment for water, electricity, communications and television, TV shopping, trading securities, registering hospital reservations, interactive games, booking and so on.¹⁴³ It is a new type of

¹⁴³ Source: China Union Pay

electronic payment product and service channel facing individuals and families, but also a new trend of the family and individual payment in future. Figure 13 illustrates the procedure of the TV set-top box payment by TV shopping.

Figure 13: Procedure of TV set-top box payment



Source: <http://www.chinaunionpay.com>

4.3.3.6 Online payment

Online payment is an important part of retail payment system. The process of online payment is an all business interaction between customers, businesses, banks, financial institutions and business certification management departments.¹⁴⁴

The methods of online payment mainly include: bank card payment, electronic check payment (such as electronic fund transfer, electronic remittance, etc.) and electronic money payment (such as electronic cash, electronic purse, etc.), in which the relatively

¹⁴⁴ Tao (2008).

more mature type is bank card payment. Online transfer payment by bank card and settlement payment on third-party platform are currently the most important means to realize online payment for online shopping in China.

Online transfer payment by bank card:¹⁴⁵ After the customer places an order through internet to the merchant, he or she encrypts and sends the bank card number and password through internet to the bank, directly requesting the money transfer to the merchant's bank account to complete the payment. The types of bank cards include credit cards, debit cards and smart cards. The current online transfer payment by bank card in China can be divided into two ways: digital certificate and non-digital certificate. Generally if users do not apply the banks to open the online payment function protected by digital certificate, they will only use the online payment protected by non-digital certificate. The online payment without the protection of digital certificate will be restricted to some extent, for example, users can only query the account or make micro-payment, and with the online payment protected by digital certificate, users can not only enjoy all services provided by online banking, have no restrictions in payment amount and enjoy a higher security.

Settlement payment on the third-party platform:¹⁴⁶ This refers to that first both customers and merchant open accounts on the third-party payment platform, and provide their bank account information to the payment platform; after the customer orders the commodity, he or she will first transfer the money to the account of third-party payment platform which then informs the merchant of having received money, and the merchant dispatches; after the customer receives and inspects the commodity, he notifies the third-party payment platform to pay the merchant and third-party payment platform then transfers the money to the account of the merchant. In this way the bank account information of customers and business is only provided to a third party payment platform, which is very safe. The payment is completed through third-party payment platform, and if the customer does not receive goods or there is

¹⁴⁵ Wu(2007).

¹⁴⁶ Wu(2007).

some problems with the goods, he or she can inform the third party payment platform to refuse transferring money to the merchant and the merchant can dispatch goods with the assured payment, which effectively reduces the transaction risks.

According to the iResearch Statistics, the total e-Payment spending in china has reached in 2007 \$10 billions, and will come to \$20 billions in 2008.¹⁴⁷ Table 15 reviews and forecasts the Development Stages of China's E-Payment Market.

Table 15: Analysis of Development Stages of China's E-Payment Market

Period	Development/Forecast
1997-2004 Cultivation Stage	E-business is the business basis for online payment. China's e-business started in 1997 and the trading volume gradually increased from then on with the active participation of enterprises and individuals.
2005-2010 Growth Stage	During the stage, the governmental authorities shall set up and perfect relevant polices to provide policy basis and powerful guarantee for the smooth development of e-payment in the country.
after 2010 Maturation Stage	China's e-payment will be very sturdy and enter into a stable maturation stage in 2010 after early rapid development and reform. In this stage, the country will set up rigid legal and regulation systems and practice effective supervision to the industry. After the rearrangement of resources, e-payment industry will have built a stable market situation to offer perfect products and services.

Source: [http:// iresearch.com.cn](http://iresearch.com.cn) (2007).

4.3.4 Trust Products Innovation

Before 2002 there were even no trust companies in China dealing with trust business of assembled fund but putting most energy in dealing with original debt business, thus

¹⁴⁷ Source: China Payment (2008).

there was no existent mode for new business to refer to, and regulatory bureaus hadn't promulgated relevant regulatory measures, thus trust companies were completely fumbling their way to business directions.¹⁴⁸ Till July of 2002, this condition finally changed substantially; domestic trust companies made historical break-through in business innovation. As *Provisional Rules on Entrusted Funds Management of Trust and Investment Companies* was officially put into effect on July 18, 2002, the first trust product in China - "Shanghai Outer-ring Tunnel Project Fund Trust Plan" - was released to market and ardently welcomed by investors. Modeling this trust product, all trust companies one after another released various trust plans of assembled fund and made innovations and trials in the field of trust fund utilization.

In view of the warm welcome of market to trust products in 2002, all trust companies began to carry out development and management of trust products after being re-registered. In 2003, the number of new issued trust products increased greatly from that in 2002 and all trust products launched by different trust companies had made break-through innovations in multiple aspects, such as system utilization, structure devise, use pattern, investment direction, business scope, promotion, propaganda, sales, and circulation.¹⁴⁹

In 2004 the issuing number of real estate trust products exceeding that of traditional infrastructure trust products, jumped to the first place.¹⁵⁰ In addition, banking loans trust business also became a light spot. Its growing speed has surpassed that of all other types of businesses fully reflecting the special preference of trust companies and mass investors for low-risk financial products. In 2004, a minor part of trust companies released security investment trust products of which the biggest break-through lies in no more commitment on principal-guaranteed income. In this case the market risks and credit risks undertook by trust companies were to a large extent reduced and it gradually made the income level of trust companies match and symmetry with the risks they had

¹⁴⁸ Chen and Zhang (2007).

¹⁴⁹ Chen and Zhang (2007).

¹⁵⁰ Xia (2007).

to bear. Moreover, all trust companies, when devising security investment trust products, would put priority to portfolio and risk prevention.

Through exploration in 2002, preparation in 2003 and 2004, in 2005 the scale of trust products grew extraordinarily. Huge scale expansion derived constant innovations in business modes. The trust products released in 2005 emphasized on diversification and distribution of investment items to realize basic consistency of financing party's risk preference with practical status of the risk in investment item and to meet different investor's preference for risks and due to market competition with financial products of banks, the financial products of trust companies emphasized more on innovations in investment field and product design with the funding operation modes expanding to credit (loan) application, shareholding application, real estate investment, asset securitization, combined application, capital market investment and financing leasing.¹⁵¹ In 2005, among all varieties of trust products, compared from the prospect of funding operation, real estate trust appeared most conspicuous; it was almost the one with most comprehensive funding operation modes.

With the revival of security market, in 2006, trust companies began to put great efforts to develop security investment trust products, especially after promulgation of new IPO (initial public offerings) policy, because new share subscription has advantages of considerable income, simple operation and high security, all trust companies released series of products of new share subscription which became a light spot in trust product issuance for recent years. Some big events in 2006 and 2007 are listed in table 16 as follows.

¹⁵¹ Yang (2006).

Table 16: Big Events of Trust Industry in 2006 and 2007

<i>Time</i>	<i>Events</i>
June of 2006	PINGAN Trust Company took the lead and released personal unsecured loan business involving multiple personal loans such as property owner loans and education loans setting a model for other trust companies to explore other fields of businesses.
August of 2006	The first trust company delegation led by China Trustee Association went to Hong Kong to investigate innovative businesses such as QDII etc. The regulatory level also accelerated the formulation of relevant regulations on QDII pilot trust company.
September of 2006	Shenzhen International Trust & Investment Company released the first enterprise asset securitization trust innovation product in China named "SITIC: Trust Plan of Assembly Funds for project NANGUANG Holding Grand Skylight Hotel" which was a bold trial of domestic trust business innovation. This plan regarded cash flow of three-year net income of Shenzhen Grand Skylight Hotel as the subject, and the product was sold to the preferential beneficiaries with forming the preferential beneficial rights in terms of a certain discount rate. Though it was not an asset securitization product in real sense, it made a great step in transformation to asset securitization.
April of 2007	CBRC and SAFE co-promulgated <i>Tentative Measures for the Administration of the Entrusted Overseas Financial Management Business of Trust Companies</i> making it clear that trust companies could get QDII qualification upon approval.

Source: Chen and Zhang (2007) and China Security Journal (2007)

September 2007, LI Jianhua, deputy director of Non-banking department of CBRC, stated: "Till now the total asset of Chinese trust industry has reached over 600 billion RMB". ZHOU Xiaoming, director of Trust and Fund Research Institute of RENMIN University of China, thinks that at present the trust market has achieved initial scale; trust system has been known to the public and in future the market demand will be very huge. According to analysis, at present the entrusted asset scale of China is around 1.2 trillion RMB, given the compound growth rate of 25% in following years; till 2020 it

will exceed 20 trillion RMB.¹⁵²

4.4 Financial Service/Business Innovation

The innovative capacity of a bank is the life source of its development and the basis of its operation. Only to constantly develop new financial products and provide new services with adapting to the need of customers can the commercial banks ensure the longstanding competitiveness. The business of commercial banks includes liabilities, assets and intermediate business.

4.4.1 Liability Business Innovation

The liability is the source of funds to operate a bank and the basis of assets business expansion and other business activities operation. The liability business of banks is mainly expressed by various forms of deposit business. In recent years, the innovation in deposit business of commercial banks in China is mainly characterized with following aspects:¹⁵³

1. The development of new varieties of deposit business making the deposit more flexible in the premise of safety, liquidity and benefit. That is specifically expressed as: automatic banking services, the creation of deposit accounts in money market, money market deposit certificate, negotiable deposit certificate, time/demand optional deposits, notice deposits, etiquette deposits, housing deposits, individual retirement savings, education deposits and so on. In addition, the use of personal cheques, tourism cheques, as well as multi-purpose card are vigorously promoted and the self-service banking, telephone banking, internet banking and other service means are also developed vigorously.

¹⁵² Source: China Security Journal (2007).

¹⁵³ Tang (2007).

2. Focus on the convertibility of deposits and promoting deposit securitization. Deposit securitization is to change a bank certificate of deposit into security that can circulate and be traded in financial market so that it is characterized with hedge against inflation, added value, security, volatility. To commercial banks, this is the initiative liability, of which the negotiable certificate of deposits, repurchase agreements and bank drafts all fall in the content of deposit securitization.

3. Combining deposit products with characters of financial products: For example, the third generation of bank account “Rollover Account” jointly launched by ICBC with eight fund companies in 2006.¹⁵⁴ This account is characterized by excessive demanded amount to be translated into funds of monetary market, which is to link the customer's demand-deposit account with monetary fund account to meet the daily needs of payment, while agreeing on a limit to demand-deposit account so that at the end of the day the excessive funds will be automatically transferred to investment account for the purchase of fund products assigned by customers.

4.4.2 Assets Business Innovation

Assets Business Innovation refers to those business innovations that commercial banks use self-owned assets and liability to acquire proceeds. The assets business innovation of commercial banks is mainly composed of two parts: innovations in *loan business* and innovation in *investment business*. In recent years, the innovation of loan business is mainly expressed by following aspects:¹⁵⁵

1. To vigorously develop individual consumption credit and housing loans. Consumer credit has been the fastest-growing loan business since the 1970s, in which the business innovation mainly takes these three ways: (i) one-time repaid consumer credit adopting the form of demand overdraft; (ii) non-mortgage-based amortizable consumer credit,

¹⁵⁴ Yang (2007).

¹⁵⁵ Tang (2007) and Han (2005).

such as medical and educational loans; (iii) overdraft by credit card. Although housing loan is a veteran traditional business, in recent years new innovation emerges, mainly including fixed-rate mortgages and adjustable rate mortgages.

2. To promote bill discount business and buyout loans. After the PBOC further strengthens open market operations, the commercial banks take bills discounted loans as the major form of liquidity loans for industrial and commercial business. The buyout loan is provided for business mergers and acquisitions and other capital operating activities, which is used in enterprise capital restructuring to realize low-cost expansion of enterprise scale.

3. The comprehensive credit authorization and overdraft of corporate accounts launched mainly for large corporate customers. Customer can use loans and other bank credits in circle within the limit of credit and when encountering temporary shortage of funds, the enterprises with corporate accounts can quickly and automatically obtain loans within the approved credit limit.¹⁵⁶

The innovation in investment business of commercial banks rapidly developed after 1970s. The scope increasingly expanded from treasury bills, medium and long-term treasury bonds, government bonds, municipal bonds and high-grade corporate bonds gradually extending to all kinds of security business, such as zero-interest-rate bonds, floating rate bonds, junk bonds, bonds replacement, offshore bond business, the European bond market and so on, all of which have become masterpieces and important fields of investment business innovation of commercial banks.¹⁵⁷

4.4.3 Intermediate Business Innovation

The intermediate business of commercial banks refers to that commercial banks, based

¹⁵⁶ Han (2005).

¹⁵⁷ Yang (2008).

on assets and liabilities, by means of its advantages in technology, information, institutions and credibility without using or using less of its capital, deal with the receipt and payment, consulting, agent, security and other matters entrusted by customers with the identity of middlemen or agent and provide various financial services and from which charge a certain fee.¹⁵⁸ The intermediate business is derived from the assets and liability businesses, with them together constituting the “three pillars of commercial banks” and also organically integrating into a whole and promoting each other.

Intermediate business falls in a wide range and extremely rich content, thus it is currently the most active area of innovation of commercial banks. In addition to traditional settlement, exchange, agency for the receipt and payment and other operations, there are in recent years emerging innovations in intermediate business, such as asset trusteeship, wealth management, financial consulting, information consulting, financial management, risk management and other high value-added business which for now however take a relatively small share in Chinese financial market and contribute less to the revenue.¹⁵⁹ In the developed countries, the intermediate business income of commercial banks generally accounts for over 60% of the total revenue, while in China the proportion in average is less than 10%. This difference in income structure reflects the gap in intermediate business development of commercial banks in China, but is also the opportunity of development for China's commercial banks.

4.5 Restricting factors and advantages of Financial Innovation in China

After so many years' development and reform, China's financial industry has made in terms of institutions, markets, instruments and services great progresses. But because of various restricting factors in the development process of financial innovation, China's financial system is still far from being able to accomplish its central task – effectively

¹⁵⁸ Source: <http://baike.baidu.com/>

¹⁵⁹ Han (2005).

allocating the credit resources to different sectors in the economy.

4.5.1 Restricting factors because of market environment

Unreasonable financing structure: At present, the prominent character in Chinese social financing structure is the domination of bank loans in aggregate social financing amount with relatively small proportion of stock market and corporate bond market. The external financing of enterprises, either in long term or in short term, all excessively relies on bank loans.

Imbalance in internal structure of stock market and bond market:¹⁶⁰ The structural deficiency in capital market is expressed in stock market with the prominent problem of unreasonable shareholding structure of listed companies. The shareholding structure in which state-owned stock dominates not only leads to a seriously segmented pattern in stock market but also results in inequality between negotiable stock and non-negotiable stock in transaction pricing, liquidity and risk evasion that restrains the innovation in trade varieties and trade mode. The structural deficiency in capital market is expressed in bond market with the prominent phenomenon of imbalanced structure of bond market in which the government bond dominates and corporate bond accounts for little proportion. Due to various restraints in issuance of corporate bond, enterprises find it difficult to finance by means of issuing bond, not to mention the financial innovation based on corporate bond.

Unbalanced pattern in the development of bond market and stock market:¹⁶¹ The security market in China is mainly composed of bond market for credit financing transactions and stock market for shareholding financing transactions. In developed countries, bond is the most important financial instrument in capital market with far more scale, proportion and varieties than that of stock. The scale of bond financing is always several times that of stock financing, thus it provides more investment instruments to investors. The insufficiency in issuance scale of bond in China, to some extent, restrains the innovation in financial investment instruments and that of risk transfer.

¹⁶⁰ Zhou (2007).

¹⁶¹ Jiang (2007).

4.5.2 Restricting factors because of financial regulation

Although China has instituted a great number of decrees in financial supervision and regulation and gradually formed a set of relatively complete system of financial laws and rules, it is still confronted with many problems that have restraining impact to the deepening and development of financial innovation. These problems mainly include:

1. Most decrees and regulations in financial market are relatively principled and general. They have more focus on characterization and are weak in operability.
2. Corresponding financial regulations are not complete enough.¹⁶² There is a lack of specific and detailed rules for supervision, punishment and scientific and quantified management and no clear quantification standard, thus regulation and supervision bureaus could be casual in practical operation; there is no serious reward and penalty mechanism and deficiency of severe punishment measures on violation; the regulation in market access and withdrawal is not complete.
3. The inherent problems of financial legal system lead to the lack of support and encouragement from clear legal framework in financial innovative activities of financial institutions.¹⁶³ In China, financial regulation implements examination and approval mechanism on the development of financial products, in which the usual procedure is like this, after a financial institution develops a new financial product, it has to report to the authorization bureau for examination and only after approval can the financial product enter the market. Tedious procedure raises the cost of financial innovation of financial institutions. On the other hand, due to lengthy period of approval, the financial institutions might miss the best timing for selling and using their new products. Thus it restrains the supply of innovative financial products and blocks financial development.

4.5.3 Advantages in China's financial innovation

Although China has some deficiencies in financial innovation, it also has some advantages that provide wide development space to innovations in China's financial

¹⁶² Zhou (2007).

¹⁶³ Zhou (2007).

industry.

The Chinese financial industry is lying at the transformation stage - developing from central regulated planning financial operation towards regulated but relative free market-oriented financial operation. Such financial environment is the most advantageous opportunity to carry out innovations.

WTO membership requires China to line with international standards; meanwhile the access of foreign financial institutions intensifies the competition. China has no other choice but to contend with them through financial innovation. Under the pressure in such an international financial environment, the development space of China's financial innovation expands increasingly.

Financial innovation in developed countries started very early and has very valuable experiences. These advanced experiences could be reference to China. By combining them with practical status in the development of Chinese financial industry, China can avoid unnecessary twists and turns. This is so called "exerting late-development advantages".

5 Summary

China's financial sector has undergone substantial reform and rapid growth since the economic reform began in 1978. Many financial innovations had occurred during the past thirty years and achieved significant success. While the rewards are alluring, there are also many problems and threats remaining.

Rigid mentality and lack of awareness of innovation:¹⁶⁴ For a long time, because China has adopted a highly centralized planned economic system and management model, it not only stifles the originally undeveloped commodity and currency credit relations, but also causes people to have a rigid mentality of low efficiency and completely following the planned system. Though such ideological concept has changed a lot with the development of reform and opening-up there are still many people in the management positions who are accustomed to the management pattern and practices under the planned economic system, have little knowledge of financial market and modern market economy, lack of modern business management knowledge, especially are unclear about financial deepening and financial innovation.

Un-experienced financial technologies (Software, Know-how, IT-Support etc.): Modern market economy can not be separated from market information, and market economy in itself can be said the information economy. Financial information is essential to financial innovation. Since the reform and opening-up started, China's high-tech and IT industry has made great progress, but compared with the United States, Japan and other developed countries, China still has a significant gap in this regard.

Too much government intervention and lack of initiative innovation: The promulgation of almost every major measure on financial innovation is the product of government activities. The government determines the content, direction, progress and steps of

¹⁶⁴ Jiang (2003).

financial innovation and master the whole process of financial innovation. Both of banking system reform and innovations in money/capital markets are all in this case. And due to excessive government intervention in China, many innovative financial instruments do not meet the requirements of market economy and are characterized with administrative features.¹⁶⁵ Additionally, although microscopic financial subjects have launched by themselves a number of innovative measures, they don't account for an important position in the process of financial innovation. Moreover, these measures have to be approved and recognized by the government before to be implemented, which means the government is responsible for the control and issuance of "Innovation Permission License" to microscopic financial subjects, thus the initiative innovations are stifled.

The development process of financial innovation is unbalanced: Many major measures of financial innovation are often appointed by the government to conduct in some coastal areas and economically developed cities as pilots and then are promoted to the whole country. Such a gradient pattern of promoting financial innovation helps to reduce risks and realizes an orderly manner in innovation, but also causes great development-level disparity of different areas.

The deep-seated financial innovations that touch on the major contradictions in traditional system and operations are few:¹⁶⁶ In order that the innovations do not conflict with the existing policies, economic order and social interest structure, the central government has focused the innovation more on the expansion of outer extension, such as setting up new financial institutions, introducing new financial instruments, opening up new markets etc. Many innovative measures are improvement innovation not a creation. In front of some problems that can be seen very clearly and must be modified, as they are difficult to deal with and may form the strike to the framework of the existing system, the state also hesitates and do not want to or dare not take swift innovative actions. In such circumstances, although financial innovation has

¹⁶⁵ Yuan and Li (2004).

¹⁶⁶ Yuan and Li (2004).

not caused economic and financial volatility or reduced social friction, it has missed a lot of favorable innovative timings, thus the deep-seated contradictions within the traditional system and operations can not be resolved for a long-term; the more they accumulate, the more they influence the stable operation and healthy development of the financial industry and lead to gradual decrease in revenue from innovations.

Additionally, troubles like weak foundation of social credit, imperfect financial management system, rather underdeveloped financial operations in the Chinese rural areas and etc might also cause many pitfalls in the future development of China's financial innovation. Some suggestions from the author for future financial innovation are listed as follows.

Greatly developing non-bank financial institutions: In China the proportion of non-bank financial institutions is too small, even said to be abnormally extremely small. The author had once taken an internship in a personal finance management company in Vienna knowing that, just taken the term insurance alone for example, there are more than 250 insurance companies for 8 million people in Austria, and in a huge country of 1.3 billion people, there were totally only over 100 domestic and foreign insurance companies around 2007. Non-bank financial institutions are more flexible than banks. They are able to accurately and directly access to the final consumers and from the communication with them, they can obtain their first-hand demand and supply information. Only by understanding consumers can help make the accurate market positioning. It is an imminent urgent task for China to vigorously develop non-bank financial institutions and only if there are prosperous non-bank financial institutions, the genuine marketization and stable development can be achieved.

Motivating fair competition between state-owned commercial banks and other financial institutions: China's state-owned commercial banks are the leading characters of China's financial industry and they have the absolute advantages of all aspects. But just because of these "absolute advantages", they become "greenhouse flowers" and are lack of a strong sense of competition, thus lack of competitiveness. To withdraw the "doting

protection” to state-owned banks and stimulate them to have healthy competition with other commercial banks can greatly enhance the competitiveness of state-owned commercial bank, so that this great leader will lead the whole financial industry of China to leap upward.

Establishing reliable credit culture: Healthy and reliable credit system will greatly reduce transaction costs and improve the efficiency of financial operations, and thus lay a solid foundation for the emergence of future financial innovations with better quality. Concrete measures are for example to promote credit valuation mechanism targeting at individuals, establish a sound credit rating system and complete the mechanism of punishment etc.

Refreshing mentalities and broadly, fleetly adopting the current international standards. China’s economy has been booming at present with the substantial leap compared with the situation thirty years ago, but considering the actual data, China's per capita income is still one thirtieth of that of Japan and the United States. So China is still a “developing” country. Somebody has said: "To change poverty is ultimately to change the thinking, change the values and change ways of thinking." Therefore, if Chinese people want to improve the income level, people must liberate mentality, update value conceptions, dare to take challenges and align with international high standards.

In the 21st century the financial industry globalizes increasingly, which has formed a great challenge to China’s financial industry. Actively carrying out financial innovation, improving market competitiveness and increasing the overall operating abilities have become the key to that China’s financial industry can adapt to the changes in the international financial environment to survive and develop. Only by constantly conducting financial innovation can China improve the ability of dealing with the challenges and resisting risks, and keep China’s long-term growth to be sustainable.

Abstract (English)

The purpose of this paper is to review the historical path of financial innovation in China in the past three decades (1978 – 2008), to describe its recent development, to overview its features and to recognize its problems; because a retrospection of the previous innovations in Chinese financial sector may make the status quo more apparent and could possibly wake more ideas for developing further innovations. Altogether, there are five chapters of this paper. The first chapter explains what actually financial innovation is and mentions that since 1978 China's economy has been significantly modernized and the Chinese financial industry entered a brand-new era. The second chapter briefly introduces several popular financial innovation theories that explain the motivation of financial innovation. The third chapter is a brief introduction to China's current financial system. The fourth chapter is the core of this paper; it reviews financial innovations in China from four aspects: financial institutional innovation, financial market innovation financial instrument/product innovation and financial service/business innovation; the last part of chapter four discusses several restricting factors that hinder the development of financial innovation in China but also lists some advantages in China's special case. At last is a summary in chapter five.

Abstract (Deutsch)

Der Zweck dieser Diplomarbeit ist, den historischen Pfad der Finanzinnovation in China in den vergangenen drei Jahrzehnten (1978 - 2008) zu wiederholen, ihre jüngsten Entwicklungen zu beschreiben, ihre Eigenschaften zu überblicken und ihre Probleme zu erkennen; weil ein Rückblick über den vorigen Innovationen im Chinesischen Finanzsektor kann den Status Quo noch offensichtlicher bilden und könnte möglicherweise mehr Ideen für Entwicklung von weiteren Innovationen aufwecken. Insgesamt gibt es fünf Kapiteln in dieser Arbeit. Das erste Kapitel erklärt was eigentlich Finanzinnovation ist und erwähnt, seit 1978 Chinas Wirtschaft ist erheblich modernisiert worden und die Chinesische Finanzindustrie führt in eine nagelneue Ära ein. Das zweite Kapitel stellt kurz einige populäre Finanzinnovationstheorien vor, die Motivation der Finanzinnovation erklären. Das dritte Kapitel ist eine kurze Einführung in das Chinesische gegenwärtige Finanzsystem. Das vierte Kapitel ist der Kern dieser Arbeit; es blickt die finanziellen Innovationen in China aus vier Aspekte zurück: Finanzinstitutionsinnovation, Finanzmarkt Innovation, Finanzinstrument/Product Innovation und Finanzdienstleistung/Business Innovation; der letzte Teil von Kapitel vier bespricht mehrere Einschränkungsfaktoren, daß die Entwicklung von Finanzinnovation in China behindern, aber listet auch einige Vorteile in Chinas Sonderfall. Am Ende dieser Arbeit ist eine Zusammenfassung in Kapitel fünf.

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