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Master's Thesis

海峽兩岸銀行業績效之比較研究

The Comparison of Banking Performance between China and Taiwan

學生：李采儒

Student: Lee, Tsai-Ju

指導教授：黃仁德

Advisor: Hwang, Jen-Te

中華民國九十九年七月

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Abstract

After thirty years of economic and financial reforms, banking system in China has transformed from rigidly controlled to marketization nowadays with a variety of banking institutions coexist in the financial market. Among different kinds of banking institutions, large state-owned commercial banks dominate over half of total banking assets, their huge scale allow themselves to have leading positions and monopoly power in China's banking industry.

Under WTO regulations China must fully open markets for foreign banks' investment started on December 11, 2006, before that most large state-owned commercial banks have restructured into joint-stock companies and went public sequentially in order to enhance competition for fierce challenges brought from foreign banks. Attributing to China government's effort and support, the overall domestic banking performance has made a lot of progress in the past few years.

By comparing banking performance with USA and Taiwan in four aspects of profitability, assets quality, liquidity risk management and capital adequacy ability, the study results demonstrate that general performance of banking sector and large state-owned commercial banks in China have improved greatly and even better than advanced countries in some respects.

The signing of ECFA between cross-strait governments on June 29, 2010 starts a new page of Taiwan banks' development in China, the study suggests that in the initial stage banks from Taiwan can explore markets of corporate banking by using their expertise in loans for small and medium enterprises which are always neglected by banks in China, and by providing services to Taiwan business people in China to explore markets of consumer banking, and then gradually expand market share.

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CHAPTER 1
Introduction

During the third plenum of the eleventh central committee held in Beijing in December of 1978, an important decision was made to turn the focus of the People's Republic of China (PROC) from closing to opening up and then initiated a new stage of China's economy. Since Deng Xiao-ping implemented economic reform policies in 1979, planned economy was gradually replaced by market economy, and China has maintained years of double digits economic growth rate. Amazing economic performance and rising international status in recent years has made China become more and more important to the world.

When a country is aiming to develop trade and economy, it is inevitable to increase interaction with global society and stay in line with international norms and regulations. After more than fifteen years of negotiation, China finally becomes a member of World Trade Organization (WTO) since December 11, 2001.[1] Under China's WTO accession agreement, China must step by step open domestic markets for foreign financial institutions to provide banking and other financial services according to the schedule of specific commitments.

Upon China's accession to WTO, geographic restrictions or client limitations for foreign financial institutions to do foreign currency business were no longer exist. Nevertheless, what government of PROC and banks in China worried about the most was the schedule of specific commitments to market access for foreign financial institutions to do local currency business (Renminbi business).

[1] China has started negotiations for accession since July 1986 during the GATT (the predecessor of WTO) era.

According to the schedule of specific commitments under WTO regulations, geographic restrictions of Renminbi (RMB) business in China were gradually cancelled, and as of December 11, 2006 all geographic restrictions were already removed. As for client limitations, began from December 11, 2003(two years after accession) foreign financial institutions can provide services of RMB business to Chinese enterprises, and started from December 11, 2006 (five years after accession) China must open markets and releases all the restrictions on foreign financial institutions to provide services to Chinese citizens.

Before 1979 China performed planned economy, banking system was very rigid and all financial institutions were centrally-controlled by the government, each of them was either dissolved or merged into the People's Bank of China (PBC). Attributing to economic reform policies, a series of financial reconstructions and reforms occurred since 1984; however, comparing to advanced countries, China's banking system was still far away behind. From the end of 2006, foreign banks have fully operated business in China nearly four years without restrictions on geography and clients, in order to face challenges and competitions brought from foreign banks' entry, banking industry in China got no choices but had to change accordingly.

Due to the characteristics of China's politics and economy, if we want to study banking sector in China, the best way is to realize its history; consequently, the study gives a comprehensive review of financial reform process in China after 1979 to understand development trends of the banking industry. Besides, the study compares different sorts of financial indicators about profitability evaluation, quality of assets and liquidity management and compliance of international norms of large commercial banks in China, the United States and Taiwan to find out what are the differences of banking performance between each other.

1.1 Motivation

Due to the constraint of complicated historical and political factors, Taiwan and China have always been separated in the field of financial interaction. After WTO permitted China's accession in the end of 2001, our government also lifted bans on domestic banks to set up representative offices in China, and at that time there were seven Taiwanese banks establishing representative offices as front-line units to observe local situations, but none of them can be upgraded as a branch to provide banking services.[2]

From 1991 to 2009 the sum of total cases and amount of Taiwan's investment in China has reached 37,771 and USD 82.7 billion, respectively. With growing economic dependence on China, China has become our largest export region and second largest source of import.[3]

Currently the most important mission for Taiwan government is to improve cross-strait relationship, during the second ''Chiang-Chen Talks'' in November of 2008, the two sides had reached a consensus, if it is inevitable to go a step further for cross-strait financial exchanges, the signing of memorandum of understanding (MOU) of financial supervision is necessary.[4] After a year of negotiation, Taiwan and China finally signed the MOU on November 16, 2009 and that also meant Taiwan banks' landing in China is in near future.

In Taiwan despite〈Taiwan Financial Holding Act〉 has implemented in 2001, there were 15 of 37 Taiwan local banks already merged into financial holding companies, the number of financial institutions is still too many in contrast with the

[2] Seven Taiwanese banks are Taiwan Cooperative Bank, First Commercial Bank, Hua Nan Commercial Bank, Land Bank of Taiwan, Chang Hwa Commercial Bank, China Trust Commercial Bank, and Cathay United Bank.
[3] Taiwan's trade dependence ratio on China top 40% in 2009, Bureau of Foreign Trade.
[4] Chiang Pin-kung, chairman of the Straits Exchange Foundation (SEF), representative of Taiwan. Chen Yun-lin, president of the Association for Relations Across the Taiwan Strait (ARATS), representative of China.

small scale of Taiwan financial market. As at March of 2010, there are 37 domestic banks with 3,285 branches in Taiwan, if we calculate other sorts of financial institutions, the total number of banking branches has reached 5,850. In the mean time average ROA and ROE of domestic Taiwan banks are 0.13% and 2.1%, respectively; banking profit has been narrowed down due to drastic competition.[5]

Overbanking problem in Taiwan is very serious and the issue has been criticized for a long time, I affirm that this situation could be alleviated in the future once cross-strait investment is mutually opened up.

China has always been considered as a market with great potential that commercial banks in Taiwan are eager to explore. There is an old idiom: ‘‘Know the enemy and know yourself, and then you can fight a hundred battles without danger of defeat.’’ I sincerely hope the study gives Taiwan banks which plan to invest in China not only a general picture of local financial situation but also useful and constructive suggestions for coming challenges and competitions.

1.2 Purposes

The study is aiming to examine and find out answers of following questions:

1. How do commercial banks in China make profit? Every commercial bank has its own background and expertise; the study analyzes different kinds of financial indicators relevant to profitability performance of representative commercial banks in China under the consideration of current economic situation and government policies to find out why they can make profits even though global financial tsunami has devastated the world economy.

[5] See Financial Supervisory Commission, Statistics, http://www.fsc.gov.tw/Layout/main_ch/BS_BSList.aspx?path=2566&Language=1.

2. How do commercial banks in China maintain assets quality? Ratio of Non-Performing Loans (NPL ratio) reveals a bank's assets quality, and coverage ratio shows a bank's capability to undertake default risk of bad loans, both ratios are very important indicators to examine assets quality of a bank. Therefore, the study makes an observation of changes of those two indicators of representative commercial banks in China and governmental policies from year 2006 to 2009 to figure out how commercial banks in China maintain assets quality.

3. How do commercial banks in China manage liquidity risk? Many large and international banks in USA went bankrupt due to global financial turmoil which occurred in late 2008 and the main reason was because those banks failed to manage liquidity. From this aspect, management of liquidity is very important for banking operation, and relevant indicators popularly used to evaluate liquidity such as liquidity ratio and loan-to-deposit ratio, etc. will be used to examine effect of liquidity management of commercial banks in China.

4. How do commercial banks in China obey Basel II? After China's WTO accession, China must gradually adopt international rules to maintain qualification as a member. Nowadays the most important international organization to monitor banking operation in the world is Bank for International Settlement (BIS). BIS proposed ''The New Capital Accord'' (Basel II) in June of 2004, the study also includes the examination of how commercial banks in China follow Basel II regulations.

5. What are the differences of banking performance between China and USA? USA has always maintained a leading position in finance and in economy of the world. By comparing financial indicators relevant to profitability, assets quality, liquidity management, and capital adequacy ability between representative commercial banks in China and in USA, the study aims to find out the differences of banking performance

between each other.

6. What are the differences of banking performance between China and Taiwan? By comparing financial indicators relevant to profitability, assets quality, liquidity management, and capital adequacy ability between representative commercial banks in China and in Taiwan, the study aims to find out the differences of banking performance between each other.

7. What are the investment opportunities for Taiwan banks' landing in China? By studying banking industry in China can help us better understand what kind of business in China might be niche market that suitable for banks from Taiwan to explore and invest. Moreover, by studying relevant regulations on cross-strait financial activities, the study dedicates to conclude the best approach for Taiwan banks' development in China.

1.3 Research Method and Limitation

Reference materials about comprehensive study of banking performance comparison between China and advanced countries are relatively limited; as a result the study collects abundant financial indicators and figures of commercial banks and uses analyses and comparison of selective data to conclude the study results, hence quantitative methodology is adopted in the study.

As for data collection, because China Banking Regulatory Commission was set up in 2003, the history of financial regulatory institution in China is very short, historical statistics of banking sector are not sufficient for the study; thus, data collection also contains annual reports of state-owned commercial banks and other study subjects.

Except for Agricultural Bank of China, other three state-owned commercial banks in China have been listed by the end of 2007, and their financial statements are made in

two different versions, one is for Hong Kong Stock Exchange (H share) complying with the international accounting standard—IFRS, and the other is for Shanghai Stock Exchange (A share) complying with local Chinese accounting standard—China GAAP. In order to be in line with international norms, the study basically chooses H share annual reports as sources of financial data but if the data is not available in H share annual reports, and then A shares annual reports will be referred as substitute.

Besides collecting individual bank's annual reports, the study is developed highly rely on data provided by the world banking information source—Bankscope. Bankscope is a database with up to 16 years of detailed financial information including ratings, rating reports, news, ownership plus financial and credit analysis software for over 23,000 private and public banks in the world, which is commonly adopted for analyses of banking performance. Bankscope is maintained under the cooperation between worldwide-known credit rating agency-Fitch Ratings and BUREAU VAN DIJK, they updates relevant banking information regularly.

Financial information in Bankscope are majorly provided by Fitch Ratings; however, not only Fitch Ratings but also other credit rating agencies, such as Standard & Poor's, Moody's, Capital Intelligence, and the Economist Intelligence Unit supply additional information in this database.

According to the classification of Bankscope, if the bank is a subsidiary of a financial holding company, both of them have separate and independent financial reports and that will avoid users from mixing up each other and also allow the study obtains accurate data of research banks. In order to comply with local financial situation, different countries might have different accounting standard and regulations on financial statements, but in Bankscope each ratio is calculated under the same formula and which allows research subjects to be compared base on the same criterion,

in this regard, indicators with respect to evaluating profitability, assets quality, liquidity, and capital adequacy will be adopted from Bankscope.

From the end of 2006 financial markets in China were fully opened for foreign banks' entrance and most large state-owned commercial banks of China have been listed on Hong Kong Stock Exchange, since then financial statements released from China banking sector have become more transparent and reliable. Besides, the global financial tsunami began to batter world economy and finance in the end of year 2008, such difficult situation could better reflect true banking performance in different countries. As a result, comparisons of banking performance among representative banks in China, USA, and Taiwan will focus on the period from 2007 to 2009.

With reference to limitation of the study, when I cross-check the same data from different sources, e.g. statistic released by China Banking Regulatory Commission and annual reports of large state-owned commercial banks, sometimes the data does not exactly match. In consideration of the credibility of supervisory institution, the study adopts official data rather than annual reports of individual bank when analyzing the overall situation of China's banking industry.

Additionally, during the research Agricultural Bank of China was in the process of initial public offering, even thought the bank postponed announcement of year 2009 annual report until July 12, 2010, the study still adopted the latest financial data in order to precisely reflect current situation of banking industry in China.

CHAPTER 2
Banking Performance in China

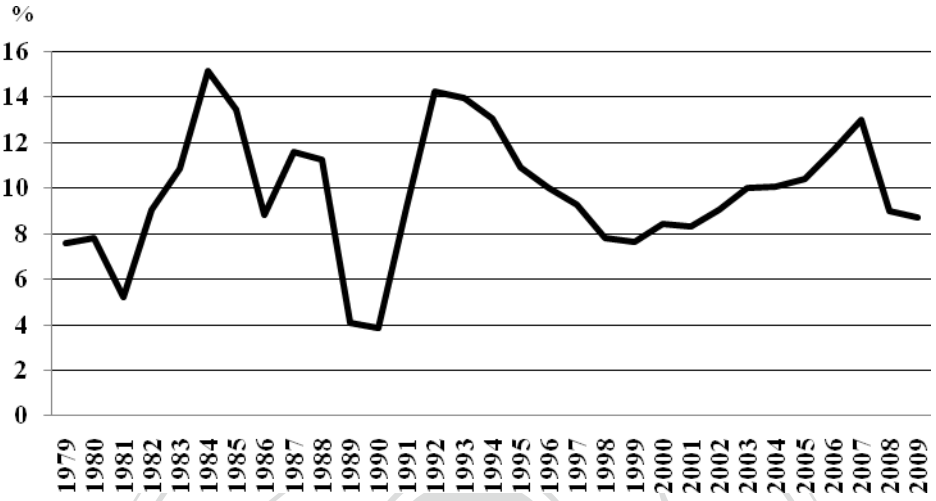
Before 1979 China implemented central-planned economy system, national finance was dominated by the government, and the expense of economic development financed by government was RMB 76.16 billion, meanwhile, the balance of all banks' loans was RMB 19.2 billion, the former was four times larger than the latter; however, in 1995 the expense of economic development from government finance was RMB 170.4 billion, in the mean time, the balance of all banks' loans was RMB 973.59 billion, the latter was almost six times larger than the former. This shows that with deepened economic reforms banking industry in China plays a more and more important role in supporting the country's economy (Huang, 1998).

To achieve profound understanding of China's banking sector, in this chapter the study not only gives a historical review of financial reforms and development process of China's banking system, but also gives the whole picture of current banking situation in China. Additionally, by examining China's state-owned commercial banks in four different dimensions, including profitability, assets quality, liquidity management and compliance with international regulations-Basel II to find out how well their performances are.

2.1 Development Process of China's Baking System

Ever since 1979 the government of China has launched a series of financial reforms to accommodate the path of economic reforms; comprehensive reforms in

economy and finance have made China maintained years of double digits economic growth rate (Figure 2-1).



Source: National Bureau of Statistics of China (2009), *China Statistical Yearbook*, http://www.stats.gov.cn/tjsj/ndsj/2009/indexeh.htm.

Figure 2-1: Economic Growth Rate of China—1979~2009

When we look back to history of banking development in China, 1979 was a watershed year of initiating financial reforms, and development process of banking system in China can be divided into four stages, each of them will be discussed detailed as below.

Stage I: Unified Financial System—Before 1979

Before 1979 China performed planned economy, resources were dominated and distributed by the government. In this stage, all banks and financial institutions were dissolved or merged into PBC, at this time PBC was the only financial intermediary in China, and other financial institutions were functionless or became subsidiaries of Ministry of Finance (MOF). PBC was the country's center of credit, center of settlement and center of cash teller. This stage was commonly known as ''Unified Financial System'' in China's financial development history.

Stage II: A Transition Period of The People's Bank of China—1979~1994

This stage is not only the development process of how PBC adjusted its functions into a real central bank of China but also how national specialized banks developed into state-owned commercial banks (SOCBs).

From 1979 major banks including Agricultural Bank of China (ABC), Bank of China (BOC), and the People's Construction Bank of China (renamed as China Construction Bank (CCB) in 1996) began to resume business in coordination with reform policies. Banking sector was diversified to meet the need of economic development and unified financial system was disintegrated gradually.

In January of 1984 Industrial and Commercial Bank of China (ICBC) was established, PBC transferred its city financial business to the newly-established ICBC, and withdrew from general commercial banking business. From then on PBC began to reveal its specific functions as the central bank of China.

In April of 1987, Bank of Communications (BOCOM) was re-established, and other regional joint-stock commercial banks, such as China Merchants Bank (CMB) and CITIC Industrial Bank (renamed as China CITIC Bank in July 2005); national joint-stock commercial banks, such as China Everbright Bank and Huaxia Bank; urban credit cooperatives and financial companies have been established, besides, foreign banks also came back to China one after another.

In this stage PBC still maintained part of policy and commercial banking business, it was a transitional period of banking system with PBC as the central bank, national specialized banks (predecessor of SOCBs) as the main body and other financial institutions co-existed and coordinated with each other.

After the third plenum of the fourteenth central committee, the State Council made an important decision in the end of 1993 that was ‘‘to develop PBC into a real

central bank of China; to develop national specialized banks into real state-owned commercial banks''. In March of 1994, three policy banks including China Development Bank, The Export-Import Bank of China, Agricultural Development Bank of China were established to take over policy financing roles from national specialized banks. Four national specialized banks were transformed into SOCBs pursuant to the government's requirement of commercialization and to carry out complete commercial banking services.

Since the end of 1993 PBC was fully separated from commercial banking business and started to concentrate on financial supervision and macroeconomic control, and to exercise functions independently; the status of PBC as a central bank of China was assured.

Stage III: Establishment of Regulations and Financial Supervision—1995~2003

China has always been preparing for challenges and impacts that might come after WTO accession, except for building laws and regulations into financial system, policies of eliminating or consolidating financial institutions with weak composition and poor performance were adopted to increase competitiveness of banking industry.

〈Law of the People's Republic of China on the People's Bank of China〉 and 〈Law of the People's Republic of China on Commercial Banks〉 were released in 1995 which meant all banking operations in China have laws and regulations to follow. In September of 1997 〈Measures for Administration on Urban Credit Cooperatives〉 was released, most urban credit cooperatives were regionally merged and some of them even became city commercial banks.

In addition to uniting urban credit cooperatives, in 1998 the MOF issued RMB 270 billion special national bonds to inject capital into four large SOCBs,[6] and four

[6] Four large SOCBs are ICBC, CCB, BOC and ABC.

asset management corporations (AMCs) were set up according to 〈Regulations of Financial Asset Management Corporations〉 passed by State Council in April 1999, the main purpose of AMCs' establishment was to deal with NPL problems of SOCBs.

During this period, PBC played multiple roles as the central bank and also the banking supervisor, PBC did not focus on performing monetary policy specifically until China Banking Regulatory Commission (CBRC) took over the function of banking supervision from it. CBRC was established in 2003 to conduct regulations and supervision over all banking institutions and their business activities in China.

In this stage, China's financial system was getting back on track of laws and regulations binding, and regulatory system was gradually in line with international standards.

Stage IV: Accelerating Reforms of State-owned Commercial Banks—After 2004

According to the schedule of specific commitments under WTO regulations (Table 2-1), geographic restrictions on foreign banks were cancelled year after year, China must open financial markets in Shanghai, Shenzhen, Tianjin and Dalian upon accession; Guangzhou, Zhuhai, Qingdao, Nanjing and Wuhan within one year after accession; Jinan, Fuzhou, Chengdu and Chongqing within two years after accession; Kunming, Beijing and Xiamen within three years after accession; Shantou, Ningbo, Shenyang and Xi'an within four years after accession, five years afterward all geographic restrictions were removed.

As for client limitations, foreign banks can provide services of RMB business to Chinese enterprises after two years of accession, from then on financial markets in China have become more and more competitive than before, and after five years of accession that was December 11, 2006, foreign banks can provide services of RMB business to all Chinese citizens.

Table 2-1: China's WTO Commitments—Schedule of Market Access for Foreign Banks to do RMB Business

Schedule	Upon Accession	1 year	2years	3 years	4 years	5 years
Date (Year/Month/Day)	2001/12/11	2002/12/11	2003/12/11	2004/12/11	2005/12/11	2006/12/11
Area	Shanghai Shenzhen Tianjin Dalian	Guangzhou Zhuhai Qingdao Nanjing Wuhan	Jinan Fuzhou Chengdu Chongqing	Kunming Beijing Xiamen	Shantou Ningbo Shenyang Xi'an	All geographic restrictions will be removed
Client			Chinese Enterprises			Chinese Citizens

Source: World Trade Organization, Member Information, http://www.wto.org/english/thewto_e/countries_e/china_e.htm.

We can see from Table 2-2, foreign banks never stop expanding financial markets in China, in 2004 there were only 188 operational banking entities of foreign banks in China,[7] and assets of foreign bank were RMB 582 billion accounting for 1.84% market share of total banking assets in China, but two years later, in 2006 limitations of geography and customers on foreign banks to provide services were no longer existed, hence the number of banking entities increased to 224; assets grew 59.35% to RMB 928 billion, and the market share increased to 2.11% as well.

From 2004 to 2009 the number of foreign banks' operational banking entities increased from 188 to 338, assets grew more than twice from RMB 582 billion to RMB 1,349 billion. And the percentage of market share accounted for total assets in China banking industry rose steadily year by year, but in 2009 the figure fell to 1.71% compared to 2.16% in the previous year, the reason was because the growth rate of total banking assets in China was much higher than that of foreign banks.

[7] Operational banking entities include head offices of locally incorporated banks, branches and subsidiaries of locally incorporated banks and foreign bank branches.

Table 2-2: Foreign Banks in China—2004~2009

Item \ Year	2004	2005	2006	2007	2008	2009
Operational Banking Entities (Number)	188	207	224	274	311	338
Assets (RMB 100 million)	5,823	7,155	9,279	12,525	13,448	13,492
Market Share (%)	1.84	1.91	2.11	2.38	2.16	1.71

Source: China Banking Regulatory Commission (2009), *Annual Report*.

Table 2-3 shows that in 2004 total assets and liabilities of banking institutions in China were RMB 31,599 billion and RMB 30,325 billion, respectively, after five year elapsed, total assets increased to RMB 78,769 billion and total liabilities increased to RMB 74,335 billion, both of them maintained double digits growth rate every year in the period from 2004 to 2009.

Table 2-3: Total Assets and Liabilities of Banking Institutions in China—2004~2009

Item \ Year	2004	2005	2006	2007	2008	2009
Assets (RMB 100million)	315,990	374,697	439,500	525,983	623,876	787,691
Growth rate (%)	14.25	18.58	17.29	19.68	18.61	26.26
Liabilities (RMB 100 million)	303,253	358,070	417,106	495,675	586,015	743,349
Growth rate (%)	14.03	18.08	16.49	18.84	18.23	26.85

Source: China Banking Regulatory Commission (2009), *Annual Report*, http://www.cbrc.gov.cn/chinese/home/jsp/docView.jsp?docID=20100615A314C942DEE7DD34FF395FFCEB671E00.

Attributing to markets opening up and thirty years of financial reforms, the scale of banking industry in China has grown very huge. For the purpose of accelerating reforms and increase competitiveness of SOCBs, in 2004 the government of China used huge amount of foreign exchange reserves to inject funds into BOC, CCB and ICBC in order to conduct comprehensive financial restructuring and corporate governance reforms, the final target was to transform them into limited joint-stock companies.

Meanwhile, the newly amended 〈Law of the People's Republic of China on Commercial Banks〉 allowed commercial banks to provide services of not only banking business but also insurance agency, security cooperation, and investment banking sector. Multiple services have shown a pattern of financial holding company; however, till now China does not officially approved establishment of financial holding company.

SOCBs (except for ABC) went public one after another since 2006, by internationalizing and diversifying their business to respond to competition pressures brought from foreign banks. As for ABC, it was transformed into joint-stock company in January of 2009 and has prepared to go public. In 2010 the initial public offering of RMB-denominated ordinary shares (A Shares) at Shanghai Stock Exchange and H share at Hong Kong Stock Exchange of ABC has been approved by the China Securities Regulatory Commission (CSRC).

With fully support and protection from the government, SOCBs have a monopoly over the banking industry in China and the degree of competitiveness and internationalization of domestic commercial banks in China also improved a lot. Above discussed four stages of China's banking system evolution are summarized into Table 2-4.

Table 2-4: The Evolution of China's Baking System

Stage	Year	Policies & Events	Features
I	Before 1979	Under planned economy, all banks and financial institutions were dissolved or merged into PBC. During this period PBC was the only financial intermediary in China.	Financial system was unified by PBC.
II	1979 | 1983	Major banks resumed business since 1979; banking sector was diversified to meet the need of economic development.	Unified financial system was disintegrated gradually.
	1984	PBC transferred its urban financial businesses to the newly established ICBC, and withdrew from general commercial banking businesses.	PBC revealed its function as the central bank of China.
	1987	BOCOM re-established in April, and other regional joint-stock commercial banks, national joint-stock commercial banks, urban credit cooperatives and financial companies have been established. Foreign banks also came back to China one after another.	A transitional period of banking system with PBC as the central bank, national specialized banks as the main body and other financial institutions co-exist.
	1993	State Council made an important decision that was ‘‘to turn PBC as a real central bank of China; to turn national specialized banks into real commercial banks’’.	Status of PBC as a central bank of China was assured.
	1994	National specialized banks were developed into SOCBs in accordance with government's requirement and three policy banks were established to take over policy-related business from SOCBs.	

Table 2-4: The Evolution of China's Baking System (Continued)

Stage	Year	Policies & Events	Features
III	1995	〈Law of the People's Republic of China on the People's Bank of China〉 and 〈Law of the People's Republic of China on Commercial Banks〉 were released in March.	China's financial system was back on track of laws and regulations binding, and the regulatory system was established to meet international standards.
	1997	In September 〈Measures for Administration on Urban Credit Cooperatives〉 was released, and most urban credit cooperatives were merged or transformed into city commercial banks.	
	1998	MOF issued 270 billion special national bonds to supplement capital of SOCBs.	
	1999	In April four AMCs were set up to deal with NPL problems of SOCBs.	
	2003	CBRC was established and took over functions of banking supervision from PBC.	
IV	2004	Government of PROC used huge amount of foreign exchange reserves to inject funds into the BOC, CCB and ICBC to conduct a comprehensive financial restructuring and corporate governance reforms. The goal was to transform SOCBs into limited joint-stock companies.	Accelerating reforms of SOCBs in order to increase competitiveness.
	2006	SOCBs (except ABC) went public one after another. In December a series of policies were implemented to speed up developing rural cooperatives into rural commercial banks.	
	2009	In January ABC was transformed into joint-stock company and has prepared to go public.	

Source: Chu (2010); Bankscope, http://bankscope.bvdep.com/ip.

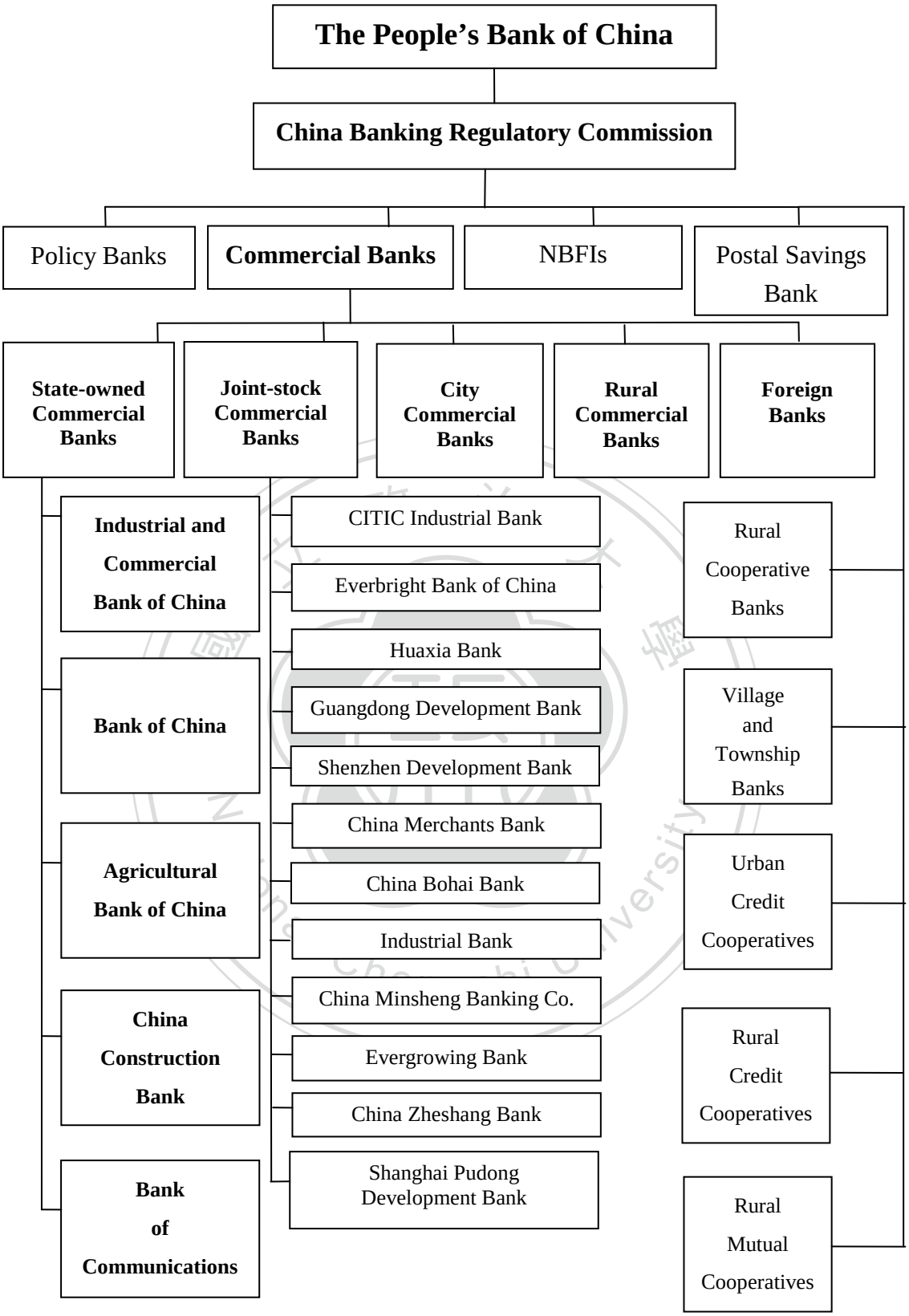
2.2 Overview of Banking Industry in China

After thirty years of financial reforms, currently in the banking system of China the PBC takes charge of monetary policies as the central bank and CBRC plays the role regulating and supervising business operations of banking institutions.

The objectives of CBRC are promoting safety and soundness of banking industry, enhancing the industry's competitiveness, and maintaining public confidence in the banking sector; the supervisory missions of CBRC are protecting interests of depositors and consumers, maintaining market confidence through prudential supervision, increasing public knowledge about modern financial products, services and related risks through education and information disclosure, and reducing banking-related crimes to maintain financial stability.

China's banking system went through three decades of development; the structure has been built completely and also became more and more diversified. In the end of 2009, China's banking system consists of 3 policy banks, 5 state-owned commercial banks (SOCBs), including ICBC, CCB, BOC, ABC and BOCOM, 12 joint-stock commercial banks (JSCBs), 143 city commercial banks, 43 rural commercial banks, 37 foreign banks, 196 rural cooperative banks, 148 village and township banks, 11 urban credit cooperatives, 3,056 rural credit cooperatives, 16 rural mutual cooperatives, one postal savings bank of China and other non-bank financial institutions (NBFIs) which include 8 lending companies, 58 trust companies, 12 financial leasing companies, and 10 auto finance companies, etc (Figure 2-2).

According to CBRC's definition of commercial banks, commercial banks in China shall include SOCBs, JSCBs, city commercial banks, rural commercial banks, and foreign banks.



Source: China Banking Regulatory Commission (2009), *Annual Report*, http://www.cbrc.gov.cn/chinese/home/jsp/docView.jsp?docID=20100615A314C942DEE7DD34FF395FFCEB671E00; Chu (2010).

Figure 2-2: The Structure of Banking System in China—2009

Table 2-5 shows the number of legal entities and staff of different sorts of commercial banks in China, as of year 2009 the total number of legal entities in banking industry was 3,857 and the total number of employees was around 2.84 million. Except for other banking institutions which has 0.86 million workers, commercials banks account for 69.63% of total banking staff, but with 1.5 million workers merely five SOCBs hire over half banking staff in China.

Because SOCBs are developed and transformed from national specialized banks, with government's fully support and protection, they are very huge either in scale or in assets and that is also the reason why they become so important to China's economic development.

Table 2-5: Legal Entities and Staff of Commercial Banks in China—2009

Item \ Bank	SOCBs	JSCBs	City Commercial Banks	Rural Commercial Banks	Foreign Banks	Other Banking Institutions	**Total**
Legal Entities (Number)	5	12	143	43	37	3,617	3,857
Staff (Number)	1,506,424	197,657	177,765	66,317	32,502	864,038	2,844,703

Source: China Banking Regulatory Commission (2009), *Annual Report*, http://www.cbrc.gov.cn/chinese/home/jsp/docView.jsp?docID=20100615A314C942DEE7DD34FF395FFCEB671E00.

SOCBs, JSCBs and city commercial banks were the focus of government's restructuring efforts during banking reforms, and they have grown and developed very fast in recent years. From 2008 to 2009 assets of SOCBs were up by 25.92 % to RMB 40,089 billion; assets of JSCBs were up by 33.78% to RMB 11,785 billion; assets of city commercial banks were up by 37.46% to RMB 5,680 billion, in 2009 they accounted for 73.06% market share in terms of total banking assets.

Total assets of banking institutions in China were RMB 62,391 billion in 2008, and SOCBs had 31,835 billion in assets accounting for 51.03% market share; in 2009 total banking assets increased by 26.26% to RMB 78,769 billion, and total assets of SOCBs were 40,089 billion accounting for 50.89% market share, which means half of financial markets in China were shared and dominated by SOCBs (Table 2-6).

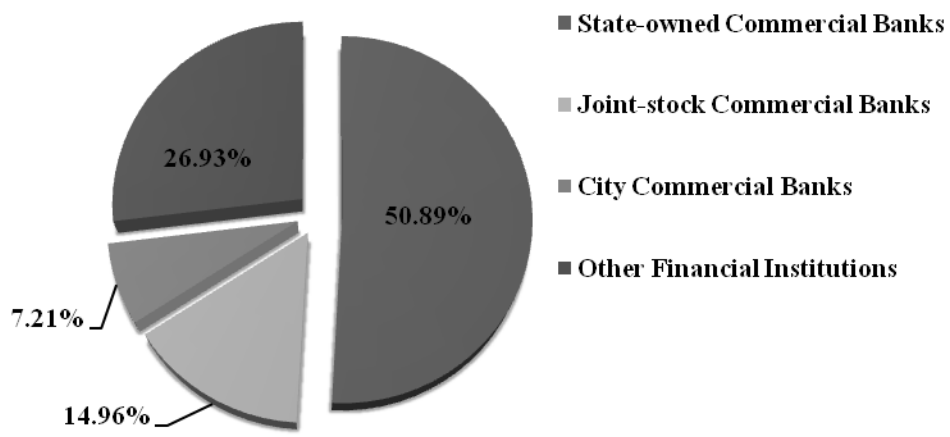
Table 2-6: Assets and Market Share of Banking Institutions in China—2008~2009

Year	2008		2009		Growth Rate (%)
Item / Bank	Assets (RMB 100 million)	Market Share (%)	Assets (RMB 100 million)	Market Share (%)	
SOCBs	318,358	51.03	400,890	50.89	25.92
JSCBs	88,131	14.12	117,850	14.96	33.78
City Commercial Banks	41,320	6.62	56,800	7.21	37.46
Other Banking Institutions	176,105	28.23	212,151	26.93	20.47
Total	623,913	100	787,691	100	26.26

Note: Other banking institutions include policy banks, rural commercial banks, urban credit cooperatives, rural credit cooperatives, postal savings, foreign banks and non-bank financial institutions.
Source: China Banking Regulatory Commission, Statistics, http://www.cbrc.gov.cn/chinese/info/twohome/index.jsp?itemCode=9.

Figure 2-3 helps us better understand distribution of market share of total banking assets in China. SOCBs were developed from national specialized banks with extensive branch networks and large state-owned enterprises as customer base; moreover, China government's restructuring plans and fully support in past thirty years have contributed to their huge scale in assets, currently all of them are ranking among the world's top 100 largest banks. In addition, the government has made a lot of efforts

to protect them from severe competitions and which also allows they to maintain monopoly and leading position in financial markets.



Source: China Banking Regulatory Commission, Statistics, http://www.cbrc.gov.cn/chinese/info/twohome/index.jsp?itemCode=9.

Figure 2-3: Market Share of Total Banking Assets in China—2009

Table 2-7 summarizes the history of establishment, restructuring to joint-stock company, H shares initial public offering on Hong Kong Stock Exchange and A shares initial public offering on Shanghai Stock Exchange of each SOCB.

Every SOCB had been restructured as a joint-stock company, among others BOCOM was the earliest bank to transform share structure and BOCOM was also the earliest bank to have a foreign bank as shareholder, in March of 2004 HSBC possessed 19.99% shares of it.

By 2008 except ABC the rest four SOCBs all went public, but in 2010 ABC got the approval from CSRC and prepared to go public, the date of dealings in A shares on Shanghai Stock Exchange was set on July 15, 2010 and the date of dealings in H shares on the Hong Kong Stock Exchange was set on July 16, 2010.

Table 2-7: Establishment and Listing of State-owned Commercial Banks

Item / Bank	Establishment (Year)	Restructure to JSC (Year/Month)	Hong Kong Stock Exchange Listing (Year/Month)	Shanghai Stock Exchange Listing (Year/Month)
ICBC	1984	2005/10	2006/10	2006/10
CCB	1954	2004/09	2005/10	2007/09
BOC	1912	2004/08	2006/06	2006/07
ABC	1979	2009/01	2010/07	2010/07
BOCOM	1908	1987/04	2005/06	2007/05

Note: JSC indicates joint-stock limited company.
Source: Bankscope, http://bankscope.bvdep.com/ip; ICBC, CCB, BOC, ABC, and BOCOM, *Annual Report*, 2008~2009; ABC (2010), *Notice of Public Offering*, http://www.abchina.com/cn/AboutABC/IssuePublicNotice/201007/W020100701327391494124.pdf.

According to the latest world ranking by total assets in 2009 from Bankscope database, SOCBs all rank among top 100 banks in the world, and ICBC even ranks among top 10 banks in the world.

With RMB 11.79 trillion of total assets ICBC ranks number 1 in China and number 8 in the world; CCB ranks number 2 in China and number 15 in the world by RMB 9.62 trillion of total assets; ABC ranks number 3 in China and number 17 in the world by RMB 8.88 trillion of total assets; BOC ranks number 4 in China and number 19 in the world by RMB 8.75 trillion of total assets; BOCOM ranks number 6 in China and number 65 in the world by RMB 3.31 trillion of total assets.

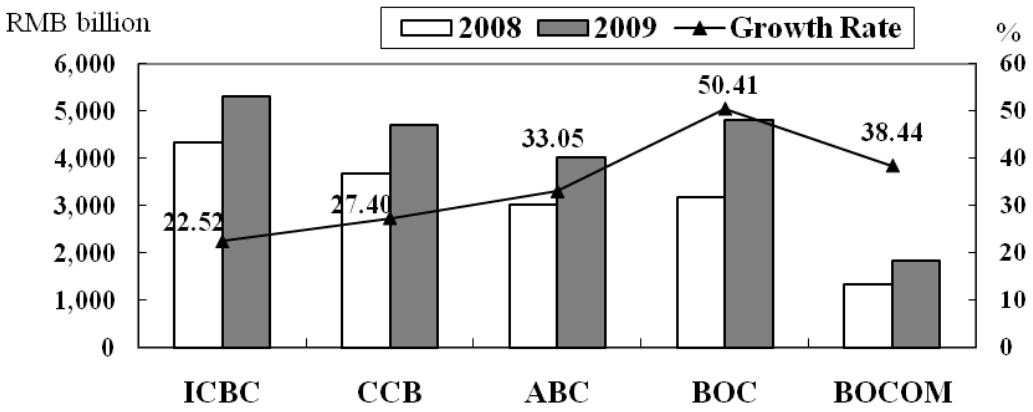
Although ABC is not the largest bank in China in terms of total assets, as of 2009 ABC has the most extensive distribution networks among large commercial banks in China with 23,624 branches and service outlets, and with 441,144 employees it also provides a lot of financial employment opportunities in China (Table 2-8).

Table 2-8: Ranking of State-owned Commercial Banks in China—2009

Item / Bank	Domestic Ranking	World Ranking	Total Assets (RMB billion)	Equities (RMB billion)	Number of Branches	Number of Employees
ICBC	1	8	11,785	679	16,394	386,723
CCB	2	15	9,623	559	13,392	301,537
ABC	3	17	8,883	343	23,624	441,144
BOC	4	19	8,748	542	10,961	262,566
BOCOM	6	65	3,309	164	2,770	79,122

Note: According to Bankscope, world ranking is based on each bank's total assets of last available fiscal year.
Source: ICBC, ABC, and BOCOM, *Annual Report*, 2009; Bankscope, http://bankscope.bvdep.com/ip.

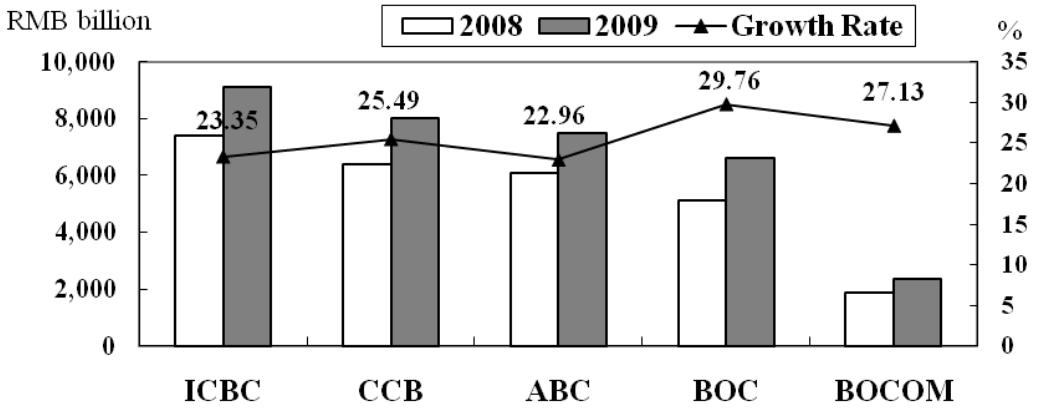
In 2009 among these five banks, ICBC had the largest amount of loans grew by 22.52% to RMB 5.32 trillion compared to the previous year, BOC had the second largest amount of loans grew by 50.41% to RMB 4.80 trillion, and CCB had the third largest amount of loans grew by 27.4% to RMB 4.69 trillion, amount of loans of ABC and BOCOM were RMB 4.01 trillion and RMB 1.84 trillion, respectively (Figure 2-4).



Source: ICBC, CCB, ABC, BOC, and BOCOM, *Annual Report*, 2008~2009.

Figure 2-4: Loans of SOCBs in China—2008~2009

As for deposits of SOCBs, from 2008 to 2009 the amount of deposits of ICBC increased by 23.35% to RMB 9.1 trillion; deposits of CCB increased by 25.49% to RMB 8 trillion; deposits of ABC increased by 22.96% to RMB 7.5 trillion; deposits of BOC increased by 29.76% to RMB 6.62 trillion; deposits of BOCOM increased by 27.13% to RMB 2.37 trillion (Figure 2-5).



Source: Same as Figure 2-4.

Figure 2-5: Deposits of SOCBs in China—2008~2009

Figure 2-4 and Figure 2-5 show that from 2008 to 2009, with double digits growth rate of loans and deposits, each SOCB all maintain upward trend and BOC exceptionally had the highest growth rate both in the amount of loans and deposits that were 50.41% and 29.76%, respectively.

Given SOCBs' large scale in assets, loans, deposits, and their status in China banking industry, they are most qualified to represent banks in China. As a result, the following study will focus on analyzing their profitability performance, policies of controlling non-performing loans, liquidity risk management and how they comply with international regulation—Basel II.

2.3 Analysis of Profitability Performance

In China benchmark loan interest rate and deposit interest rate are controlled and adjusted by the PBC, according to article 38 of 〈Law of the People's Republic of China on Commercial Banks〉, lending rate determined by commercial banks must fluctuate in the range between upper limit and lower limit loan interest rate regulated by the PBC.

In order to promote marketization of interest rates and increase pricing power of financial institutions to further prevent financial risks, on October 29, 2004 PBC decided to raise benchmark deposit and loan interest rates of local currency, and downward deposit rate was allowed to widen fluctuation range between deposit and loan interest rate.

Excluding urban and rural cooperatives, the loan interest rate ceiling of other sorts of financial institutions will be cancelled; however, the lower limit remains the same as 0.9 times the benchmark rate. Due to lack of competition, urban and rural cooperatives still implement upper limit management of loan interest rate; the ceiling is 2.3 times the benchmark rate.

Table 2-9 shows that since year 2002, the benchmark lending rate of RMB loans maintains slightly upward trend, but in 2008 China inevitably confronted with global financial tsunami and risk of slow economic growth, began in September PBC adopted loose monetary policy to stimulate the economy; therefore, the benchmark lending rate of 1-year-term RMB loans fell from 7.47% to 7.20%, as for other term of loans the interest rate also dropped.

Now in China the current benchmark loan interest rate for 1-year-term RMB loans is 5.31%, while the benchmark rate for 1-year time deposit is 2.25%, without upper limit of lending rate, the interest spread is very high.

Table 2-9: Benchmark Interest Rate of RMB Loans

Unit: %

Adjust Time (Year/Month/Day)	Short Term		Medium and Long Term		
	6 month	6 month ~1 year	1 year ~3 years	3 years ~5 years	Above 5 years
2002/02/21	5.04	5.31	5.49	5.58	5.76
2004/10/29	5.22	5.58	5.76	5.85	6.12
2006/04/28	5.40	5.85	6.03	6.12	6.39
2006/08/19	5.58	6.12	6.30	6.48	6.84
2007/03/18	5.67	6.39	6.57	6.75	7.11
2007/05/19	5.85	6.57	6.75	6.93	7.20
2007/07/21	6.03	6.84	7.02	7.20	7.38
2007/08/22	6.21	7.02	7.20	7.38	7.56
2007/09/15	6.48	7.29	7.47	7.65	7.83
2007/12/21	6.57	7.47	7.56	7.74	7.83
2008/09/16	6.21	7.20	7.29	7.56	7.74
2008/10/09	6.12	6.93	7.02	7.29	7.47
2008/10/30	6.03	6.66	6.75	7.02	7.20
2008/11/27	5.04	5.58	5.67	5.94	6.12
2008/12/23	4.86	5.31	5.40	5.76	5.94

Source: The People's Bank of China, Monetary Policy Department, http://www.pbc.gov.cn/publish/zhengcehubobisi/627/index.html. (In Chinese)

Table 2-10 shows that in 2009 the total profit after tax of banking institutions in China was RMB 668.4 billion, 49.63% greater than which in 2007, during the same period profit after tax of SOCBs increased from RMB 246.6 billion in 2007 to RMB 400.1 billion in 2009 with 62.25% growth rate; profit after tax of JSCBs increased from RMB 56.4 billion in 2007 to RMB 92.5 billion in 2009 with 64.01% growth rate.

In 2009 profit after tax of city commercial banks doubled to RMB 49.7 billion from RMB 24.8 billion in 2007, and profit after tax of rural commercial banks even grew 246.51% to RMB 14.9 billion from RMB 4.3 billion in 2007.

From 2007 to 2009, every sort of commercial banks in China has maintained positive and double digits growth rate of after-tax profit annually, but in 2008 only

after-tax profit of foreign banks decreased from RMB 11.9 billion to RMB 6.5 billion in 2009.

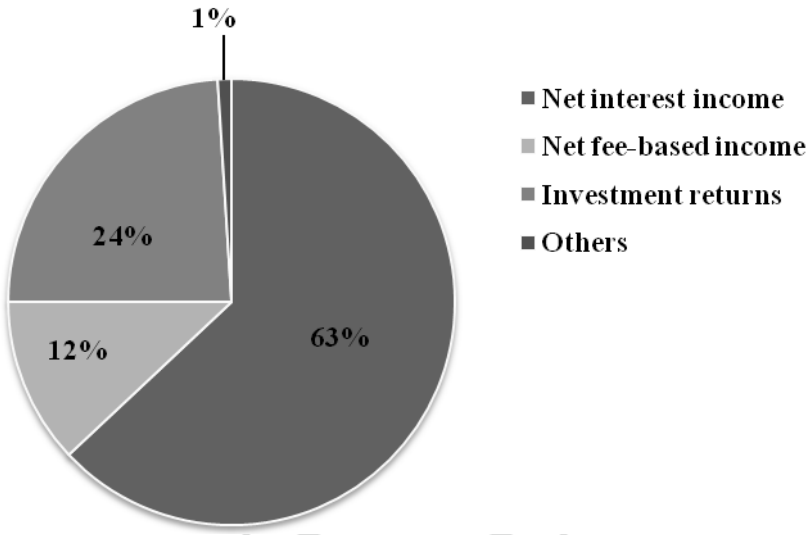
Although in 2009 SOCBs gained almost 60% of overall after-tax profit in China banking industry, among all commercial banks rural commercial banks surprisingly had the best profit growth performance, and city commercial banks ranked the second.

Table 2-10: Profit After Tax of Commercial Banks in China－2007~2009

Year / Bank	2007 (RMB 100 million)	2008 (RMB 100 million)	2009 (RMB 100 million)	Growth Rate (%)
SOCBs	2,466	3,542	4,001	62.25
JSCBs	564	841	925	64.01
City Commercial Banks	248	408	497	100.40
Rural Commercial Banks	43	73	149	246.51
Foreign Banks	61	119	65	6.56
Total Banking Institutions	4,467	5,834	6,684	49.63

Source: China Banking Regulatory Commission, *Annual Report*, 2009.

Figure 2-6 demonstrates distribution of different sources of profit of banking institutions in China. In 2009 profit of banking institutions consisted of net interest income (63%), investment returns (24%), net fee-based income (12%) and others (1%), the first three were major components of profit in China's banking industry, however, among them net interest income was the most important source of profit that banks in China rely on.



Source: China Banking Regulatory Commission, *Annual Report*, 2009.

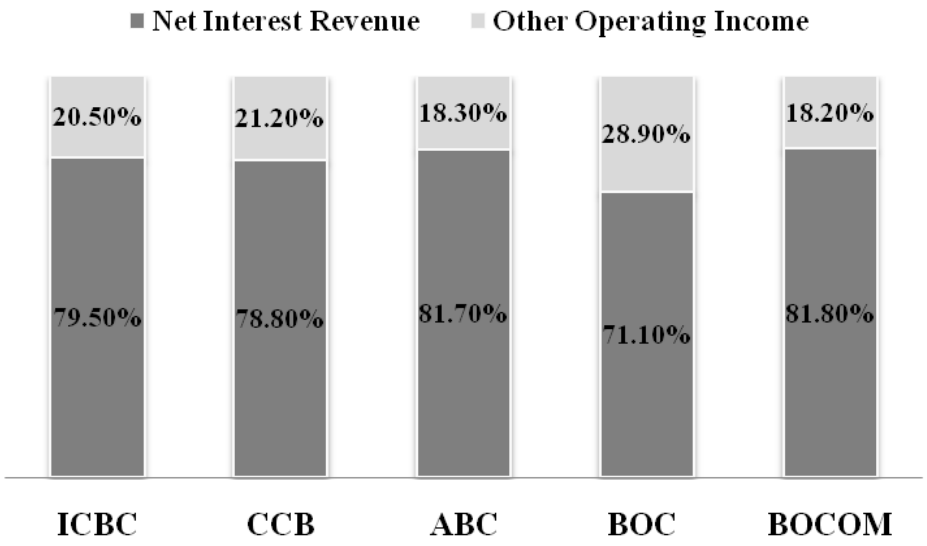
Figure 2-6: Profit Distribution of Banking Institutions in China—2009

Among different kinds of financial statements, income statement represents the whole process of income and expenses of a bank's business operation; hence if we want to examine a bank's profitability, the best approach is to start from analyzing income statement. In a bank's income statement, operating income is the sum of every income obtained from banking activities and representing the outcome of bank's performance.

Figure 2-7 illustrates the composition of income statement of each SOCB by dividing operating income into net interest revenue and other operating income. If the proportion of net interest revenue is larger than the proportion of other operating income, which means that profit of this bank mainly comes from spread between lending rate and deposit rate by giving loans to customers.

In 2009 net interest revenue accounts for over 70% of operating income of each SOCB, and ABC and BOCOM particularly relied on net interest revenue as source of income. As for other operating revenue, BOC has the highest percentage of 28.9%,

suggesting that once the interest spread in China becomes narrower, and then BOC will suffer less than other SOCBs.



Source: Bankscope, http://bankscope.bvdep.com/ip.

Figure 2-7: Composition of Operating Income of SOCBs in China—2009

Net profit is often referred as bottom line of income statement; it is the revenue earned by a bank in a period of time after deducting all expenses and taxes. Table 2-11 shows that from 2008 to 2009 net profit of ICBC grew by 16.34% to RMB 129,396 million; net profit of CCB grew by 15.32% to RMB 106,836 million; net profit of ABC grew by 26.33% to RMB 65,002 million; net profit of BOC grew by 29.90% to RMB 85,598 million, as for BOCOM the net profit grew by 5.71% to RMB 30,254 million.

As the largest state-owned commercial bank in China, net profit of ICBC was the highest one both in 2008 and 2009; however, while compare SOCBs in terms of growth rate of net profit, the profitability of BOC was the best one, the second was ABC, and ICBC ranked the third.

Table 2-11: Net Profit of SOCBs in China—2008~2009

Unit: RMB million

Bank / Year	ICBC	CCB	ABC	BOC	BOCOM
2008	111,226	92,642	51,453	65,894	28,621
2009	129,396	106,836	65,002	85,598	30,254
Growth Rate	16.34%	15.32%	26.33%	29.90%	5.71%

Source: Same as Figure 2-4.

Table 2-12 summarizes four indicators of profitability of SOCBs from 2007 to 2009, including Return on Average Assets (ROA), Return on Average Equity (ROE), Cost-to-Income ratio and Net Interest Margin; each indicator will be introduced and analyzed as below.

ROA is one of the most important ratios in comparing the efficiency and operational performance of banks as it looks at returns generated from the assets financed by the bank; as for ROE which is a measure of returns on shareholder funds, both of them are significant indicators commonly used to assess profitability of banks, and the higher ratio means the better profitability.[8]

According to statistics of last ten years, average ROA of the world's top 100 banks is 1%, and average ROE of the world's top 100 banks is between 12% and 14% (Wu, 2008). In 2008 average ROA and ROE of the banking industry in China were 1% and 17.1% respectively, which meant that profitability of China banking sector was good; however, in 2009 average ROA and ROE of the banking industry slightly dropped to 0.9% and 16.2%.[9]

[8] ROA= net income / average total assets; ROE= net income / average equity

[9] See China Banking Regulatory Commission (2008~2009), *Annual Report*, http://www.cbrc.gov.cn/english/info/annual/index.jsp.

From 2007 to 2009, except for ABC, ROA of other SOCBs were higher than 1%, in 2009 only ROE of CCB and BOCOM were down from last year while other SOCBs had increasing ROE. It is worthy to pay attention that from 2007 to 2008 net profit of ABC has increased from RMB 43.79 billion to RMB 51.45 billion, but because in 2007 equity of ABC was negative so that resulted in negative ROE for past two consecutive years.[10]

As for Cost-to-Income ratio, which is commonly used to evaluate how operating costs are changing compared to operating income, and it is also called ‘‘efficiency ratio’’, the lower one reflects the better operating efficiency. In 2009 ABC had the highest Cost-to-Income ratio that was 43.11%, meanwhile, figures of other four SOCBs were below 40%.[11]

Table 2-12: Indicators of Profitability of SOCBs in China—2007~2009

Unit: %

Bank	ICBC			CCB			BOC			ABC			BOCOM		
Item \ Year	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009
ROA	1.02	1.21	1.20	1.15	1.31	1.24	1.10	1.02	1.09	0.82	0.84	0.82	1.07	1.19	1.01
ROE	16.21	19.34	20.13	18.38	20.82	20.81	14.37	14.01	16.60	-13.60	-23.55	20.53	18.23	20.11	19.24
Cost-to-Income ratio	35.27	29.99	33.18	36.30	30.95	33.17	36.20	35.37	38.92	33.52	44.71	43.11	34.45	33.57	39.25
Net Interest Margin	2.84	2.93	2.33	3.29	3.26	2.53	2.84	2.64	2.11	3.05	3.25	2.20	2.91	2.83	2.47

Source: Bankscope, http://bankscope.bvdep.com/ip; ABC, *Annual Report*, 2009.

In addition to ROA, ROE and Cost-to-Income ratio, Net Interest Margin (NIM) is also a useful measure to examine how well the ability of a bank is to profit from its

[10] See ABC (2008), *Annual Report*.
[11] Cost-to-Income ratio= overheads / (net interest revenue + other operating income)

interest-generating assets, and the higher one also reflects the better profitability.[12]

In 2009 NIM of SOCBs all decreased compare to the previous year, because downwarding benchmark lending rate has reduced net interest income of SOCBs and also resulted in decending NIM. Because BOC has the smallest proportion of net interest revenue in its operating revenue; therefore, BOC suffers less than its peers from narrowing interest margin.

2.4 Evaluation of Assets Quality

NPL ratio is commonly used and also could be said as the most important indicator when examining assets quality of a bank.[13] Before year 2000 NPL ratio of commercial banks in China top 50%, and the main reason was unlimited funding to state-owned enterprises and default ratios were pretty high. For a long period, domestic commercial banks in China have had always been criticized for high amounts and ratios of NPL, and many financial experts have warned that financial risk in China was extremely high (Chang, 2001).

Central government of PROC was aware of the seriousness that how NPL can affect financial system in China and began to adopt measures to avoid NPL problems from deteriorating. In 1999 State Council passed the legislation of〈Regulations of Financial Asset Management Corporations〉to set up four asset management corporations (AMCs), they are China Cinda Asset Management Corporation, China Orient Asset Management Corporation, China Huarong Asset Management Corporation, and China Great Wall Asset Management Corporation. The main purpose to establish four AMCs is to solve and control NPL problems of SOCBs.

[12] Net Interest Margin= net interest revenue / average total earning assets
[13] NPL ratio= impaired loans / (loans+ loan loss reserve)

In addition, PBC made a notice regarding full implementation of management of five classification of loans quality system on December 19, 2001 and〈Loan Risk Classification Guidelines〉was wholly adopted in the beginning of year 2002. Various banks in China are required to classified loans into five categories according to specific standard of loans quality and report to PBC periodically.[14]

In compliance with the regulations of WTO, China has released restrictions on foreign banks to do RMB business since December 11, 2006, till now foreign banks have fully operate business in China more than three years. With overall change in financial environment and fierce competition brought from foreign banks, in this section I would like to make an observation of changes in ratios and amounts of NPL of China commercial banks to review how the effect that China government works on controlling NPL is.

Table 2-13 summarizes amounts and ratios of NPL of all kinds of commercial banks in China from 2006 to 2009. Before year 2007 NPL problem of banking sector in China was very serious, total amount of NPL in China banking were around RMB 1.2 trillion and NPL ratio remained very high between 6.17% and 7.09%. During the same period with NPL ratio in the range of 8.05% to 9.22% loans quality of SOCBs was the worst, and rural commercial banks ranked the second with NPL ratio in the range of 3.97% to 5.90%.

However, NPL ratio of different types of banking institution all dropped steadily year on year, from 2006 to 2009 NPL ratio of SOCBs decreased substantially from 9.22% to 1.80%; NPL ratio of JSCBs decreased from 2.81% to 0.95%; NPL ratio of city commercial banks decreased from 4.78% to 1.30%; NPL ratio of rural commercial

[14] Objects of implementation include state-owned commercial banks, joint-stock commercial banks, city commercial banks, and foreign banks in China.

banks decreased from 5.90% to 2.76%, and NPL ratio of foreign banks maintained stable fluctuation in the range between 0.46 % and 0.85%.

Second to foreign banks, JSCBs have very good assets quality attributing to its maintenance of low NPL ratios. As to foreign banks because they have good internal risk controlling system and strict reviewing process on issuing loans to customers which are commercial banks in China should improve and learn from them, and that is also why NPL ratios of foreign banks have always been the lowest one in comparison with other commercial banks.

Table 2-13: NPL of Commercial Banks in China—2006~2009

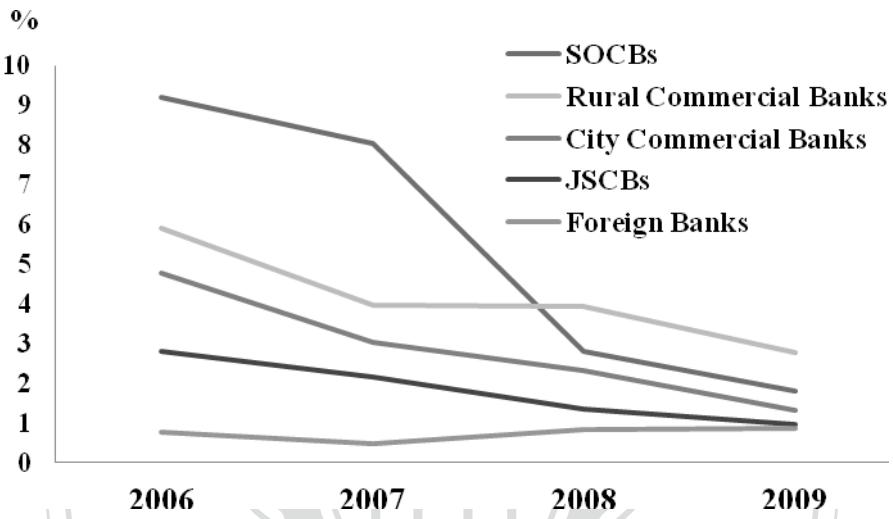
Item	Year	SOCBs	JSCBs	City Commercial Banks	Rural Commercial Banks	Foreign Banks	Total
Amount (RMB 100 Million)	2006	10,535	1,168	655	154	38	12,549
	2007	11,150	860	512	131	32	12,684
	2008	4,208	657	485	192	61	5,603
	2009	3,627	637	377	270	62	4,973
Ratio (%)	2006	9.22	2.81	4.78	5.90	0.78	7.09
	2007	8.05	2.15	3.04	3.97	0.46	6.17
	2008	2.81	1.35	2.33	3.94	0.83	2.42
	2009	1.80	0.95	1.30	2.76	0.85	1.58

Source: China Banking Regulatory Commission, Statistics, http://www.cbrc.gov.cn/english/info/statistics/index_more.jsp

Through securitization of NPL and then sell to AMCs, the amount and ratio of NPL of SOCBs has decreased sharply since 2007, and because of their large assets

market share in China,[15] dropping NPL of them also caused total NPL of China banking sector to decrease drastically year on year (Figure 2-8).

SOCBs' amazing scale and market share in banking sector make NPL problems of them could easily affect the soundness of financial system in China; therefore, the study would also like to examine NPL ratio of each SOCB during the same period.



Source: China Banking Regulatory Commission, Statistics, http://www.cbrc.gov.cn/english/info/statistics/index_more.jsp

Figure 2-8: NPL Ratio of Commercial Banks in China—2006~2009

We can see from Table 2-14, from 2006 to 2009 NPL ratio of ICBC dropped from 3.79% to 1.54%, for CCB the ratio dropped from 3.29% to 1.50%, for ABC the ratio dropped from 23.30% to 2.91%, for BOC the ratio dropped from 4.25% to 1.55%, and the ratio of BOCOM dropped from 2.54% to 1.36%.

In year 2006 and 2007 only ABC had double digits of NPL ratio, which showed that ABC had very bad loans quality comparing to other SOCBs, but began in 2008 the figure dropped significantly in order to prepare for transformation into joint-stock company and furthermore to be listed in the future.

[15] In 2009 SOCBs accounted for 50.89% market share of total assets in China's banking sector.

Table 2-14: NPL Ratio of SOCBs in China—2006~2009

Unit: %

Bank / Year	ICBC	CCB	ABC	BOC	BOCOM
2006	3.79	3.29	23.30	4.25	2.54
2007	2.74	2.60	23.57	3.17	2.06
2008	2.29	2.21	4.32	2.76	1.92
2009	1.54	1.50	2.91	1.55	1.36

Source: Bankscope, http://bankscope.bvdep.com/ip; BOCOM, *Annual Report*, 2009.

Because BOCOM has the longest history to cooperate with strategic investor-HSBC Bank,[16] which has given a lot of support and assistance regarding management and business operations, hence NPL ratio of BOCOM remained the lowest every year from 2006 to 2009.

Despite NPL ratio can demonstrates assets quality of a bank, we should also pay attention to coverage ratio,[17] because coverage ratio reflects the ability of a bank to undertake risk of default, it is calculated as the percentage of NPL covered by loan loss reserve. In market practice, coverage ratio should always be larger or equal to 100%, but in order to enhance China bank's ability to fight against credit risk, CBRC has gradually raise the level of provision coverage ratio from 100% to 130% and then up to 150%.

On July 17th of 2009, in a meeting of economic and financial sector development, the Chairman of CBRC, Mr. Liu Ming-Kang, said that banks should improve their risk management and raise their average provision coverage ratio to exceed 150% by the end of 2009.

[16] Since August of 2004, HSBC became one of the top ten shareholders of BOCOM.
[17] Coverage ratio= loan loss reserve / impaired loans.

Table 2-15 shows that coverage ratios of all SOCBs in 2006 were smaller than 100% that means none of them can fully undertake risk of default; however, since 2007 coverage ratio of ICBC, CCB and BOC were up beyond 100% except ABC and BOCOM, in 2008 coverage ratio of ABC even fell from 93.42% to 63.53% while BOCOM rose to 117.10%.

By the end of 2009, with over 150% of coverage ratio, ICBC, CCB and BOCOM has met the requirement of CBRC, and coverage ratio of BOC was very close to provision ratio, as to the ratio of ABC, which was the lowest among SOCBs slightly over 100%.

Table 2-15: Coverage Ratio of SOCBs in China—2006~2009

Unit: %

Bank / Year	ICBC	CCB	BOC	ABC	BOCOM
2006	70.56	82.24	91.34	5.10	72.83
2007	103.50	104.41	106.37	93.42	95.46
2008	130.15	131.57	117.18	63.53	117.10
2009	164.41	175.77	148.61	105.37	151.05

Source: Bankscope, http://bankscope.bvdep.com/ip; BOCOM, *Annual Report*, 2009.

Although descending NPL ratios and rising coverage ratios of SOCBs for past four years shows that government's policies on controlling NPL problems and improving risk management of commercial banks in China are effective, the growing economy will accompany with growing outstanding balance of loans, we still need to pay attention to changes of assets quality of China banking industry in the future.

2.5 Management of Liquidity Risk

The lack of liquidity is one of the main reasons that cause a commercial bank in insolvency, and liquidity problem also triggers many financial crises to happen.[18] In general, the significance of sufficient liquidity is to demonstrate that the bank is capable to pay debts, the bank is capable to grant loans to customers, the bank can avoid selling asset at a sacrifice, and the bank can reduce risk premium paid for borrowed funds (Chou, 2008).

In western countries the theory of liquidity management of commercial banks has developed from theory of asset management in 1960s to theory of liabilities management in 1970s and then evolved into theory of asset and liability management in 1980s.

Theory of asset and liability management emphasizes on comprehensive management on bank's assets and liabilities, because both assets and liabilities are sources of liquidity. In China the government implements assets-liabilities ratios control to achieve the goal of liquidity management of commercial banks.

According to article 39 of 〈Law of the People's Republic of China on Commercial Banks〉, commercial banks shall abide by following provisions when giving loans to customers:

1. The capital adequacy ratio may not be lower than 8%.

2. The ratio of the outstanding of loans to the outstanding of deposits (Loan-to-deposit ratio) may not exceed 75%.

3. The ratio of the balance of floating assets to the balance of floating liabilities (Liquidity ratio) may not be lower than 25%.

[18] In 2008 liquidity problems caused some famous and large banks in USA went bankruptcy then resulted in global financial tsunami, e.g. Lehman Brothers Holdings Inc.

4. The ratio of the outstanding of loans granted to the same borrower to the balance of the capital of the commercial bank (Loans to single largest customer) may not exceed 10%.

Table 2-16 shows afore-mentioned assets-liabilities ratios of SOCBs from 2007 to 2009, only capital adequacy ratio is excluded because it is relevant to the international norm—Basel II and therefore it will be discussed hereinafter in Section 2.6, as for other three indicators, the five SOCBs all conformed to the regulatory requirements and each indicator will be discussed separately as below.

Liquidity ratio is used to measure the ability of a bank to repay short-term debt, the higher ratio means a bank has better solvency, in 2009 CCB had the highest liquidity ratio of 49.63%, the second was BOC with ratio of 45.3%, the third was ABC with ratio of 40.99%, while BOCOM has the lowest ratio of 28.02%; however, if the ratio is too high that might reflect the efficiency of capital use of the bank is not good enough and could further affect profitability.[19]

Loan-to-deposit ratio is another measure of liquidity which is calculated by dividing loan balance by deposit balance, the higher figures denote lower liquidity. From 2007 to 2009 the average Loan-to-deposit ratio of ABC was the lowest one, the figure was 57.25%, and the second lowest was ICBC with average figure of 57.4%. During the same period the figures of ICBC and BOCOM have increased year by year, expansion of banking business might result in rising Loan-to-deposit ratio.

Percentage of ‘‘Loans to single largest customer’’ denotes the degree of concentration of credit risk; once the largest customer default on paying loans that will definitely cause the bank suffer a heavy loss, according to the regulation the ratio must lower than 10%.[20]

[19] Liquidity ratio is calculated by dividing the balance of current assets by the balance of current liabilities.
[20] The percentage is calculated by dividing loans to the single largest customer by net capital base.

In 2007 ABC's annual report did not reveal the ratio of ''Loans to single largest customer'', but the figures from 2008 to 2009 showed that ABC had the highest degree of concentration on lending to its major customer, and ratios of rest SOCBs were between 2% and 4%.

In addition to the percentage of ''Loans to single largest customer'', ratio of the outstanding of loans granted to top ten single customers to the net capital of the commercial bank (Loans to top 10 largest customers) is also an indicator to examine borrower concentration of a bank. In 2009 among peers BOC had the highest degree of concentration on lending to its major customers and ratios of rest four SOCBs were between 18% and 23%.

Table 2-16: Regulatory Indicators of SOCBs in China—2007~2009

Unit: %

Bank	ICBC			CCB			BOC			ABC			BOCOM		
Item \ Year	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009
Liquidity ratio (>25%)	26.8	33.3	30.7	43.52	47.45	49.63	32.6	48.8	45.3	37.04	44.79	40.99	27.20	39.72	28.02
Loan-to-deposit ratio (< 75%)	56.3	56.4	59.5	61.4	59.5	60.24	64.0	61.3	70.3	65.71	50.84	55.19	64.93	65.29	72.59
Loans to single largest customer (< 10%)	3.10	2.90	2.80	4.70	3.68	3.09	3.40	3.40	3.80	NA	6.04	4.41	2.70	3.81	2.75
Loans to top 10 largest customers	21.1	20.4	20.9	19.86	20.72	18.94	16.1	17.6	28.0	NA	33.96	22.47	21.73	21.10	22.15

Note: 1. Liquidity ratio of BOCOM included current assets and liabilities of local and foreign currencies, while Liquidity ratio of other SOCBs is based on RMB current assets to RMB current liabilities.
2. NA indicates no data available.

Source: ICBC, CCB, BOC, ABC, and BOCOM, *Annual Report*, 2009.

Furthermore, there are other liquidity ratios commonly used to evaluate commercial banks, such as ‘‘Net Loans/Total Assets’’, ‘‘Net Loans/ (Deposits and Short-term Funding)’’ and ‘‘Liquid Assets/ (Deposits and Short-term Funding)’’. Table 2-17 summarizes above three ratios of SOCBs from 2007 to 2009.

‘‘Net Loans/Total Assets’’ indicates what percentage of assets of the bank is tied up in loans, and the higher ratio reflects the less liquid the bank will be. From 2007 to 2009 this ratio of SOCBs were between 40% and 60%, in 2009 BOCOM had the highest ratio of 57.69%, and BOC ranked the second with figure of 54.84%.

Table 2-17: Indicators of Liquidity of SOCBs in China—2007~2009

Unit: %

Bank	ICBC			CCB			BOC			ABC			BOCOM		
Item \ Year	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009
Net Loans/ Total Assets	45.57	45.46	47.38	48.24	48.75	48.77	45.98	45.88	54.84	51.06	42.98	45.16	51.31	48.41	57.69
Net Loans/ (Deposits and Short-term Funding)	50.11	49.98	51.65	53.09	53.55	53.13	54.38	53.49	61.70	46.37	46.66	48.90	57.35	53.33	63.11
Liquid Assets/ (Deposits and Short-term Funding)	17.43	21.35	18.02	5.00	5.18	24.80	14.97	18.76	11.59	17.51	20.01	26.36	19.15	24.22	22.71

Source: Bankscope, http://bankscope.bvdep.com/ip.

‘‘Net Loans/ (Deposits and Short-term Funding)’’ is similar to Loan-to-deposit ratio, higher figure reflects lower liquidity, from 2007 to 2009 this ratio of SOCBs were in the range between 46% and 64%, and in 2009 BOCOM also had the highest figure of 63.11% among others.

‘‘Liquid Assets/ (Deposits and Short-term Funding)’’ is a deposit run off ratio and looks at what percentage of customer and short term funds could be met if they were withdrawn suddenly, the higher this percentage the more liquid the bank is and less vulnerable to a classic run on the bank. By 2008 CCB had lowest figure around 5% but the ratio up nearly 19% to 24.8% in 2009; nevertheless, in the same year ABC had the highest of 26.36% among SOCBs.

2.6 Compliance with Basel II

In 1974 several international banks in the United States, United Kingdom, and Germany went bankrupt one after another due to poor supervisory regulations, for this reason Bank for International Settlements (BIS) gave support to establish the Basel Committee on Banking Supervision (BCBS) in 1975.[21]

Basel Capital Accord (Basel I) was proposed by BCBS in 1988, which set up the standard of minimum capital requirement of 8% Capital Adequacy Ratio (CAR) and 4% of Core Capital Adequacy Ratio (Tier 1 ratio).[22]

As the first banking international regulatory cooperation agreement, Basel I contained many drawbacks and it was not complete enough for developing countries to set up perfect provision system. As a result, BCBS decided to revise Basel I and then promoted the New Capital Accord (Basel II) in June of 2004; all member countries were required to implement Basle II by 2006.

The fundamental objectives of Basel II are to further strengthen the soundness and stability of international banking system while maintaining sufficient consistency that capital adequacy regulation will not be a significant source of competitive

[21] BCBS consists of senior representatives of bank supervisory authorities and central banks from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

[22] Capital Adequacy Ratio is often referred as ‘‘BIS ratio’’ internationally.

inequality among internationally active banks and promote the adoption of stronger risk management practices by the banking industry.

In order to fulfill above-mentioned objectives, Basel II introduces three pillars, the first pillar completed the minimum capital requirement of Basel I, the second pillar and the third pillar represented innovation of capital regulation, the essence of each pillar are described as below:

1. Pillar I—Minimum Capital Requirement: Basel II improves the minimum capital standards in Basel I in order to ensure that banks have sufficient capital to against risk.

2. Pillar II—Supervisory Review Process: Supervisory Commission and Authorities monitor internal control procedures of financial institutions, such as CAR, in order to ensure the full implementation of risk management.

3. Pillar III—Market Discipline: Standardize various reporting statistics and information of financial institutions so that the public can monitor the common risk of banks' operations.

Before CBRC became a member of BCBS in 2009, it already announced〈The Guidelines on the Implementation of the New Basel Accord by China's Banking Sector〉on February 28, 2007 and set up timetable for China banking industry to gradually adopt Basel II.

However, the implementation is not compulsory for every commercial banks in China, only large banks with operational entities in foreign countries or regions including Hong Kong, Macao and Taiwan or with large proportion of international business should adopt Basel II; commercial banks with above-mentioned qualifications are named by CBRC as ‘‘Basel II banks’’, and every SOCB conforms to the criteria.

Table 2-18 is the timetable of Basel II implementation in China which could be separated into following three stages.

Stage I: The year 2008 was the preparation period for Basel II implementation in China. During this period CBRC issued relevant supervisory rules and amend the existing capital regulation requirements according to current financial situation and banking development level.

Stage II: The year 2009 was the policy testing period; CBRC conducted Quantitative Impact Study to evaluate the impact of implementing Basel II on China banking industry.

Stage III: Overall Basel II implementation in China's banking industry is scheduled to commence in the beginning of year 2010, but with the approval from CBRC, Basel II banks can extend deadline of adoption to the end of year 2013. As for other non-Basel II banks, they may voluntarily propose an application to CBRC for the implementation of Basel II by going through the same procedures as the Basel II banks do after year 2011.

Although till now commercial banks in China have not yet completely implement Basel II, the requirement of minimum 8% of CAR and the requirement of minimum 4% of Tier 1 ratio set up in the Basel I are already applicable to all banks in China for many years.

CAR measures Tier 1 capital plus Tier 2 capital as a percentage of risk weighted assets and off balance sheet risk, under the Basel rules this ratio should in no event lower than 8%. Similarly, Tier 1 Ratio measures Tier 1 capital as a percentage of risk weighted assets and off balance sheet risk, under the Basel rules this ratio should be at least 4%.[23]

[23] Tier 1 capital includes shareholder funds, perpetual non cumulative preference shares; Tier 2 capital includes subordinated debt, hybrid capital, loan loss reserves and the valuation reserves.

Table 2-18: Timetable of Basel II Implementation for Banking Industry in China

Stage	Year	Policy
I	**2008**	By the end of 2008 CBRC successively issued supervisory rules regarding the Basel II implementation and made amendments to the existing capital regulation requirements by taking public opinions into account.
II	**2009**	During 2009 CBRC conducted Quantitative Impact Study to evaluate the impact of the Basel II implementation on the capital adequacy of banks.
III	**2010**	From the beginning of 2010 CBRC starts to accept applications of the bank which plans to adopt the Basel II, and the official applications should be made at least six months prior to the adoption.
		From the end of 2010 Basel II banks should start the implementation. If by then banks fail to meet the minimum requirements set by the CBRC, with the CBRC's approval they may postpone implementation but should not later than 2013.
		From the end of 2010 other commercial banks (including foreign bank subsidiaries) should be subject to the revised capital regulation requirements. Besides, if the Basel II banks have, by then, not started the Basel II implementation, they will also be subject to the revised capital regulation requirements
	2011	After 2011 other commercial banks may propose an application for the Basel II implementation voluntarily by going through the same procedures as the Basel II banks do.
	2013	By the end of 2013 is deadline of implementation for Basel II banks.

Source: China Banking Regulatory Commission, http://www.cbrc.gov.cn/english/home/jsp/docView.jsp?docID =200703190C3356986BEDAB3AFF45DA32BF983500.

Table 2-19 shows that in 2003 there were only 8 commercial banks in China met the requirement of 8% CAR, but the number has increased rapidly year on year, in 2009 almost every commercial banks in China met the requirement, and according to the year 2009 annual report of CBRC the average CAR of commercial banks has reached 11.4%.

Table 2-19: Number of Commercial Banks Meet CAR Requirements in China—2003~2009

Item \ Year	2003	2004	2005	2006	2007	2008	2009
Banks (Number)	8	30	53	100	161	204	239
Share in total banking assets (%)	0.6	47.5	75.1	77.4	79	99.9	100

Source: China Banking Regulatory Commission, *Annual Report*, 2009.

Table 2-20 summarizes CAR of SOCBs from 2007 to 2009, except the data of ABC in 2007 was not available, since 2007 every SOCB has met the minimum requirement of 8% CAR, but under the consideration of macroeconomic conditions, rapid growth of credit supply and associated risk, in 2009 CBRC has required banks in China to raise their CAR over the standard of 8%. Accordingly, the CAR of small-and-medium-sized banks as a whole was required to reach 10%; meanwhile, the overall CAR of systematically important large banks was required to reach 11%.

In 2009 except the CAR of ABC was only 10.07% which failed the CBRC's requirement, CAR of other SOCBs are all beyond 11% and all of them have met the new prudential supervisory requirement.

Table 2-20: Capital Adequacy Ratio of SOCBs in China—2007~2009

Unit: %

Bank / Year	ICBC	CCB	ABC	BOC	BOCOM
2007	13.00	12.60	NA	13.00	14.40
2008	13.00	12.20	9.40	13.00	13.50
2009	12.00	11.70	10.07	11.00	12.00

Note: NA indicates no data available.
Source: Bankscope, http://bankscope.bvdep.com/ip; ABC, *Annual Report*, 2009.

Table 2-21 shows Tier 1 ratio of SOCBs from 2007 to 2009, since 2007 every SOCB has met the minimum requirement of 4% Tier 1 ratio, except the data of ABC in 2007 was not available, moreover, among SOCBs the figure of Tier 1 ratio of ABC was the lowest during this period.

China government has made a lot of efforts to force banking industry be in line with international norm, and both CAR and Tier 1 ratio of SOCBs for last three years showed that the achievement is satisfactory and successful.

Table 2-21: Tier 1 Ratio of SOCBs in China—2007~2009

Unit: %

Bank / Year	ICBC	CCB	ABC	BOC	BOCOM
2007	11.00	10.40	NA	11.00	10.30
2008	11.00	10.20	8.00	11.00	9.50
2009	10.00	9.30	7.74	9.00	8.20

Note: NA indicates no data available.
Source: Bankscope, http://bankscope.bvdep.com/ip; ABC, *Annual Report*, 2009.

2.7 Summary

After reviewing the history of whole process of financial reforms in China for past three decades, we can see that banking system has transformed very fast from rigid and unified to modernization and marketization. Nowadays there are different kinds of commercial banks, policy banks, postal saving banks, and non-bank financial institutions coexist in China's banking system to satisfy the need of rapid economic development.

China government sped up the development of financial regime, including established CBRC as supervisory institution to oversee financial markets and banking operation, and restructured SOCBs into joint-stock limited company to improve their constitution, especially after China step by step opened up financial markets for foreign banks' investment according to its commitments to WTO accession.

Under China's WTO commitments foreign banks can provide services of RMB business in China without customer or geographic limitations began in the end of 2006; therefore, since then SOCBs all went public one after another in order to enhance competition to face fierce challenges brought from foreign banks in the future. Now the five SOCBs are very huge either in assets or in scale, they all rank in the world's top 100 largest banks.

However, in the initial stage of financial reforms, without relevant laws and supervisory regulations, amount and ratio of NPL were extremely high reflecting that banking operation in China was very backward, but after a serious of implementation of financial rules and afterwards the set up of AMCs, descending NPL ratios and rising coverage ratios of SOCBs in recent years showed that government's policies on controlling bad loans problems and improving risk management were effective and loans quality of SOCBs indeed improved a lot.

With growing economy the assets scale of banking industry in China expands drastically, among all banking institutions in China SOCBs account for over 50% of total banking assets. Attributing to the historic background of national specialized banks, protection and support from the government of China, SOCBs have maintained monopoly power and leading position in the financial markets, but this situation could results in imbalance banking development.

As to profitability of banking industry in China, the average ROA and ROE have reached the standard of top 100 banks in the world denoting that banking profitability performance is extremely good, nevertheless the main reason is because the benchmark lending and saving interest rates in China are controlled by the PBC, and that allows commercial banks in China to have advantage of high interest spread.

From 2008 to 2009 was the worst of time for world finance and economy due to the impact of global financial tsunami, but during the same period net profit of SOCBs all maintained positive growth rate, it seemed that none of them has been suffered from the downturn.

With respect to liquidity risk management, the China government enacted the upper limit of 75% Loan-to-deposit ratio, lower limit of 25% Liquidity ratio and other relevant provisions in the〈Law of the People's Republic of China on Commercial Banks〉for commercial banks to obey. By observing regulatory figures of SOCBs from 2007 to 2009 all of them have satisfied the regulations.

In order to get in line with international norms and regulations, the CBRC set up the timetable of Basel II implementation for commercial banks, even though adoption of Basel II has not yet completely, but the requirement of minimum 8% of CAR and 4% of Tier 1 ratio are already applicable to all banks in China, and number of banks meeting the regulatory requirements has increased quickly year after year.

By examining overall banking industry and SOCBs in China in four dimensions including profitability performance, assets quality, liquidity risk management, and capital adequacy ability, amazing progress for past three years was obviously revealed, although the development history of banking industry in China is not very long, dramatic evolution has been achieved after thirty years elapsed.

國立政治大學 National Chengchi University

CHAPTER 3
Comparison of Banking Performance between China and USA

Banking industry in the United States of America (USA or US) is generally recognized with a leading position in the world, and most large international commercial banks are originated from USA, such as JP Morgan Chase Bank, Citibank and Wells Fargo Bank. Their stunning performance, management courses and financial innovations are always becoming models for commercial banks in other countries to learn and follow.

In this chapter the study not only gives an overview of current banking situation in the USA, but also collects and uses relevant financial indicators of representative banks of USA to compare with China top five state-owned commercial banks in four aspects such as profitability performance, liquidity risk management, assets quality and ability of capital adequacy to figure out the similarities and differences between each other.

3.1 Overview of Banking Industry in USA

With reference to the statistics of Federal Deposit Insurance Corporation (FDIC), excluding non-insured banks and other financial institutions, as at the end of 2009 merely the number of commercial banks insured and supervised by FDIC has reached 11,372 with USD 11,846 billion of total assets and USD 6,500 billion of total loans.[24] Afore-mentioned figures indicate that the size of US banking industry is very huge.

[24] See Federal Deposit Insurance Corporation, Industry Analysis, http://fdic.gov/bank/statistical/stats/2009dec/industry.html.

Since sub-prime mortgage markets in USA collapsed in 2007, causing the issuers and purchasers of Collateralize Debt Obligation (CDO) and other derivative products of sub-prime mortgage in severe financial crisis or went bankrupt one after another, and then global financial turmoil was even triggered in the third quarter of 2008.

Till the end of June in 2010, there were 227 failed American banks went bankrupt since 2009,[25] and the number has kept increasing. However, as of the end of year 2009 commercial banks had over USD 14 trillion in total assets, as a whole banking industry in USA was still the largest one in the world.

Banks in USA are referred as depository institutions, which are financial intermediaries accepting deposits from individuals and institutions and making loans. Banking institutions in USA can be divided into three categories including Commercial Banking, Savings Institutions, and Credit Unions.[26] As for commercial banking which is comprised of US-chartered commercial banks, foreign banking offices in US,[27] bank holding companies and banks in U.S.-affiliated areas.[28]

Every banking institution in USA is governed by Federal Reserve System (Fed); Fed plays the role as the central bank of USA, which was founded by Congress in 1913 dedicated to provide the nation with a safer, more flexible, and more stable monetary and financial system.

Table 3-1 indicates total assets of banking institutions in USA from 2006 to 2009, in the first three years the total assets had increased steadily year after year, but in 2009 the figure slightly decreased from USD16,337 billion to USD 16,276 billion, it was because assets of foreign banking offices in US and saving institutions dropped

[25] See Federal Deposit Insurance Corporation, Industry Analysis, http://www.fdic.gov/bank/individual/failed/banklist.html.

[26] Savings Institutions comprise Savings and loan associations, mutual savings banks, and federal savings banks.

[27] Foreign Banking Offices in U.S. comprise branches and agencies of foreign banks, Edge Act and Agreement corporations, New York investment companies, and American Express Bank.

[28] Banks in U.S.-Affiliated Areas comprise commercial banks and branches of U.S.-chartered commercial banks located in Puerto Rico, the U.S. Virgin Islands, American Samoa, Guam, and other U.S.-affiliated insular areas.

substantially. Among all the banking institutions in USA, US-chartered commercial banks accounted for over 60% market share of total banking assets, bank holding companies ranked the second accounted for around 12% to 16% market share.

US-chartered commercial banks consist of large and major commercial banks and they comply with the criteria as representative banks of USA to compare with SOCBs in China. As a result the study subjects will be chose in accordance with total assets and ranks among top commercial banks in USA.

Table 3-1: Total Assets of Banking Institutions in USA—2006~2009

Unit: USD billion

Year / Banking Institution	2006	2007	2008	2009
Commercial Banking	**10,821**	**11,810**	**14,001**	**14,138**
US-Chartered Commercial Banks	8,190	8,841	10,248	10,046
Foreign Banking Offices in US	828	1,048	1,625	1,271
Bank Holding Companies	1,695	1,813	2,024	2,722
Banks in US-Affiliated Areas	108	108	105	99
Savings Institutions	**1,715**	**1,815**	**1,524**	**1,254**
Credit Unions	**716**	**759**	**812**	**885**
Total	**13,252**	**14,383**	**16,337**	**16,276**

Source: Board of Governors of the Federal Reserve System, Economic Research & Data, http://www.federalreserve.gov/releases/z1/20100311/z1.pdf.

Table 3-2 lists top five largest banks in USA, and all of them are nationally chartered member banks belonging to the category of US-chartered commercial banks. In the order of ranking of total assets, top five banks are JP Morgan Chase Bank (JPM), Bank of America (BOA), Citibank (CITI), Wells Fargo Bank (Wells Fargo), Wachovia

Bank (Wachovia). According to world ranking by total assets of Bankscope database as of July in 2010, JPM ranked among top 10 largest banks in the world with USD 1,627,684 million in total assets, but it was still secondary to ICBC which ranked number 8 in the world, while rest four banks all ranked among top 100 banks in the world equivalent to the size of total assets of other SOCBs in China.

Although total asset of BOA was smaller than JPM, but BOA had the largest amount of equities in US banking industry and it also had the largest number of branches and employees among others. With USD 1,161,361 million of total assets, CITI ranked number 3 in USA and number 22 in the world, and Wells Fargo ranked number 4 in USA and number 48 in the world by USD 608,778 million of total assets. Currently the world rank of Wachovia is not available in Bankscope database, but its scale is close to BOCOM in China.

Table 3-2: Top Five Banks in USA—2009

Item / Bank	Domestic Ranking	World Ranking	Total Assets (USD million)	Equities (USD million)	Number of Branches	Number of Employees
JPM	1	9	1,627,684	128,319	5,186	165,426
BOA	2	14	1,465,221	166,691	6,164	180,360
CITI	3	22	1,161,361	117,893	1,393	163,564
Wells Fargo	4	48	608,778	56,593	3,379	145,580
Wachovia	5	NA	510,083	69,029	3,296	79,791

Note: 1. According to Bankscope work rank is based on each bank's total assets of last available fiscal year.
2. Number of Branches includes domestic branches and foreign branches.
3. NA indicates no data available.

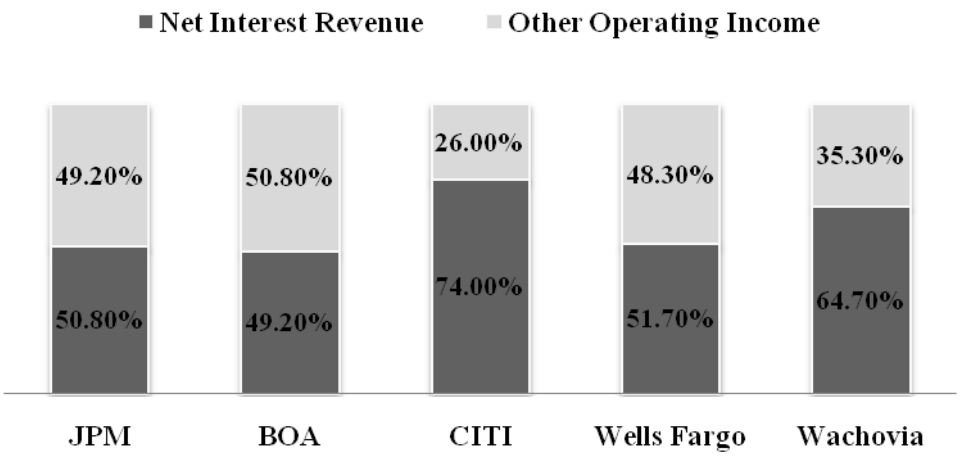
Source: Bankscope, http://bankscope.bvdep.com/ip; Federal Reserve System, http://www.federalreserve.gov/releases/lbr/20091231/default.htm.

Given these five bank's large scale in total assets, their profitability, assets quality, liquidity management and capital adequacy ability will represent banks in USA to compare with SOCBs in China in following sections of this chapter.

3.2 Analysis of Profitability Performance

Due to the global financial tsunami, commercial banking sector in USA remained under significant pressure in 2009. Banking profitability was deteriorated by impacts of weak economy, lending activities and poor assets quality, with loan delinquency and charge-off rates rising to historical high in many cases and contracting balance sheets of banking, reflecting the weak portfolios and low profitability that weighed on the sector as a whole (Lee, 2010).

Figure 3-1 illustrates the composition of operating income of US top five banks in 2009, the proportion of net interest revenue in CITI's operating income was the highest up to 74%, hence for CITI interest revenue was the major source of profit and it was very similar to SOCBs in China, because in the same year share of net interest revenue also accounted for 70% to 82% of SOCBs' operating income.



Source: Bankscope, http://bankscope.bvdep.com/ip.

Figure 3-1: Composition of Operating Income of Top Five Banks in USA—2009

As for other four banks, their proportions of net interest revenue were between 49.2% and 64.7%, with other operating income accounted for over 50% share of operating income, BOA particularly did not rely on interest spread as source of income, in other words the bank has multiple sources of profit.

In comparison with SOCBs in China, large commercial banks in USA have multiple financial products and innovative wealth management services, they are more capable to generate income from other business activities, and commission or fee-based income contribute a lot to banks' revenue.

Table 3-3 shows net profit of US top five banks from 2008 to 2009, Wells Fargo doubled its net profit from USD 3,636 million to USD 7,872 million within one year, in addition to Wachovia turned deficit to profit, Wells Fargo was the only bank had positive growth rate of net profit comparing to its peers. During the same period, JPM, BOA, and CITI all suffered negative growth of net profit, and net profit of CITI even declined 32.98%.

Table 3-3: Net Profit of Top Five Banks in USA—2008~2009

Unit: USD million

Banks / Year	JPM	BOA	CITI	Wells Fargo	Wachovia
2008	10,419	5,895	-2,101	3,636	-3,440
2009	8,422	4,757	-2,794	7,872	4,247
Growth Rate (%)	-19.17	-19.31	-32.98	116.50	—

Source: Bankscope, http://bankscope.bvdep.com/ip.

In contrast, during the same period net profit of SOCBs in China all maintained positive growth rate of net profit from 5.71% to 29.90%. USA is the leading country in

the world, if its economy becomes worse, the impact will spread world-widely; however, in China banking sector is more conservative and relatively closed than US banking, besides accompanied by growing economy banking profitability in China seemed not suffer much from global financial crises.

Table 3-4 summarizes different kinds of profitability indicators of top five US banks from 2007 to 2009, with growing net profit Wells Fargo and Wachovia were the only two banks had increasing ROA and ROE in the period from 2008 to 2009, as for rest three representative banks, they all had dropping figures both in ROA and ROE at the same time.

Not only CITI but also Wachovia had negative ROA and ROE in 2008, and CITI even had negative figures in consecutive years from 2008 to 2009, its profitability performance was the worst among these five banks. Comparing to SOCBs, except ABC the ROA and ROE of other SOCBs were above 1% and 14%, respectively, on the average the profitability performance of China banking was better than US banking.

Table 3-4: Indicators of Profitability of Top Five Banks in USA—2007~2009

Unit: %

Bank	JPM			BOA			CITI			Wells Fargo			Wachovia		
Item \ Year	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009
ROA	0.86	0.68	0.50	0.93	0.42	0.32	0.20	-0.17	-0.23	1.32	0.72	1.37	0.83	-0.53	0.74
ROE	10.39	8.78	6.53	10.50	4.84	3.17	2.64	-2.25	-2.73	13.90	8.70	16.00	7.56	-5.15	6.61
Cost-to-Income Ratio	62.80	57.18	56.06	59.92	57.68	49.71	73.78	81.43	62.67	60.39	55.63	49.99	64.12	73.61	55.12
Net Interest Margin	2.09	2.29	2.65	2.46	2.51	2.82	3.01	3.26	3.24	4.33	4.50	5.21	2.97	2.14	3.36

Source: Bankscope, http://bankscope.bvdep.com/ip.

As to Cost-to-Income ratio, in 2009 figures of US top five banks were between 49% and 63%, and CITI particularly had the highest ratio of 62.67%. From 2007 to 2009 the average ratio of these five banks was around 61.34%; during the same period the average ratio of SOCBs was below 40%; therefore, operating cost of banking industry in USA was higher than banking industry in China.

With regard to NIM, except in 2009 the figure of CITI slightly dropped from 3.26% to 3.24%, from 2007 to 2009 figures of other four banks were rising. The main reason was that large banks experienced substantial inflow of deposits at very low interest rates, and lowering interest rate was one of the stimulus packages that central banks of western countries tended to use for conquering financial crisis, and which improved their NIM. By contrast, during 2007 to 2009, SOCBs had contracting figures of NIM.

The deterioration in credit quality across all loan categories led to a further rise in already elevated rates of loss provisioning and then resulted in depressing profitability of US commercial banking industry. In view of the changes of ROA and ROE in recent years, overall profitability performance of US banking industry was worse than China banking industry.

3.3 Evaluation of Assets Quality

In 2007 assets quality of banking industry in USA was pretty good, NPL ratio of each US representative bank was around or even lower than 1%; however, from 2008 to 2009 their NPL ratio all increased more than twice reflecting that turmoil brought from global financial crisis has made assets quality become worse significantly.

From 2008 to 2009 NPL ratio of JPM was up from 1.98% to 5.94%, as for BOA the figure was up from 2.28% to 5.08%, as for CITI the figure was up from 3.60% to

7.34%, as for Wells Fargo the figure was up from 1.16% to 3.41%, and for Wachovia the figure even increased from 0.03% to 2.92% (Table 3-5).

During the same period NPL ratios of SOCBs in China decreased year on year, quality of assets in China banking industry has improved greatly, despite ABC had very bad assets quality (23.57 % NPL ratio in 2007, but in 2009 the ratio decreased greatly to 2.91%), in 2009 NPL ratios of other SOCBs were in the range of 1.36% and 2.91% smaller than US top five banks.

Table 3-5: NPL Ratio of Top Five Banks in USA—2007~2009

Unit: %

Bank / Year	JPM	BOA	CITI	Wells Fargo	Wachovia
2007	1.14	0.67	1.14	0.48	0.83
2008	1.98	2.28	3.60	1.16	0.03
2009	5.94	5.08	7.34	3.41	2.92

Source: Bankscope, http://bankscope.bvdep.com/ip.

In addition to NPL ratio, coverage ratios of top five US banks should also be examined to see if their preparation of loan loss reserve can fully cover NPL or impaired loans.

Table 3-6 summarizes coverage ratios of top five US banks from 2007 to 2009, in 2007 the figure of every bank was higher than 100%, and the ratio of Wells Fargo was even as high as 244.27%, sufficient loan loss reserve reflecting very sound and safe financial situation. But in 2009 coverage ratios of these five banks fell sharply under 100% which meant none of them can undertake 100% default risk of total loans.

By contrast, under strict requirements of CBRC in China, from 2007 to 2009 coverage ratios of SOCBs have maintained increasing trend, and ratios of ICBC, CCB, and BOCOM were even beyond 150%, which was two times higher than the average figure of US top five banks, from this aspect the soundness of China banking industry is stronger than banking industry in USA.

Table 3-6: Coverage Ratio of Top Five Banks in USA—2007~2009

Unit: %

Bank / Year	JPM	BOA	CITI	Wells Fargo	Wachovia
2007	124.56	103.39	135.99	244.27	117.98
2008	130.72	68.54	90.06	205.18	NA
2009	74.21	64.04	66.12	84.58	93.80

Note: NA indicates no data available.
Source: Bankscope, http://bankscope.bvdep.com/ip.

3.4 Management of Liquidity Risk

In order to compare top five US banks with SOCBs about their liquidity risk management, in this section the study observes changes of three standard liquidity indicators from Bankscope database, including ‘‘Net Loans/Total Assets’’, ‘‘Net Loans/ (Deposits and Short-term Funding)’’ and ‘‘Liquid Assets/ (Deposits and Short-term Funding)’’ of representative banks in USA from 2007 to 2009 to evaluate their performances.

Table 3-7 shows that from 2007 to 2009 ratios of ‘‘Net Loans/Total Assets’’ of JPM were the lowest between 32.93% and 37.04%, demonstrating that JPM had least total assets tied up in loans, while ratios of Wells Fargo were the highest between

63.10% and 64.91%, among these five banks JPM had more liquid assets comparing to its peers. For past three years the average ratio of ‘‘Net Loans/Total Assets’’ of top five US banks was around 51.53% slightly higher than the average ratio of SOCBs during the same period.

Basically the ratio of ‘‘Net Loans/ (Deposits and Short-term Funding)’’ is very similar to ‘‘Net Loans/Total Assets’’, and the higher ratio reflects worse liquidity. From 2007 to 2009 both ratios of JPM and BOA showed downward trend while ratios of other three banks all increased, and in 2009 Wachovia particularly had the largest proportion of net loans in deposits and short-term funding (above 83%).

By comparison, the average ratio of ‘‘Net Loans/ (Deposits and Short-term Funding)’’ of these five US banks was beyond 65%, meanwhile, the average ratio of SOCBs was around 54%.

Table 3-7: Indicators of Liquidity of Top Five Banks in USA—2007~2009

Unit: %

Bank	JPM			BOA			CITI			Wells Fargo			Wachovia		
Item \ Year	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009
Net Loans/ Total Assets	37.03	37.04	32.93	50.99	47.65	49.95	40.01	44.26	54.10	64.91	63.10	64.59	62.65	59.43	64.20
Net Loans/ (Deposits and Short-term Funding)	52.78	49.28	41.10	64.11	59.10	61.78	50.62	60.03	76.52	77.69	74.39	79.60	81.83	73.95	83.52
Liquid Assets/ (Deposits and Short-term Funding)	70.03	59.45	40.79	30.16	29.77	17.66	33.02	45.55	36.75	11.55	13.16	10.86	13.58	27.14	6.37

Source: Bankscope, http://bankscope.bvdep.com/ip.

In terms of ‘‘Liquid Assets/ (Deposits and Short-term Funding)’’, the higher ratio demonstrates the bank is more liquid and less vulnerable to bank run. From 2007 to 2009 only the ratio of CITI grew from 33.02% to 36.75%, and other US banks all had dropping ratios. Although the ratio of JPM was falling, but in 2009 with figure of 40.79% JPM had the strongest capability to deal with bank run comparing to other four banks, among these top five US banks, JPM had best liquidity management, and CITI ranked the second.

By contrast, from 2007 to 2009 the average ratio of US top five banks was around 29.73%, which was almost 13% higher than the average figure of SOCBs in China during the same period.

After comparing afore-mentioned three liquidity indicators of representative banks between USA and China from 2007 to 2009, both ratios of ‘‘Net Loans/Total Assets’’ and ‘‘Net Loans/ (Deposits and Short-term Funding)’’ showed that liquidity management of banking industry in China was better and safer than banking industry in USA, but US top five banks had better control over ratios of ‘‘Liquid Assets/ (Deposits and Short-term Funding)’’.

3.5 Compliance with Basel II

Since the Basel Committee on Banking Supervision was established in 1975, USA was one of the initial funding members, and with the leading financial position in the world, USA have already fully implemented Basel II.

In consideration of banking institutions in China have not yet completely adopted Basel II, only the principle of Pillar II of Basel II (supervisory review of capital adequacy) was implemented currently; therefore, in this section I try to compare the

figures of Capital Adequacy Ratio (CAR) and Tier 1 ratio between representative banks in USA and in China to find out their ability of capital adequacy.

Table 3-8 shows CAR of US top five banks from 2007 to 2009, since 2007 every bank has met the minimum requirement of 8% CAR. From 2007 to 2009 the CAR of JPM increased from 11.82% to 13.5%, for BOA the CAR increased from 10.94% to 13.7%, for CITI the CAR increased from 13.33% to 15%, for Wells Fargo the CAR increased from 11.14% to 11.9%, and for Wachovia the figure increased from 11.45% to 13.7%. On the contrary, during the same period CAR of each SOCB in China was declining year on year.

In 2009 CAR of SOCBs were between 10% and 12%, while figures of US top five banks were in the range of 11.9% and 15%, which was a little higher than SOCBs. In this regard, the ability of capital adequacy of US banking is better.

Table 3-8: Capital Adequacy Ratio of Top Five Banks in USA—2007~2009

Unit: %

Bank / Year	JPM	BOA	CITI	Wells Fargo	Wachovia
2007	11.82	10.94	13.33	11.14	11.45
2008	12.31	11.63	15.18	10.79	10.89
2009	13.50	13.70	15.00	11.90	13.70

Source: Bankscope, http://bankscope.bvdep.com/ip.

Table 3-9 shows Tier 1 ratio of US top five banks from 2007 to 2009, since 2007 these five banks have met the minimum requirement of 4%, besides in 2009 Tier 1 ratio of top five banks in USA was between 8.9% and 13.2%, on the average the figure was higher than SOCBs in China.

Table 3-9: Tier 1 Ratio of Top Five Banks in USA—2007~2009

Unit: %

Bank / Year	JPM	BOA	CITI	Wells Fargo	Wachovia
2007	8.26	8.19	8.98	7.68	7.50
2008	8.61	8.47	9.94	7.26	6.45
2009	9.50	10.30	13.20	8.90	9.00

Source: Bankscope, http://bankscope.bvdep.com/ip.

Above comparison results regarding scale of assets, profitability performance, quality of assets, liquidity risk management, and capital adequacy ability of banking industry between China and USA are summarized in below Table 3-10 for us to better understand the difference between each other.

Table 3-10: The Comparison of Banking Industry between China and USA

Items	Country with outperformance
Scale of Assets	＝
Profitability Performance	China
Quality of Assets	China
Liquidity Management	＝
Capital Adequacy Ability	USA

Note: "＝" indicates both countries have equal performance.
Source: Prepared by author.

3.6 Summary

After comparing different aspects of banking performance between China and USA, the results showed that banking industry in China has become huge and strong enough to compete with US banking industry.

First, in terms of total assets both SOCBs and US top five banks ranked among top 100 banks in the world; therefore, the scale of representative banks in China and in USA is equivalent, and assets amount of the largest bank in China—ICBC is even greater than the number one bank in USA—JPM.

Second, after comparing profitability between US top five banks and SOCBs in China, the decreasing net profit, ROA and ROE in past three years have reflected that profitability performance of US banking industry was worse than China banking industry, and of course financial crisis and weak economy were main reasons caused depressing profitability.

However, as the leading country in the world, banks in USA are very advance, different kinds of financial products and innovative financial services have made US banks have more sources of revenue than China banking.

Third, with regard to quality of assets, rising NPL ratios and declining coverage ratios of US top five banks denotes that global financial tsunami has caused the deterioration in credit quality of loans, by contrast, NPL ratios of SOCBs decreased annually and coverage ratios of SOCBs have maintained increasing trend, hence the soundness of China banking industry is stronger than banking industry in USA. Besides, indicators relevant to evaluating liquidity risk management showed that liquidity of banks in China is not inferior to US banks.

Although overall performance of US banking industry for past three years was not good enough, both CAR and Tier 1 ratio of top five banks in USA were higher than

SOCBs demonstrating that capital adequacy ability of US banking industry remained better, and that was because USA have implemented Basel II very earlier than China and put much emphasis on maintaining capital adequacy.

國立政治大學 National Chengchi University

CHAPTER 4
Comparison of Banking Performance between China and Taiwan

Taiwan has opened up financial markets for foreign banks' investment for many years, the overall soundness, competition and innovations of financial system in Taiwan are considered better than China. But in recent years China has created rapid economic growth rate, and thanks to successful financial reforms for past thirty years, NPL ratio of commercial banks declined dramatically, profitability and management capability also improved a lot.

In this chapter the study gives an overview of current situation of banking industry in Taiwan, and uses analyses of relevant financial indicators of Taiwan representative banks to compare with SOCBs of China in four aspects including profitability, liquidity management, assets quality and ability of capital adequacy to figure out the differences between each other.

On November 16, 2009, Taiwan and China have signed MOU; however, MOU is only the first step of mutual investment between cross-strait banking industries. What are the best ways to invest in China and how to make profit in China are currently the two most concerned issues of banks in Taiwan.

Attributing to the consensus of both sides eager to forge economic ties, after half year of negotiations, Taiwan and China finally signed the Economic Cooperation Framework Agreement (ECFA) on June 29, 2010. In this chapter the study also tries to compare changes of each other's regulations on governing foreign banks' investment before and after the signing of ECFA to analyze what might be the best approach and model for banks from Taiwan to invest in China.

4.1 Overview of Banking Industry in Taiwan

In the initial stage of economic development, Taiwan government adopted financial stabilization measures and establishment of new banks was restricted, during this period most banks were owned by the state. But in 1980s liberalization and privatization of financial institutions were urged to and satisfy the need of Taiwan economic growth, as a result in 1991 Ministry of Finance (MOF) began to approve set-up of new banks and at that time there were 51 domestic banks (Shen, 2010).

According to the statistics of MOF in 2000, there were too many banks and the average scale of Taiwan banks was obviously too small; therefore, in 2001 the government implemented 〈Taiwan Financial Holding Act〉; inter-bank merger was encouraged to enlarge the scale of banks and raise overall competition and management efficiency of Taiwan banking industry. Currently there are 15 Taiwan banks as subsidiaries of financial holding companies.

Table 4-1 shows that as of the end of 2009 there are 37 domestic banks with 3,279 branches, 32 local branches of foreign banks, and other kinds of financial institutions include credit cooperatives, credit departments of farmer's and fishermen's associations, bills finance companies, and the postal savings system coexist in Taiwan's banking system.

According to the analysis result from Financial Supervisory Commission of Taiwan, most domestic banks tend to expand by opening more branch offices rather than by establishing subsidiaries or joint ventures, hence on the average only one domestic bank owns almost 90 branches.

As to quantity of financial employees, in 2009 there were 156,312 employees in Taiwan banking institutions, more than 82% were hired by domestic banks, and each domestic bank has average number of 3,469 workers.

Table 4-1: Banking Institutions in Taiwan—2009

Item \ Type	Domestic Banks	Local Branches of Foreign Banks	Credit Cooperatives	Credit Departments of Farmer's Associations	Credit Departments of Fishermen's Associations	Bills Finance Companies	The Postal Savings System	**Total**
Head Office (Number)	37	32	26	275	25	10	1	**406**
Branches (Number)	3,279	133	258	811	42	32	1,321	**5,876**
Employees (Number)	128,348	7,758	4,413	13,822	582	973	416	**156,312**

Note: Number of Branches of ''Local branches of foreign banks'' includes "Head office".
Source: Central Bank of the Republic of China (2009), *Financial Statistics Monthly, Taiwan District, R.O.C.*; Financial Supervisory Commission, Executive Yuan, R.O.C., http://www.fsc.gov.tw/Layout/main_ch/BS_BSList.aspx?path=2566& Language=1&Page=2.

In China the average number of employees of each SOCB is close to 300 thousand, merely employees of single SOCB exceed the total financial employees in Taiwan, as for JSCBs and city commercial banks the average employees of them are 13,985 and 1,109, respectively. From this aspect the scale of Taiwan domestic banks is between JSCBs and city commercial banks.

Table 4-2 shows that both in assets and in equities domestic banks accounted for major market share in Taiwan, that were 75.23% and 83.19%, respectively. In terms of assets, the postal savings system ranked the second accounted for 11.66% market share by NTD 4,762 billion, and local branches of foreign bank ranked the third accounted for 5.78% market share by NTD 2,362 billion of total assets.

With regard to equities, bills finance companies ranked the second accounted for 5% market share by NTD 116 billion of equities, and the second was credit departments of farmer's associations accounted for 3.89% market share by NTD 91 billion of equities.

Table 4-2: Assets and Equities of Banking Institutions in Taiwan—2009

Item \ Type	Domestic Banks	Local Branches of Foreign Banks	Credit Cooperatives	Credit Departments of Farmer's Associations	Credit Departments of Fishermen's Associations	Bills Finance Companies	The Postal Savings System	**Total**
Assets (NTD billion)	30,725	2,362	615	1,608	44	729	4,762	**40,844**
Market Share (%)	75.23	5.78	1.50	3.94	0.11	1.79	11.66	**100**
Equities (NTD billion)	1,936	71	38	91	1	116	74	**2,328**
Market Share (%)	83.19	3.04	1.64	3.89	0.06	5.00	3.18	**100**

Source: Same as Table 4-1.

In 2009 domestic banks also accounted for major market share in terms of loans and deposits, over 90% of loans in Taiwan were credited by domestic banks, and 75.7 % of total deposits were also taken by them. Although The Postal Savings System offers only remittance and deposit services, with widespread network of more than 1,300 post offices national wide, which accounted for 15.38 % market share of outstanding deposits (Table 4-3).

Table 4-3: Loans and Deposits of Banking Institutions in Taiwan—2009

Item \ Type	Domestic Banks	Local Branches of Foreign Banks	Credit Cooperatives	Credit Department of Farmer's and Fishermen's Associations	The Postal Savings System	**Total**
Loans (NTD billion)	17,078	507	329	689	0	**18,604**
Market Share (%)	91.80	2.73	1.77	3.71	0	**100**
Deposits (NTD billion)	21,758	583	539	1,440	4,422	**28,741**
Market Share (%)	75.70	2.03	1.87	5.01	15.38	**100**

Note: Loans include short-term, medium and long-term loans, overdrafts, and discounts.
Source: Financial Supervisory Commission, Executive Yuan, R.O.C., http://www.banking.gov.tw/Layout/main_en/ArtHtml_Show.aspx?ID=55d2e230-28b5-4640-a970-bacd81f2823f&path=2923.

Table 4-4 lists top ten largest banks in Taiwan in terms of assets, all of them are domestic banks, except for Bank of Taiwan (BOT) and Land Bank of Taiwan (LBOT) are 100% state-owned, the rest eight banks have already been privatized, their shares owned by the government are less than 50%, and seven of these top ten banks are subsidiaries of financial holding companies.

If we classify these ten banks according to specialization, only Taiwan Cooperative Bank (TCB) and LBOT are classified as specialty banks, both of them have particular missions given by the government. Under the charter of TCB, one of its functions is to provide finances for cooperative enterprises, the farming and fishery industries, and LBOT is a real-estate specialty bank one of its functions is to conduct special loans pursuant to government policies to enhance national economic development, in addition to afore-mentioned special missions, TCB and LBOT also provide services of commercial banks.

According to article 10 of Taiwan's〈Regulations Governing Approvals of Banks to Engage in Financial Activities between the Taiwan Area and the Mainland Area〉, one of the requirements to set up representative office in China is that prior to submitting an application assets and net worth in the fiscal year of the Taiwan bank must ranked among the top ten domestic banks, up to February of 2010, except for Taipei Fubon Commercial Bank other nine Taiwan banks already have representative offices in China.

In 2009 Domestic Banks were possessed of 75.23% total assets in Taiwan banking system, but merely the sum of assets of top five domestic banks accounted for nearly 41% of market share, and also accounted for 36.14% of total banking equities.[29] Top five domestic banks are BOT, TCB, Mega International Commercial Bank

[29] According to statistics of Central Bank of the Republic of China, as of the end of 2009 total assets and equities of top five domestic bank in Taiwan were around NTD 12,600 billion and NTD 700 billion, respectively.

(MEGA), LBOT, and First Commercial Bank (FCB), they are now or once belonged to state-owned banks. Additionally, except TCB and LBOT, other three top five banks, BOT, MEGA and FCB belong to financial holding companies.

Table 4-4: Top Ten Largest Banks in Taiwan

Item / Bank	Domestic Ranking	World Ranking	State or Private	Subsidiary of Financial Holding Company	Commercial or Specialty	Representative Office in China
Bank of Taiwan	1	206	State	Y	Commercial	Y
Taiwan Cooperative Bank	2	271	Private	N	Specialty	Y
Mega International Commercial Bank	3	313	Private	Y	Commercial	Y
Land Bank Of Taiwan	4	334	State	N	Specialty	Y
First Commercial Bank	5	359	Private	Y	Commercial	Y
Chinatrust Commercial Bank	6	393	Private	Y	Commercial	Y
Hua Nan Commercial Bank	7	395	Private	Y	Commercial	Y
Cathay United Bank	8	436	Private	Y	Commercial	Y
Chang Hwa Commercial Bank	9	451	Private	N	Commercial	Y
Taipei Fubon Commercial Bank	10	485	Private	Y	Commercial	N

Note: 1. According to Bankscope work rank is based on each bank's total assets of last available fiscal year.
2. World ranking is updated as of July 12, 2010.
3. If more than 50% of shares are held by the government then the bank is categorized as a state-owned bank.
4. Y indicates yes; N indicates no.

Source: Bankscope, http://bankscope.bvdep.com/ip; Official website of each banks; Financial Supervisory Commission, Executive Yuan, R.O.C., http://www.banking.gov.tw/Layout/main_ch/FscSearch_BankMain.aspx?path=1614&Type=1.

國立政治大學 National Chengchi University

Table 4-5 summarizes amount of total assets, equities, loans, deposits, number of branches and employees of top five Taiwan bank in 2009. As the largest commercial bank in Taiwan, BOT also had the highest amount of total assets, equities, Loans and deposits.

If we sort top five Taiwan banks in terms of equities, MEGA defeated TCB and ranked the second by NTD 156 billion of equities; in terms of loans, LBOT defeated MEGA and ranked the third by NTD 1,576 billion of loans, as to deposits the ranking of these five banks were consistent with total assets. Among top five banks, TCB had 298 domestic branches and 8,980 banking employees providing the most intensive service network in Taiwan.

Table 4-5: Top Five Banks in Taiwan—2009

Item / Bank	Total Assets (NTD billion)	Equities (NTD billion)	Loans (NTD billion)	Deposits (NTD billion)	Number of Branches	Number of Employees
BOT	3,891	241	2,046	3,400	170	8,459
TCB	2,569	110	1,797	2,314	298	8,980
MEGA	2,198	156	1,265	1,930	126	5,105
LBOT	2,099	100	1,576	1,927	151	5,824
FCB	1,921	90	1,096	1,699	187	7,094

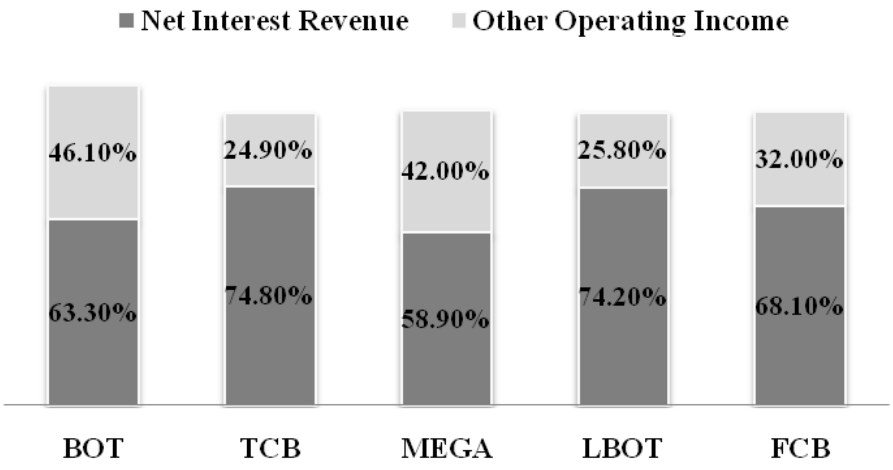
Note: 1. Loans include short-term funding.
2. Number of branches only includes domestic branch.
3. Number of employees of LBOT is calculated as at March of 2009.
Source: Bankscope, http://bankscope.bvdep.com/ip; LBOT, *Annual Report*, 2008; TCB, FCB, *Annual Report*, 2009.

Given top five Taiwan banks' large scale both in assets and equities, in the study they are chosen as representative banks for Taiwan to compare with SOCBs in China regarding banking performance in different aspects.

4.2 Analysis of Profitability Performance

Figure 4-1 illustrates the composition of operating income of top five Taiwan banks in 2009, among these five banks proportion of net interest revenue of MEGA was the lowest only 58.9%, suggesting that the bank has less dependence on interest revenue as source of profit.

As for other four Taiwan representative banks, proportions of net interest revenue were between 63.30% and 74.80% while proportions of SOCBs in China were in the range of 71.10% and 81.80%, both banks in Taiwan and in China depend on granting loans to earn interest income.



Note: Each proportion of net interest revenue and other operating income just demonstrates how much share of it accounts for operating income.
Source: Bankscope, http://bankscope.bvdep.com/ip.

Figure 4-1: Composition of Operating Income of Top Five Banks in Taiwan—2009

From 2008 to 2009 with 211.63% growth rate of net profit, MEGA was the only bank enjoyed growing net profit among its peers, moreover, in 2009 MEGA was also the king profit maker in Taiwan banking industry, but at the same time other four Taiwan top banks all suffered backward net losses due to the global financial tsunami which occurred in the third quarter of 2008 originated from USA deteriorating overall performance of Taiwan banking industry (Table 4-6).

On the contrary, during the same period net profit of every SOCB in China maintained positive growth rate (5.71% to 29.9%), banking performance seemed not suffer much from financial and economic crises.

Table 4-6: Net Profit of Top Five Banks in Taiwan－2008~2009

Unit: NTD billion

Banks / Year	BOT	TCB	MEGA	LBOT	FCB
2008	8.15	7.53	3.42	5.86	8.97
2009	8.12	6.87	10.66	5.70	2.05
Growth Rate (%)	-0.43	-8.72	211.63	-2.70	-77.09

Source: Bankscope, http://bankscope.bvdep.com/ip.

Table 4-7 summarizes indicators regarding profitability evaluation of top five Taiwan banks; from 2007 to 2009 all of them had decreasing ROA and ROE. In 2009 ROA and ROE of BOT dropped to 0.22% and 3.5%, respectively; ROA and ROE of TCB dropped to 0.27% and 6.32%; ROA and ROE of MEGA dropped to 0.5% and 7.16%, respectively; ROA and ROE of LBOT dropped to 0.28% and 5.73%, respectively; for FCB its ROA and ROE dropped to 0.11% and 2.29%, respectively.

Among others MEGA had the highest ratios of ROA and ROE in 2009, conversely FCB had the lowest figures of both indicators. During the same period in comparison with SOCBs of China not only ROA but also ROE of were higher than Taiwan top five banks.

As to Cost-to-Income ratio, the average ratio of Taiwan top five banks was around 52.33% from 2007 to 2009; during the same period the average ratio of SOCBs was below 40%; therefore, operating cost of Taiwan banking was higher than China banking. Besides, NIM of each Taiwan top five banks was also lower than SOCBs, showing that interest spread between loans and deposits in Taiwan banking industry was smaller than China's.

Table 4-7: Indicators of Profitability of Top Five Banks in Taiwan—2007~2009

Unit: %

Bank	BOT			TCB			MEGA			LBOT			FCB		
Item \ Year	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009
ROA	0.38	0.24	0.22	0.41	0.31	0.27	0.75	0.17	0.5	0.34	0.31	0.28	0.75	0.52	0.11
ROE	5.09	3.45	3.50	9.73	7.19	6.32	9.28	2.33	7.16	6.53	6.18	5.73	13.6	10.01	2.29
Cost-to-Income Ratio	56.72	58.08	58.74	57.14	57.11	60.55	39.01	51.89	39.18	52.57	52.13	55.28	42.91	45.96	57.63
Net Interest Margin	0.56	0.73	0.48	1.14	1.21	0.98	1.27	1.43	1.08	0.95	0.99	0.81	1.48	1.52	0.93

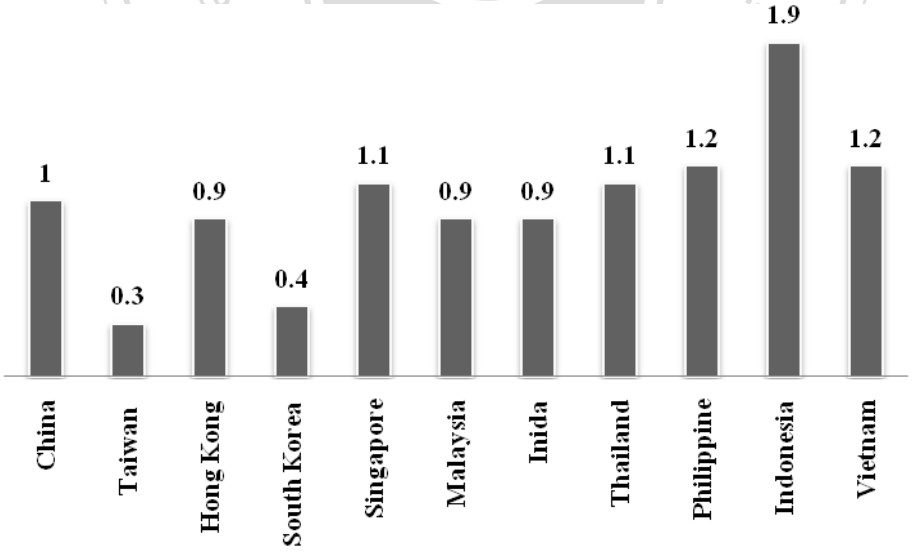
Source: Bankscope, http://bankscope.bvdep.com/ip.

In the end of year 2009, there are 406 financial institutions in Taiwan, and the number of branches has reached 5,876, on the average a branch provide services to

3,935 Taiwan citizens, but in China one branch banking institution serves around 6,900 people, serious overbanking problem and competitive financial markets have suppressed profit margins in Taiwan banking industry.[30]

No wonder decreasing figures of ROA, ROE, net interest margin, and increasing cost-to-income ratio demonstrate that profitability performance of Taiwan top five banks was worse than SOCBs in China.

According to the report of credit rating agency-Fitch Ratings, comparing banking sectors of Asian countries, average ROA of China's banking industry in 2009 was 1%, suggesting that its profitability was stronger than Taiwan (0.3%), Hong Kong (0.9%), South Korea (0.4%), Malaysia and India (0.9%), but inferior to Singapore (1.1%), Thailand (1.1%), Philippines (1.2%), Indonesia (1.9%), and Vietnam (1.2%), in this regard profitability performance of Taiwan banking industry was the worst among Asian countries (Figure 4-2).



Source: Fitch Ratings, http://www.fitchratings.com.

Figure 4-2: ROA of Asian Banking Industry—2009

[30] In 2009 total population in Taiwan was 23,119,772. See http://www.moi.gov.tw/stat/english/year.asp.

4.3 Evaluation of Assets Quality

From 2007 to 2009 only BOT had increased NPL ratio, meanwhile, the ratio of TCB decreased from 1.67% to 1.43%, for MEGA the ratio decreased from 1% to 0.95%, for LBOT the ratio decreased from 1.15% to 0.79%, as to FCB the ratio decreased from 1.5% to 1.32%. In 2009 among top five Taiwan banks, NPL ratio of LBOT was the lowest while the ratio of TCB was the highest; however, since 2007 these five Taiwan banks have maintained very low NPL ratios and some figures were even less than 1% (Table 4-8).

Table 4-8: NPL Ratio of Top Five Banks in Taiwan —2007~2009

Unit: %

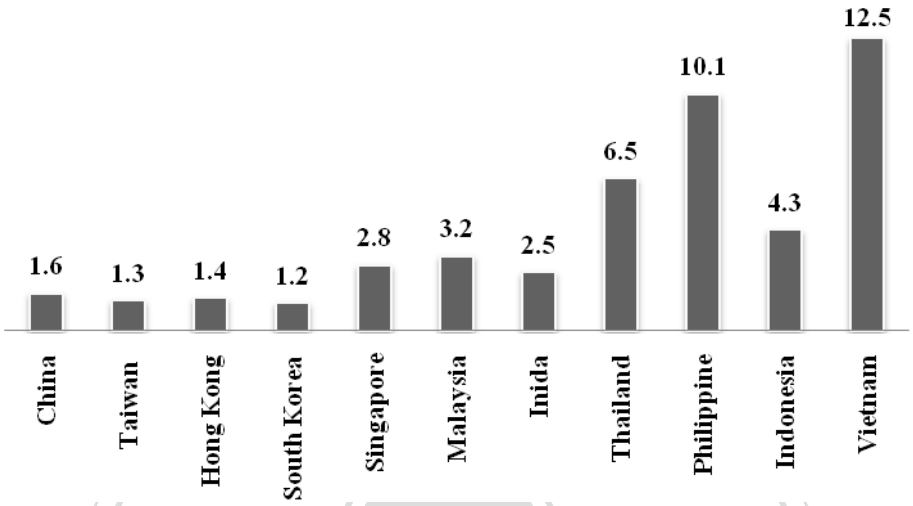
Bank / Year	BOT	TCB	MEGA	LBOT	FCB
2007	0.97	1.67	1.00	1.15	1.5
2008	1.06	1.52	1.16	1.00	1.45
2009	1.03	1.43	0.95	0.79	1.32

Source: Bankscope, http://bankscope.bvdep.com/ip.

During the same period NPL ratios of SOCBs in China were falling annually, in 2009 NPL ratios of SOCBs were all less than 2%; by comparison the figures were still higher than Taiwan top five banks nevertheless. As a result we can say that assets quality of Taiwan banking is better than China banking.

According to the research report of credit rating agency-Fitch Ratings, comparing banking sectors of Asian countries, the average NPL ratio of China's banking industry in 2009 was around 1.6%, higher than Taiwan (1.3%), Hong Kong (1.4%) and South

Korea (1.2%), but lower than other Asian countries. General speaking both banking industry in Taiwan and in China have good quality of assets (Figure 4-3).



Source: Fitch Ratings, http://www.fitchratings.com.

Figure 4-3: NPL Ratio of Asian Banking Industry—2009

Apart from NPL ratio, we should also examine coverage ratios of top five Taiwan banks to see how well they prepare for loan loss reserve to their non-performing or impaired loans. Table 4-9 summarizes coverage ratios of top five banks in Taiwan, from 2007 to 2009 only BOT had falling ratio from 71.25% to 60.82%, for TCB the ratio grew from 55.97% to 66.65%, for MEGA the ratio grew a lot from 87.1% to 126.49%, the ratio of LBOT also increased greatly from 88.18% to 145.72%, for FCB the ratio increased from 56.31% to 86.81%.

In 2007 coverage ratio of each representative Taiwan bank was smaller than 100%, which meant that at the time none of them can undertake total risk of default, in 2008 only the coverage ratio of LBOT was greater than 100 %, and in 2009 MEGA also had coverage ratio over 100 % beside LBOT.

Table 4-9: Coverage Ratio of Top Five Banks in Taiwan—2007~2009

Unit: %

Bank / Year	BOT	TCB	MEGA	LBOT	FCB
2007	71.25	55.97	87.10	88.18	56.31
2008	54.91	58.71	89.31	104.16	57.14
2009	60.82	66.65	126.49	145.72	86.81

Source: Bankscope, http://bankscope.bvdep.com/ip.

Comparing SOCBs with Taiwan top five banks, began from year 2008 coverage ratios of each SOCB already higher than 100% excluding ABC, and in 2009 the ratio of CCB even as high as 175.77%. Under strict requirements of China banking supervisory institution-CBRC, the capability of China banks to cover loan losses is getting better and better.

Despite Taiwan banks have better control over NPL problems than China banks, in the aspect of coverage ratio the ability of Taiwan banks to undertake risk of default from their customers seems poorer than China banks.

4.4 Management of Liquidity Risk

Although high saving ratio in Taiwan keeps the liquidity of financial system, global financial tsunami still brought recession and negative impact to Taiwan, hence the government made every effort to stimulate economy and fight recession.

Table 4-10 summarizes three liquidity indicators including ‘‘Net Loans/Total Assets’’, ‘‘Net Loans/ (Deposits and Short-term Funding)’’ and ‘‘Liquid Assets/ (Deposits and Short-term Funding)’’ of top five Taiwan banks from 2007 to 2009.

Table 4-10: Indicators of Liquidity of Top Five Banks in Taiwan—2007~2009

Unit: %

Bank	BOT			TCB			MEGA			LBOT			FCB		
Item \ Year	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009
Net Loans/ Total Assets	57.37	55.31	52.58	71.43	73.68	69.98	61.33	63.57	57.56	75.02	75.59	75.08	64.76	65.73	57.04
Net Loans/ (Deposits and Short-term Funding)	70.35	63.14	60.17	79.23	81.74	77.68	72.24	73.98	65.53	82.66	83.03	81.81	75.82	76.61	64.51
Liquid Assets/ (Deposits and Short-term Funding)	28.59	35.44	40.46	12.25	11.85	12.07	25.53	22.55	21.60	11.17	10.19	10.25	13.91	13.76	14.45

Source: Bankscope, http://bankscope.bvdep.com/ip.

During 2007 to 2009 ratios of ‘‘Net Loans/Total Assets’’ of top five Taiwan banks were in the range between 50% and 76%, and figures of BOT were the lowest between 52.58% and 57.37%, while figures of LBOT were the highest between 75.02% and 75.59%, showing that around 75% of LBOT’s total assets were occupied by net loans and also reflecting the bank was less liquid comparing to peers. For last three year the average ratio of Taiwan top five banks was around 65% almost 20% higher than the average ratio of SOCBs in China, reflecting that Taiwan banking was less liquid than China banking.

Ratios of ‘‘Net Loans/ (Deposits and Short-term Funding)’’ of Taiwan top five banks were between 60% and 84% from 2007 to 2009, and the average figure was 73.9%, meanwhile, the average figure of SOCBs was only 49.86%. In this respect, Taiwan banks were also less liquid than SOCBs.

Since 2007 ratio of ‘‘Liquid Assets/ (Deposits and Short-term Funding)’’ of BOT

has risen steadily year after year while ratios of other Taiwan banks show only slight fluctuations, and in 2009 the ratio of BOT was almost four times higher than its peer, accordingly we could say that BOT has better capability to handle the situation of suddenly bank run. By comparison, from 2007 to 2009 the average figure was 18.94% nearly 2% higher than the average figure of SOCBs.

After comparing afore-mentioned three liquidity indicators, both ratios of ‘‘Net Loans/Total Assets’’ and ‘‘Net Loans/ (Deposits and Short-term Funding)’’ showed that liquidity risk management of China banking industry was better and safer than Taiwan banking industry for past three years, and ratios of ‘‘Liquid Assets/ (Deposits and Short-term Funding)’’ of SOCBs evenly matched top five banks in Taiwan.

4.5 Compliance with Basel II

Since Basel I was proposed in 1988, Taiwan soon amended the Banking Act and set up the provision of minimum 8% CAR for Taiwan banks in 1989; after Basel II was promoted in 1998, Taiwan government didn’t adopt it until 2007 due to some preparation work.

On January 4, 2007 Financial Supervisory Commission issued amendments to the 〈Regulations Governing the Capital Adequacy of Banks〉and related instructions for capital adequacy calculations; from then on Taiwan banking has officially implemented Basel II.

Table 4-11 shows CAR of Taiwan top five banks from 2007 to 2009, the figure were between 10% and 12.5%, ever since 2007 Taiwan top five banks have met the minimum requirement of 8% CAR. During the same period except ABC the figure of other SOCBs were between 11% and 14.4%, on the average the CAR of SOCBs was higher than Taiwan top five banks.

Table 4-11: Capital Adequacy Ratio of Top Five Banks in Taiwan—2007~2009

Unit: %

Bank / Year	BOT	TCB	MEGA	LBOT	FCB
2007	12.47	11.09	10.54	10.47	10.8
2008	11.63	10.59	11.2	10.81	10.88
2009	11.89	10.58	11.73	10.54	11.01

Source: Bankscope, http://bankscope.bvdep.com/ip.

Table 4-12 shows Tier 1 ratio of Taiwan top five banks from 2007 to 2009, since 2007 all of them have met the minimum requirement of 4% Tier 1 ratio. From 2007 to 2009, BOT had the highest figures which were in the range of 11.35% and 12.01%, MEGA ranked the second with figures between 9.04% and 9.88%, TCB had the lowest figures which were between 6.47% and 6.74%.

During the same period the average Tier 1 ratio of top five banks in Taiwan was 8.64%, and which was a little lower than SOCBs' 8.85% average figure; however, basically both of them have met the Basel II requirement.

Table 4-12: Tier 1 Ratio of Top Five Banks in Taiwan—2007~2009

Unit: %

Bank / Year	BOT	TCB	MEGA	LBOT	FCB
2007	12.01	6.56	9.80	7.86	7.30
2008	11.35	6.47	9.04	7.52	7.10
2009	11.67	6.74	9.88	7.45	7.45

Source: Bankscope, http://bankscope.bvdep.com/ip.

In conclusion, both average figures of CAR and Tier 1 ratio of SOCBs in China from 2007 to 2009 were higher than Taiwan top five banks and that reflects banking industry in China has better capital adequacy ability.

Above comparison results of different financial indicators and figures regarding the scale of total assets, profitability performance, assets quality, liquidity management, and capital adequacy ability of banking industry between China and Taiwan are summarized in Table 4-13.

Table 4-13: The Comparison of Banking Industry between China and Taiwan

Items	Country with outperformance
Scale of Assets	China
Profitability Performance	China
Quality of Assets	Taiwan
Liquidity Management	China
Capital Adequacy Ability	China

Source: Prepared by author.

4.6 Development Opportunities for Taiwan Banks in China

For many years banks from Taiwan are keen on exploring financial markets in China, but investment in China's banking industry is strictly forbidden by our government. The signing of MOU on November 16, 2009 is the entrance ticket and also a turning point for cross-strait mutual financial development; however, it does not mean every kind of banking investment in China is permitted immediately.

In accordance with China's〈Regulations of the People's Republic of China on Administration of Foreign-funded Banks〉, which has set up requirements for foreign banks' entrance in China. Currently there are three types of entrance approaches for banks from Taiwan to choose, including establishing branches, wholly foreign-funded banks, or cooperate with Chinese enterprises to establish Chinese-foreign joint venture banks (Table 4-14).

But there is another limitation if Taiwan banks want to do RMB business in China, they must have opened business in China for at least three years and maintained profitable for two consecutive years prior to application.

Table 4-14: Requirements for Foreign Banks' Entrance in China before ECFA

Type / Requirement	Branch of Foreign Bank	Wholly Foreign-Funded Bank	Chinese-Foreign Joint Venture Bank
Capital formation	Wholly foreign capital	Wholly foreign capital	Chinese-foreign joint venture
Representative offices in China	At least 2 years	At least 2 years	Foreign capital already has representative office
Total assets of parent bank in previous year	More than USD 20 billion	More than USD 10 billion	More than USD 10 billion
Minimum registered capital	No	RMB 1 billion	RMB 1 billion
Operating capital from parent bank	More than RMB 200 million	No	No
RMB Business	1. Having opened business in China at least three years 2. Making profit for two consecutive years	Same as Branch of Foreign Bank	Same as Branch of Foreign Bank

Note: Capital can be paid either in RMB or in other convertible currencies.
Source: China Banking Regulatory Commission, http://www.cbrc.gov.cn/english/home/jsp/docView.jsp?docID=2871.

Ever since WTO admitted China's accession in 2001, foreign banks from other countries have cultivated in China for many years, comparing to them banks from Taiwan seem already lost initial opportunities to explore China financial markets; therefore, if Taiwan banks need to follow the same requirements as other foreign banks do, it would be too late to develop in China.

In order to lower the entrance hurdle for banks from Taiwan, after MOU signing the government of Taiwan soon moved to the next stage of ECFA negotiations with China authority.

After over six months of negotiations, ECFA finally has been signed by Taiwan and China on June 29, 2010. According to the list of early harvest under ECFA, if Taiwan banks want to establish branches or wholly foreign-funded banks in China, the time requirement to have a representative office in China is shortened from 2 years to only 1 year, besides, time requirement for Taiwan banks to do RMB business is also shortened to have opened business in China for at least 2 years and maintained profitable for 1 year prior to application.

Table 4-15 shows that by the end of June 2010, there are eleven Taiwan domestic banks have representative offices in China, and seven of them have set up representative office more than 1 year, including TCB, LBOT, FCB, Chinatrust Commercial Bank, Hua Nan Commercial Bank, Cathay United Bank, and Chang Hwa Commercial Bank, after checking their total assets in fiscal year of 2009, they are now all qualified to set up branches in China.

On June 24, 2010 Financial Supervisory Commission of Taiwan has approved LBOT to establish a branch in Shanghai, TCB to establish a branch in Suzhou, FCB to establish a branch in Shanghai, and Chang Hwa Commercial Banks to establish a branch in Kunshan.

Table 4-15: Representative Offices of Taiwan Banks In China—2010

Item / Bank	Date of set up (Year/Month/Day)	Location	Qualified to set up branches	Approved to set up branches
BOT	2010/02/01	Shanghai	N	N
TCB	2002/11/07	Beijing	Y	Y
MEGA	2009/10/28	Suzhou	N	N
LBOT	2003/04/09	Shanghai	Y	Y
FCB	2003/03/07	Shanghai	Y	Y
Chinatrust Commercial Bank	2003/01/20	Beijing	Y	N
Hua Nan Commercial Bank	2002/11/26	Shenzhen	Y	N
Cathay United Bank	2002/05/15	Shanghai	Y	N
Chang Hwa Commercial Bank	2002/04/08	Kunshan	Y	Y
E. Sun Commercial Bank	2010/04/28	Dongguan	N	N
Taiwan Business Bank	2010/06/24	Shanghai	N	N

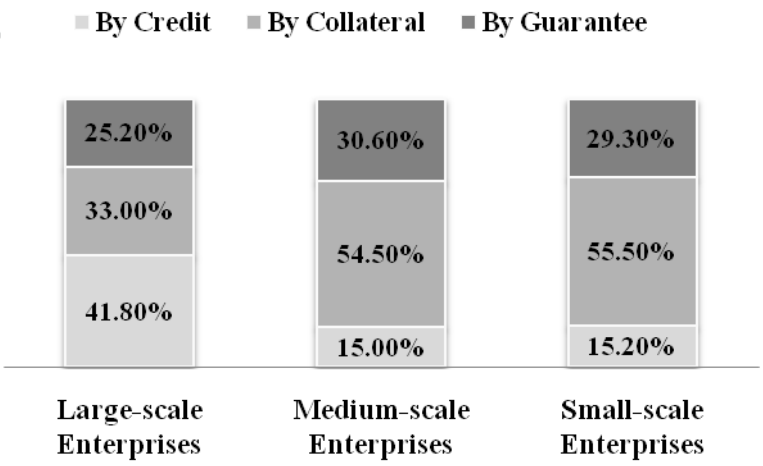
Note: Y indicates yes; N indicates no.
Source: Financial Supervisory Commission, Executive Yuan, R.O.C., Domestic Banks, http://www.banking.gov.tw/Layout/main_ch/FscSearch_BankMain.aspx?path=1614&Type=1. (In Chinese)

As for other small scale domestic Taiwan banks which have not yet or not qualified to set up representative offices in China, in my opinion the easier and quicker way to enter China financial markets is to cooperate with Chinese enterprises and establish Chinese-foreign joint venture banks.

Otherwise, there is still another option, that is to buy shares of China banks but under current regulations the equity investment proportion of a single overseas financial institution in a Chinese financial institution shall not exceed 20%, and the limit of total shares of one China bank possessed by foreign financial institutions is 25%.[31]

Although the door to China financial markets is already opened, it is definitely a big challenge for us to compete with foreign banks which have developed in China for a long time; right now the most concerned issue is to find out what kind of business could be suitable and profitable for banks from Taiwan to invest in China.

Figure 4-4 demonstrates that commercial banks in China put emphasis on large enterprises and tend to give loans to them by credit, however, due to the small scale and without government protection, in China Small and Medium Enterprises (SMEs) are often required to provide collateral or guarantee, and consequently in China it is very difficult for SMEs to acquire funds.



Source: China Financial Publishing House (2009), *Almanac of China's Finance and Banking*.

Figure 4-4: Credit Forms of Corporate Loans in China—2008

[31] See China Banking Regulatory Commission, http://www.cbrc.gov.cn/english/home/jsp/docView.jsp?docID=552.

Table 4-16 shows that from 2004 to 2009 the amount of loan balance granting to SMEs from Taiwan domestic banks has increased by 42.27% from NTD 2,252 billion to NTD 3,204 billion, and the proportion of SMEs loan balance accounts for total corporate loans in Taiwan also increase year on year.

Most enterprises in Taiwan are SMEs, and SMEs are very important corporate customer base in Taiwan banking industry, and we have more experience of granting loans to SMEs than China banking, thus under ECFA's list of early harvest China government allows banks from Taiwan to establish specific institutions to provide services to small-scale enterprises.

Table 4-16: Loan Balance of SMEs of Taiwan Domestic Banks—2004~2009

Item \ Year	2004	2005	2006	2007	2008	2009
Amount (NTD billion)	2,252	2,535	2,745	3,005	3,138	3,204
Account for total corporate loans (%)	37.31	39.33	39.87	41.40	40.51	42.66

Source: Banking Bureau, Financial Statistics, http://www.banking.gov.tw/Layout/main_ch/News_NewsContent.aspx?NewsID=21214&path=2243&LanguageType=1. (In Chinese)

Once Taiwan banks have branches in China, it will be easier to control the use of funds and operation status of Taiwan enterprises in China, if customers went bankrupt, it also facilitate debt collecting and further to curb financial crime events, e.g. ''Debt in Taiwan, Assets in China'' which happened frequently in recent years.

Additionally, according to the crude statistics of Taiwan's Strait Exchange Foundation, currently there are about 800,000 Taiwan business people in China, they need good and advance financial services and sometimes it is very difficult for them to

obtain from China banks, for example, some commercial banks in China do not provide remittance services for individuals, hence Taiwan business people and their family in China could be the primary customer base for banks from Taiwan to provide consumer banking services.[32]

Because China is still a developing country, financial markets are highly regulated and under government's protection, China government has great power to decide what kind of business could be opened for foreign financial institutions, besides the ''hidden rules'' in China are unpredictable, and adaptation to local conditions and expansion of market share are also big challenges for Taiwan banks to overcome in the future. Now ECFA's list of early harvest only shorten time requirement of Taiwan banks' entrance and open business of small-scale enterprises, other business items opened for investment still need further cross-strait negotiations.

In general, the study suggests that in the initial stage Taiwan banks can focus on serving Taiwan enterprises to expand market share of corporate banking and to expand market share of consumer banking by providing services to Taiwan business people, and then gradually extend to local Chinese customers.

4.7 Summary

After comparing different aspects of banking performance between China and Taiwan, the results have showed that banking industry in China has made a lot of progress in recent years, and Taiwan banks perform better than China banks only in the respect of assets quality.

First, in terms of total assets and number of employees, the scale of Taiwan

[32] See Straits Exchange Foundation Taiwan Businessmen Information Web, http://www.seftb.org/mhypage.exe?HYPAGE=/service/service_item.asp&cid=1. (In Chinese)

domestic banks is bigger than city commercial banks in China but smaller than JSCBs, and the scale of SOCBs are too big for Taiwan banks to compete with.

Second, after comparing profitability performance between banks in Taiwan and in China, figures of net profit, ROA and ROE of SOCBs were higher than Taiwan top five banks in past three years, reflecting that profitability performance of banking industry in Taiwan was worse than China. In addition to overbanking problem in Taiwan has narrowed down profit margins, another reason is that financial market in Taiwan is more open than China, Taiwan banks are easier to be affected by global financial tsunami and further deteriorate profitability.

Third, with regard to quality of assets, although NPL ratios of SOCBs in China were declining significantly every year, but in comparison with Taiwan top five banks, they still had higher figure of average NPL ratio, consequently assets quality of Taiwan banks is better than China banks. However, coverage ratios of SOCBs were much higher than Taiwan top five banks, demonstrating the capability of China banks to cover loan losses is better than Taiwan banks.

Fourth, by comparing three indicators relevant to liquidity risk management evaluation between Taiwan top five banks and SOCBs, the result showed that liquidity of banks in China is better, but Taiwan banks have higher proportion of liquid assets in their deposits and short-term funding.

With regard to capital adequacy ability, from 2007 to 2009 both average figures of CAR and Tier 1 ratio of SOCBs were higher than Taiwan top five banks, and that reflected capital adequacy ability of China banking industry was better than Taiwan banking industry.

In conclusion, financial markets in China are very big and full of opportunities for banks from Taiwan to explore, since ECFA has been signed and currently four Taiwan

banks got the approval to establish branches in China, in the aspect of corporate banking, Taiwan banks could start business by providing financial services to local Taiwan business enterprises; as for consumer banking, Taiwan business people in China could be the primary customer base for banks from Taiwan to expand market share.

國立政治大學 National Chengchi University

CHAPTER 5
Conclusions and Suggestions

China has been experienced reform and opening up more than thirty years, but it is essentially a one-party regime and planned-economy country. In the initial period of reform era, banking operation in China was led by government policies, however, since China became a WTO member, and state-owned commercial banks went public sequentially, banking industry in China has been gradually moving from policy-controlled to profit-oriented development.

With growing competition brought from foreign financial institutions, Chinese commercial banks have made a lot of effort to improve accordingly, although the development history of commercial banking in contemporary China is very short, amazing progress has stunned the whole world, and major findings of the study contribute to following conclusions and suggestions.

5.1 Conclusions

After examining and comparing performance in four aspects of profitability, assets quality, liquidity management and capital adequacy ability among banks in China, Taiwan and USA, the results showed that general performance of banking industry and particularly large state-owned commercial banks in China have improved greatly and even better than advanced countries in some aspects. Conclusions of the study are summarized as below:

1. Profitability performance of banking industry in China is very good

Figures of average ROA and ROE of SOCBs in China have reached the standard

of top 100 banks in the world, nevertheless in China the benchmark lending rate and saving rate are controlled by the PBC and that is an important reason allowing banks in China to maintain high interest spread.

On the contrary, in Taiwan overbanked and highly competitive financial markets narrowed down profit margins of commercial banks, average figure of selected indicators such as ROA, ROE, and net interest margin are lower than SOCBs, reflecting that profitability performance of banking industry in Taiwan was inferior to China.

2. Assets quality of commercial banks in China has improved a lot

Without rule of laws and supervisory regulations, in the initial stage of financial reforms, high amounts and ratio of NPL showed that banking industry in China was very backward. But after a serious of implementation of laws and regulations, descending NPL ratios shows that assets quality of commercial banks has improved a lot and government's policies on controlling NPL problems and improving risk management are effective, moreover, rising coverage ratios of SOCBs in recent years also shows that SOCBs have better capability to undertake default risk of bad loans.

In comparison with China, Taiwan banking industry has longer development history and more regulated financial environment, average NPL ratio of Taiwan banks was lower than SOCBs', which means that Taiwan banks have better assets quality. But coverage ratios of Taiwan top five banks were lower than SOCBs', showing that Taiwan banking industry has weaker capability to cover loan loss.

3. China government adopts assets-liabilities ratios control to enhance liquidity management of commercial banks

CBRC has set up many regulatory indicators for commercial banks to follow, by observing changes of relevant ratios for past three years; the figures have showed that

every SOCB in China has met the requirements.

After comparing liquidity risk management of SOCBs with representative banks in Taiwan and USA, the result shows that liquidity of banks in China is better than Taiwan, but banks in Taiwan have higher proportion of liquid assets, as to banks in USA the liquidity of China banks is not inferior to them.

4. Capital adequacy ratio and Tier 1 ratio of commercial banks in China have gradually met Basel II requirements

To be in line with international regulations, China government has set up the time table of Basel II implementation for commercial banks. Although banks in China have not yet completely implemented Basel II, but the minimum requirements of 8% capital adequacy ratio and 4% Tier 1 ratio are already applicable to all banks. According to the figures for past three years SOCBs have met requirements, and the number of qualified banks in China also increased year after year, therefore, capital adequacy ability of commercial banks in China has improved accordingly.

For Taiwan top five banks, both average figures of CAR and Tier 1 ratio from 2007 to 2009 were lower than SOCBs that denotes the capital adequacy ability of banking industry in Taiwan was weaker than China.

5. State-owned commercial banks in China have become very huge and strong enough to compete with large banks in the world

After SOCBs went public one after another, their total assets have expanded very fast, both China's SOCBs and US top five banks ranked among top 100 banks in the world as of year 2009.

Increasing net profit, ROA and ROE in past three years have reflected that overall profitability performance of banking industry in China was better than banking industry in USA.

With regard to quality of assets, rising NPL ratios and declining coverage ratios of US top five banks denotes that global financial tsunami has caused deterioration of assets quality and further depressed profitability of banking industry in USA. By contrast, NPL ratios of SOCBs decreased annually and coverage ratios of SOCBs have maintained increasing trend, hence the soundness of banking industry in China is stronger than USA.

5.2 Suggestions

Although the study results demonstrate amazing performance of banking industry in China for past few years, some suggestions still need to be given for China commercial banks on future operation course. Besides, ECFA has been signed by cross-strait governments; the study also provides advices about potential business opportunities for Taiwan commercial banks which prepare to invest in China.

1. Banking industry in China should have more of financial innovation

By analyzing composition of operating income of SOCBs, the proportion of net interest revenue accounts for major part of operating income which means banks in China highly rely on granting loans to customers and gain profit by interest margin.

On the contrary, most US top five banks have equal proportion of net interest revenue and other operating income, because financial development in USA is very advance, a variety of financial products and innovative financial services make banks in USA have more sources of profit than banks in China, as a result China government should make efforts to develop financial innovation.

2. Commercial banks in China should have balance-developed environment

Due to historical factors that most SOCBs were transformed from national specialized banks with large state-owned enterprises as primary customer base, under

China government's protection merely the five SOCBs dominate more than half of total banking assets in China, and consequently serious monopoly problem and imbalance development are not good for banking industry.

3. **Lending to SMEs and providing consumer banking services to Taiwan business people in China are two priorities for Taiwan banks' investment in China in the initial stage**

Banks in Taiwan have abundant lending experiences of SMEs loan and that are what commercial banks in China lacking in. Moreover, the number of Taiwan business people in China is over 800,000; it will be very convenient if Taiwan banks in China provide them with cross-strait remittance services and consumer banking services.

4. **Development opportunities for Taiwan banks in China still need further negotiations under ECFA in the future**

The signing of ECFA between Taiwan and China is a tremendous progress of cross-strait relationship. Nevertheless, the list of early harvest only shortens the time requirement for Taiwan banks' entrance and allows Taiwan banking to establish specific institution to serve small enterprises, if Taiwan banks want to develop other kinds of business; it still needs our government to make further efforts to negotiate with China government.

國立政治大學 National Chengchi University

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