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The Evolution of the Banking Sector in China

Preamble

This chapter provides a systematic review of the evolution of the Chinese banking sector in Sect. 2.1, beginning from its establishment in 1949 through to early institutional reforms in the 1980s, commercialization reforms in the mid-1990s, modernization reforms in the early twenty-first century, and modern banking development in the post-crisis era from 2011 onwards. Section 2.2 discusses the theoretical underpinnings that motivate and guide the banking reform in China. Finally, Sect. 2.3 analyzes the banking sector's overall performance in terms of capital adequacy, asset quality, profitability, and liquidity for the period 1995–2015 based on a conventional financial ratio analysis using key macro-prudential indicators proposed by the International Monetary Fund (IMF).

2.1 A Brief History of Banking Reform

The new China's banking system was established in 1949, when the People's Republic of China (hereafter China) was founded. Over half a century, the banking system has gone through two distinctive evolutionary periods: a monobanking period (1949–1978) and a reforming period (1979–present). The mono-banking system was a highly centrally planned, unitary banking system dominated by the People's Bank of China (PBOC), the only bank in the country, in charge of nearly all financial functions, including the formulation and implementation of monetary policy and foreign exchange policy, foreign reserve management, deposit taking, commercial lending, and investment. The PBOC essentially combined the roles of the central bank and the commercial banks and its operation was subject to strict cash and credit plans set in accordance with the production plans projected by the State Planning Commission.

A few banks were established during this period without challenging the dominant status of the PBOC. The People's Construction Bank of China was founded in 1954 as a subsidiary of the Ministry of Finance. Bank of China (BOC), which was founded in 1912, became a subsidiary of the PBOC exclusively dealing with foreign currency transactions since the 1950s. The Agricultural Bank of China (ABC) was established in 1951, but lately ceased to operate. These banks were wholly state owned and passively collected household savings and channeled funds to serve the state's centrally planned production projects. Their operations were driven by government goals and resultant needs rather than profit maximization, and as a result, normal commercial banking skills such as risk management and project selection were largely ignored. During this period, the banking system played only a limited role in promoting economic growth (Yang 2002).

This centrally controlled mono-banking system lasted until 1978 when Deng Xiaoping started the economic reform and opening up policy in China. Since then, the banking system has entered into a gradual reform period that can be divided into five sub-periods: (1) initial institutional restructuring during 1979–1984; (2) specialized state-owned banking system during 1985–1994; (3) banking commercialization during 1995–2002; (4) banking modernization during 2003–2010; and (5) banking development in the post-crisis era.

2.1.1 Initial Institutional Restructuring During 1979–1984

Since the economic reform started in 1979, the centrally planned banking system was no longer fit for the need of economic development, urging institutional reforms to separate commercial banking operations from the regulatory and supervisory body of PBOC. Institutional reform was kicked off in 1979 by the introduction of a two-tier banking system—the first milestone in transforming the mono-banking system into a modern one. The government removed the monopolistic position of PBOC, which was broken up into two arms—the central bank and the commercial operations. Since then, PBOC became the central bank with the primary objective of maintaining price stability, enforcing strict supervision over financial institutions, conducting clearance, and issuing bank notes. The headquarters was also in charge of designing and implementing monetary policy and formulating a credit plan in accordance with the national economic plan.

The commercial operations of PBOC were stripped off and assigned to four specialized state-owned banks: ABC, which reopened in 1979, took over PBOC's rural banking business and responsibilities for supervising a network of rural credit cooperatives (RCCs) that had been providing small-scale rural banking services; the People's Construction Bank of China, renamed as China Construction Bank in 1996 and then as China Construction Bank Corporation (CCBC) in late 2004, specialized in dealing with fixed assets investment of the government and focused on urban large construction projects in the 1980s; BOC specialized in foreign currency transactions in 1979; and the Industrial and Commercial Bank of China (ICBC) was established in 1984, taking over commercial banking activities in urban areas from PBOC. These four state-owned banks operated as well-encapsulated monopolistic institutions within their own serving niches, with no responsibilities and incentives to penetrate or compete across regions and sectors, effectively ruling out free competition. They provided services to a designated sector of the economy and they were the official source of financing for state-owned enterprises (SOEs) within each assigned serving realm.

There was no stock and corporate bond market, leaving the entire role of financial intermediation to these four state-owned specialized banks.

2.1.2 Further Institutional Restructuring During 1985–1994

From 1985, the Chinese government advanced institutional restructuring to increase competition and create a competitive banking market. New banking institutions, such as joint-stock commercial banks (JSCBs) and foreign banks were allowed to enter into the banking market and restrictions on state-owned banks were gradually relaxed. From the mid-1980s to the 1990s, the majority of JSCBs were launched with a shareholding ownership structure, which was an institutional breakthrough in the Chinese banking industry.¹ JSCBs operate as commercial banks with the main objective of profit maximization and they have more freedom to develop their business scopes and geographical expansion. It is arguable to distinguish JSCBs from state-owned specialized banks since the key shareholders of most JSCBs are still local governments and/or the state-owned/controlled enterprises. However, JSCBs are more competitive, profit-oriented, and performance conscious due to a lower degree of government intervention, flexible personnel management, and overall better corporate governance structure.

Meanwhile, restrictions on the business scopes of state-owned specialized banks were removed in 1985 and four state-owned specialized banks were institutionally released and permitted to enlarge their business scopes to compete with each other and with JSCBs. In the 1980s, more RCCs and urban credit cooperatives (UCCs) were set up to diversify the banking system and to channel funds to projects in areas where resources were scarce. The main business of RCCs and UCCs was to finance small and medium-sized rural or urban enterprises and individuals. Their lending policies were governed by the local authorities rather than the central bank. Thousands of RCCs played an important role in

¹These JSCBs include CITIC Industrial Bank, China Merchants Bank, Shenzhen Development Bank Co., Ltd, Industrial Bank Co. Ltd, Guangdong Development Bank, China Everbright Bank, Huaxia Bank, and Shanghai Pudong Development Bank.

mobilizing rural household savings, channeling funds to town and village enterprises, agricultural activities, and other development projects in rural areas. These financial institutions were an important supplement to the banking system.

In 1994, in recognizing that the policy lending practice of state-owned banks was detrimental to the health of the whole banking system, the Chinese government created three policy banks to take over policy lending activities from state banks, namely, China Development Bank, the Import-Export Bank of China, and the Agricultural Development Bank of China. China Development Bank dealt with long- and medium-term lending to finance construction projects in infrastructure and in strategic industries. The Import-Export Bank of China was responsible for providing loans to import and export companies. The Agricultural Development Bank of China was in charge of lending to the agricultural sector with specific policy focus.

By 1994, the institutional restructuring of the Chinese banking system was completed. The two-tier banking system took shape, dominated by state-owned specialized banks, along with JSCBs and a large number of UCCs and RCCs, as well as newly established state-owned policy banks.

However, banking reform in this period failed to transform a policy-driven banking system to a market-oriented system—competition was increased but insufficient, the banking system remained as policy-driven, and the role of state-owned specialized banks became rather vague and contradictory. State-owned banks were officially expected to be profit-driven institutions to compete with each other, while banks' operations were frequently intervened on by the central and local governments. These banks, as before, were governmental agencies to help implement production plans projected by the state and regional planning commissions. This policy-driven banking system extended loans to SOEs on the basis of fulfilling the national and regional production plans and to maintain employment, regardless of profitability. About two-thirds of SOEs were loss makers during this economic transition period, and the banking sector accumulated a huge amount of non-performing loans (NPLs). These NPLs and losses were regarded as the costs of institutional transition of the economy and the state was expected to clean

up. Thus, state-owned specialized banks were implicitly guaranteed by the government and enjoyed a soft budget constraint when SOEs were increasingly subject to hardened budget constraints. Commercial banking practices and skills, such as risk management, were hardly developed due to the prevalence of policy lending practice.

2.1.3 Banking Commercialization During 1995–2002

From the mid-1990s, the government initiated the second wave of comprehensive reform to commercialize the banking sector; the necessity and urgency for banking reforms were further reinforced in 1999 in the wake of the 1997–1998 Asian financial crisis. Concrete reforming measures addressed legal and institutional restructuring, financial liberalization and opening up, and strengthening prudential regulation.

In 1995, the four state-owned specialized banks were legally defined as wholly state-owned commercial banks (SOCBs) when the Law of the People's Republic of China on Commercial Banks was enacted. They were expected to operate under the principles of profitability, safety, and liquidity and were responsible for their own profits and losses. They were supposed to be operationally independent and have the freedom to choose the clientele on a purely commercial basis. Although efforts were made on releasing SOCBs from the role as government agents, they still played a significant role in policy lending to support the economic development and to maintain social stability. The roles of the commercial bank and the policy bank were well defined in legal term but not in practice. Because of the lack of a branch network and capital, policy banks had insufficient serving and lending capacity and hence were unable to meet the need for policy lending previously provided by the four state-owned specialized banks. Consequently, SOCBs were often under pressures from both the central and regional authorities to make loans to their preferred sectors and enterprises.

Also in 1995, the PBOC was legally confirmed as the central bank by the Law of the PBOC. However, the central bank itself was not an independent regulatory body. It was ultimately overseen by the State Council (the cabinet)—the central government. Local governments

also had the right to appoint senior managers for the local branches of the PBOC (as well as SOCBs). As such, governments had the power to force banks to lend in accordance with their preference, and government intervention in SOCBs' operations was common practice at that time. In order to eliminate government intervention, the central bank was reorganized at the end of 1998. Provincial-level branches were merged into nine large regional branches, located in Shenyang, Tianjin, Jinan, Nanjing, Shanghai, Guangzhou, Wuhan, Chengdu, and Xi'an. This reorganization reduced local governments' influences on SOCBs' lending decisions and commercial banks were released (Wong and Wong 2001).

Since the mid-1990s, City Commercial Banks (CCBs) were created by a way of restructuring and consolidating UCCs. CCBs served mainly the small and medium-sized enterprises and collectives as well as local residents within their geographical localities. CCBs adopted a shareholding ownership structure and capitals were provided by urban enterprises and local governments. In the meantime, RCCs were restructured as independent financial institutions. By then, the second layer of the banking system included two parts: (1) commercial banks and other banking institutions that were subject to prudential regulations and the PBOC's supervision, including JSCBs, CCBs, SOCBs, foreign banks, and RCCs and UCCs; and (2) three state-owned policy banks governed by individual charters, not subject to the commercial bank law.

Despite considerable efforts on banking reform, SOCBs became financially insolvent because of a stubbornly high level of accumulated NPLs by the end of the twentieth century, partially caused by the overheating of the Chinese economy and transitional reform of SOEs in the 1990s. By 1999, the total amount of NPLs in SOCBs was estimated as RMB 3.3 trillion under the four-category loan-classification system, accounting for 41% of GDP for the year. Low capitalization and massive NPLs posed a direct threat to the Chinese banking system. A financial crisis could tremendously damage the economy and wipe out years of economic achievements, as clearly demonstrated by the Asian financial crisis in 1997–1998. Perhaps alerted by the Asian financial crisis, the central government, as expected, commenced the first round of SOCBs bailout. In 1998, RMB 270 billion was injected

into four SOCBs through issuing long-term treasury bonds. In 1999, the government offloaded NPLs worth RMB 1.4 trillion at book value (about 15.6% of the combined total of outstanding loans) from SOCBs to four newly established state asset-management companies, namely Cinda Asset Management Company, China Great Wall Asset Management Company, Oriental Asset Management Company, and China Huarong Asset Management Corporation. Financial restructuring of SOCBs improved the soundness and stability of the banking system. Immediately, the total amount of NPLs of SOCBs decreased to RMB 1.9 trillion, accounting for 22% of GDP in 2000.

Financial liberalization and opening up were also underway. In 1998, the credit plan for both working capital loans and fixed investment loans was replaced by an indicative non-binding target as a reference for commercial banks to plan their business—another milestone of the Chinese banking reform. SOCBs were granted more responsibility and autonomy in making lending decisions and government intervention in commercial lending activities was explicitly forbidden. Moreover, from 1996, interest rate liberalization started from the wholesale markets in which Interbank Offered Rate and repurchasing and trading interest rates of treasuries, for example, were allowed to be determined in accordance with the market conditions. In 1998, floating ranges on lending interest rates were raised to 20% for financial institutions and 50% for RCCs, giving more room for varying lending rates charged on different clients (Berger et al. 2009). The central government also lowered the reserve requirement for commercial banks from 20 to 6%. The most crucial milestone of financial liberalization was China's accession to the WTO in 2001 and the Chinese government committed to fully open up the banking market to foreign banks after a five-year grace period.

While liberalizing the financial market, the Chinese government also tightened prudential regulation and supervision that had long been behind international standards. Capital adequacy requirement was first introduced in 1995 in Shenzhen and the central bank started internal monitoring in accordance with the Basel Capital Accord from 1998. In 1995, the newly enacted commercial bank law prohibited commercial banks from engaging in investment banking business, such as securities

trading and underwriting, investment in non-bank financial enterprises and productive enterprises, and investment in trust business, to reduce risk taking and protect depositors. In 1998, to better control asset quality, the authorities introduced an internationally accepted five-category loan-classification system by a trial application in Guangdong province. Although it was applied to all commercial banks nationwide since 2002, few banks followed this prudential norm and the authorities had to reinforce all banks to fully comply with it by the end of 2005.

The banking commercialization reform did not bring the Chinese banking sector into a modern era. The favorable outcomes of the financial restructuring and capital injection into SOCBs were short-lived and the total amount of NPLs rebounded to RMB 2.3 trillion in 2001 under the newly adopted five-category loan-classification system.² Capital adequacy ratio of SOCBs and JSCBs dropped. Banks, especially SOCBs and CCBs, were unable to raise sufficient capital to meet minimum requirements, making capital regulation unenforceable. The main reason was that reforms did not address the deep-rooted causes of the problems. SOCBs still played a significant role in policy lending to support the economic development and to maintain social stability. SOCBs' major clients were still SOEs, of which the majority remained inefficient and unprofitable. Moreover, this round of bailout seemed to send out a message that the government was the last resort of help once banks were in distress and the soft budget constraint invited moral hazard problems and inefficiency.

By 2002, the banking sector was still characterized by poor asset quality, high level of NPLs, deteriorated solvency ratios, low profitability, the lack of risk management skills, and so on. The reform was far from complete and the tough nut of reform remained to be cracked, while incoming WTO challenges were real. Under the opening-up schedule of the WTO accession in December 2001, the banking market was to be gradually opened up to foreign banks in a five-year grace period and foreign banks started to enjoy national treatment without

²The increase of NPLs was partially due to the change from the four-category classification system before 2001 to the five-category loan classification system afterward. The former was estimated to underestimate NPLs by 14% suggested by a PBC internal study since it provides leeway to retain NPLs unreported.

any restrictions by the end of 2006. This represents significant challenges to the Chinese banking system that were real and imminent, threatening domestic banks, both state-owned and non-state-owned in many aspects. On the other hand, the WTO accession presents an unprecedented opportunity for building up of a modern and internationally viable banking system. In the face of the increasing challenges, the Chinese authorities set the reform of SOCBs at the top of the agenda of financial reform at the second National Financial Work Conference in 2002 and outlined concrete strategies for next steps.

2.1.4 Banking Modernization During 2003–2010

Since 2003, the Chinese government has implemented more radical SOCBs reform measures. The SOCBs reform followed a three-phase roadmap sequentially: the first phase is to recapitalize SOCBs and resolve the NPLs burden through the second round of bailout and financial restructuring; the second phase is to transform SOCBs into modern financial enterprises with joint-stock ownership structure to optimize corporate governance; and the third phase is to list them on capital markets, subjecting their operations to market discipline.

The government initiated the second round of capitalization in 2003, and this long-awaited bailout was in the form of capital investment by Central Huijin Investment Company Limited, a government vehicle company. The government injected \$45 billion into BOC and CCBC in 2003 (each received \$22.5 billion), \$15 billion into ICBC in 2005, and \$19 billion into ABC in 2009. As part of financial restructuring, the government conducted the second round of NPLs divestment from SOCBs. NPLs were offloaded from BOC and CCBC by \$57.4 billion (RMB 475 billion) in 2004, ICBC by \$87.4 billion (RMB 705 billion) in 2005, and ABC by \$133 billion (RMB 816 billion) in 2008. After financial restructuring, the assets quality of SOCBs improved significantly and balance sheets were strengthened. For instance, the NPL ratio of SOCBs dropped to 10% in 2005 from 20% in 2003 and the total amount of NPLs shrunk to RMB 1 trillion, accounting for 6% of GDP in 2005 from RMB 1.9 trillion, 17% of GDP in 2003.

After the divestment of historical burden of NPLs and recapitalization, SOCBs reform proceeded with the second phase of joint-stock ownership reform and SOCBs were encouraged to attract foreign investors, which was welcomed by foreign investors. Three newly financially restructured SOCBs successfully attracted international financial giants as foreign strategic investors. For example, CCBC teamed up with Bank of America, BOC with the Royal Bank of Scotland, and ICBC with Goldman Sachs. Following the path, all banks were encouraged to attract foreign investors for much-needed capital and modern banking skills to improve their capital level in line with minimum requirements set by the Basel Accords. Foreign investors reacted positively to this policy and acquired minority stakes in all types of banks, including SOCBs, JSCBs, and CCBs.³

Subsequently, SOCBs were restructured into joint-stock entities and organizationally transformed into modern enterprises aimed at forging ahead for going public. This was the boldest and toughest decision of the government—to convert SOCBs into truly commercial institutions. The main purpose is to improve corporate governance, risk management, internal control, and the management of finance, debt, and human resources. As planned, shortly after joint-stock restructuring, SOCBs reform proceeded to the third phase—going public. The going public strategy was motivated by the diversified ownership, better corporate governance structure, hardened budgetary constraints, and the role of market discipline, all of which help better solve the agent-principal problem and improve performance. The capital market investors reacted to SOCBs' initial public offerings (IPOs) positively. CCBC and BOC were successfully listed on the Hong Kong Stock Exchange in 2005 and 2006 when they raised USD \$8 billion and \$9.7 billion through IPOs, respectively. ICBC was simultaneously listed on both the Shanghai Stock Exchange and the Hong Kong Stock Exchange on 27 October 2006. The market reactions were unexpectedly positive and by July 2007, ICBC became the largest bank in the world after less than a year as a public company, overtaking Citigroup by market capitalization of \$246 billion. ICBC raised about USD \$21.9 billion in Hong

³See Sect. 1.6 for more details.

Kong (H-shares) and Shanghai (A-shares) and it was the world's largest IPO until ABC set the new world record by raising \$22.1 billion in 2010. Successful IPOs and their subsequent extraordinary performance in stock markets provided a sound cornerstone for the overall success of China's further banking reform. By 2010, the overhaul of SOCBs was complete and all SOCBs had been transformed into public banks with a diversified shareholding structure.

Banking reform extended to policy banks starting with the establishment of China Development Bank Corporation in 2008, cofounded by the Ministry of Finance and Central Huijin Investment Company (the central government's vehicle company). China Development Bank became an ordinary commercial bank subject to normal banking regulation and supervision. However, the State Council officially defined the bank as a development finance institution in 2015. The reform of two other policy banks—the Export-Import Bank of China (EIBC) and the Agricultural Development Bank of China (ADBC)—has been to strengthen their policy service capacity with no intention to change their nature as policy banks.

Synchronously, the reform of the RCCs was carried out since 2004 and by the end of 2006, reforms have been rolled out across 30 provincial units across the country. The RCCs reform addressed areas such as the management system reform and ownership reform, which improved their earning ability to make profit. The reform also extended to China's Postal Savings. On 31 December 2006, the Postal Savings Bank of China (PSBC) was established as a wholly owned subsidiary of the China Postal Group, a historical step of commercialization of China's postal savings. CCBs also undertook a comprehensive reform program focusing on ownership reform and standardizing information disclosure. In 2006, CCBs were allowed to consolidate and set up cross-regional branches, becoming regional commercial banks.

During this period, the government also strengthened the regulatory and supervisory framework. In April 2003, the China Banking Regulatory Commission (CBRC) was established as a regulatory and supervisory body, taking over the responsibility and functions from the central bank to regulate and supervise all the banking institutions.

CBRC became in charge of the banking sector reform to strengthen the banking sector and improve banking capitalization. The PBOC started to be responsible for monetary policy and liquidity of the financial sector by managing the interest rates on loans and deposits and reserve requirement along with other monetary policy instruments. This separation showed the government's resolution to promote safe, sound, and efficient operations of the banking industry through strengthened supervision and risk control capacity (www.cbrc.gov.cn).

The authority understood that listing SOCBs on stock exchanges to raise fresh capital was not the end of the reform but a short-run goal. The long-run goal is to transform SOCBs into modern banks with good corporate governance in place and to create a sound and internationally competitive banking system. Building up a well-functioning corporate governance is the key to the success of Chinese banking reform, which ensures sustainable improvement in performance in the long term. For monitoring the ongoing bank reform, CBRC strengthened prudential regulation and supervision and set out 10 requirements for good corporate governance and seven performance indicators since 2004. These measures have been benchmarked to the top 100 largest banks globally, focusing on improving risk management and corporate governance. Against these benchmarks, CBRC monitors the pace of SOCBs moving toward modern enterprises and their performance. Ten requirements cover corporate governance structure, diversified ownership, goal of profit maximization, prudent accounting practices, market-oriented human resource management, and so on. In 2006, the CBRC issued the Guideline on the Corporate Governance Reforms and Supervision of State-owned Commercial Banks to further improve SOCBs' corporate governance and enhance their internal restructuring. It sets up seven quantitative benchmarks, covering operational performance, asset quality, and prudent operations. Operational performance parameters include net return on total assets, net return on equity, and expense-to-revenue ratio. Asset quality parameters refer to NPL ratio and prudent operations parameters include capital adequacy ratio, large exposure concentration, and coverage ratio of loan loss provisions.

2.1.5 Banking Development in the Post-Crisis Era from 2011 Onwards

After the major overhaul of SOCBs, the Chinese authorities focused on the sound development of the newly modernized banking sector in the post-crisis era by deepening banking reform, advancing regulation and supervision, improving risk-management skills, and promoting inclusive finance. In 2010, the authority initiated some pilot programs on universal banking, which were unfolded from 2011. The programs explore the models for commercial banks to extend operations into other financial segments, such as insurance and trust, to meet the increasingly diversified financial demands. The participating banks are mainly large commercial banks and some selected small- and medium-sized banks and they either establish or invest in companies in fund management, insurance, financial leasing, trust, and consumer finance.

Banking reform was deepened. The PSBC, incorporated in 2007, was the first move to commercialize China's postal savings. In 2012, the PSBC was transformed into a joint-stock limited company and subsequently listed on the Hong Kong Stock Exchange on 30 September 2016 after attracting 10 domestic and international strategic investors.⁴ PSBC has the largest financial network bridging the rural and urban economies and societies and it aims to provide basic financial services to town and village communities and rural residents to finance the development of the new rural society.

Another focus of banking reform during this period is small- and medium-sized banking institutions, including CCBs, RCBs, UCCs, and RCCs, to enhance financial stability and promote financial inclusion. The reform of management system and ownership was accelerated to strengthen their corporate governance, risk management, and sustainable development capability. Under the “new normal” in the post-crisis era, small- and medium-sized banking institutions face challenges from

⁴Ten strategic investors include six globally well-known financial institutions: United Bank of Switzerland, J. P. Morgan Chase, Development Bank of Singapore, CPP Investment Board, Temasek, and International Finance Corporation; two large state-owned enterprises: China Life Insurance and China Telecom; and two internet enterprises: Ant Financial and Tencent.

interest rate liberalization, disintermediation, internet finance, and the like. In response, they have accelerated strategic transition to improve market competitiveness through innovations and operational expansion. These institutions have targeted niche markets, such as micro and small enterprises (MSEs) and other disadvantaged groups usually overlooked by large state-controlled banks and joint-stock banks. UCCs and RCCs have made good progress in equity restructuring, corporate governance, operational efficiency, and business performance.⁵ Some have been restructured as CCBs or RCBs, while others are either being transformed into rural cooperative banks or exiting from the market. By the end of 2011, altogether 800 UCCs completed restructuring and reform. Some 2667 existing rural cooperative financial institutions, including 212 RCBs and 190 rural cooperative banks, cover 76% of the townships or villages that were previously not reached by any financial institutions or services. New-type rural financial institutions have also been established, such as village and township banks, lending companies, and rural mutual cooperatives. As of the end of 2015, there were 1377 village and township banks.

In the process of banking ownership reform, the biggest challenge is the shortage of capital. Unlike SOCBs and JSCBs that have been able to raise capital from a variety of sources, such as central/local governments and foreign investors, small- and medium-sized financial institutions generally lack capital sources. Private capitals have been gradually allowed to enter into the banking sector. Remarkably, the authorities launched a pilot project to establish five entirely privately funded banks in 2014. By March 2015, the five pilot private banks had all opened for business serving the real economy. The KinCheng Bank of Tianjin (KCB) focused on differentiated services to serve small- and medium-sized enterprises with loans and deposits from corporate units. Shanghai Huarui Bank positions itself as an asset management bank and

⁵Since their establishment in 1951, RCCs have been providing financial services to farmers, the agricultural industry, and rural development. RCCs are also the main channel for disbursing national subsidies to farming households via the most widely distributed outlets in rural areas, playing a crucial role in supporting rural areas in China. RCCs were first managed by ABC, subsequently became independent cooperatives overseen by the Central Bank, and currently are under management by respective provincial governments.

adopts new technologies to serve micro- and small enterprises (MSEs), technology and innovative start-ups, and free trade zone reforms. Zhejiang MYbank focuses on the development of “micro credit” to serve MSEs and rural markets. Wenzhou Minshang Bank also serves MSEs via a mass marketing mode and offers distinctive financial products such as “business flourishing loan,” “businessman loan,” and so on. Shenzhen Qianhai WeBank operates an open and inclusive financing platform based on big data technology to serve the general public, MSEs, and start-ups. It offers three main lines of internet finance products—retail credit “Weilidai,” online wealth management platform “WeBank APP,” and “Platform Finance.” One important feature of these five privately funded banks is the deep integration of innovations and information technology into banking business, which substantially reduces the transaction costs and asymmetric information problems, which in turn enables high quality, more efficient financial services available to a large number of individuals and MSEs. As of the end 2015, the total assets of these five banks reached RMB 79.432 billion and outstanding loans and deposits were at RMB 23.604 billion and RMB 19.943 billion, respectively. Private capital not only provides capital support but also helps improve corporate governance thereby building a sound and viable banking sector to better serve the economy and society. These institutions have embraced internet finance to expand service channels and explore business innovations while lowering costs. Private capital has become a significant part of the equity of banking institutions, especially for the small- and medium-sized commercial banks/rural financial institutions. As of the end of 2015, the share of private capital in CCBs, rural cooperative financial institutions, and village and township banks was around 53%, 90%, and more than 72%, respectively (CBRC).

After the global crisis, internet finance and shadow banking expanded prosperously and have become an important integrated part of the financial sector in China. New business models are introduced, such as setting up electronic business platforms that offer e-commerce services and financial support to merchants and consumers, undertaking intermediation and clearing function for direct loan settlement among individuals, and setting up platforms for online sales of financial products. These developments are accompanied by financial innovations and

numerous high value-added innovative products have emerged. These new developments will be discussed in more detail in later chapters.

In short, taking the 2008 global financial crisis as an opportunity, the Chinese authorities have advanced banking reform towards a sound, comprehensive, and competitive banking sector to serve the real economy. These staged impressive achievements have paved the way for future development of the financial system in China.

2.1.6 Foreign Banks in China

Foreign banks have grown at a snail's pace in the Chinese banking market although the Chinese economy was growing at about 10% per year. In the early 1980s, the Chinese government opened just a crack of the financial market to foreign financial institutions. Foreign banks first were allowed to open representative offices and subsequently permitted to open operational branches in Special Economic Zones. This geographical restriction was extended to 23 coastal cities during the first half of the 1990s and foreign banks were allowed to open branches across China in 1996. In the past, entry barriers and business restrictions for foreign banks were high. Foreign banks' operations were restricted within some designated geographical zones and they must have launched and operated a representative office for two years in order to apply for establishing branches. Foreign banks were also restricted to serve foreign companies and residents and conduct foreign currency business. Foreign banks with about 2% share of the banking total assets played a limited role in China.

China's entry into the WTO implied a faster removal of the barriers and restrictions blocking foreign bank entry. To honour WTO commitments, the CBRC has been continuously speeding up the opening up of the banking system in an attempt to create a level playing field for both domestic and foreign banks. Since 2003, CBRC has gradually loosened geographical restrictions on customers and business. Foreign banks have been given greater access to the local market by: (1) allowing them to conduct local currency business with local companies from 1 December 2003; (2) lowering the minimum capital requirement to RMB 500

million for foreign financial institutions to set up a full-service branch; and (3) expanding to 18 cities that have been fully opened to foreign banks for local currency business.

Foreign banks prospered in the Chinese banking market, attracted by the rapidly growing financial services markets and the promising prospective of the economy. By the end of 2015, there were 37 wholly foreign-owned banks with 306 branches, 2 joint-venture banks with 4 branches, 114 branches of 69 banks, and 174 representative offices of 153 banks in China. Foreign banks operate in 69 cities of 27 provinces with the total operating outlets amounted to 1044. Total assets of foreign banks were RMB 2.68 trillion in 2015, increased five times from RMB 0.42 trillion in 2003. However, the share in the total banking asset was 1.38% in 2015, which has been declining largely due to the faster growth of the total banking assets (CBRC 2015).

In contrary to opening wholly owned operations, most foreign investors have chosen to acquire equity stake in domestic banks. Prior to 2004, only a few foreign institutions acquired shares in domestic banks due to high entry barriers and business restrictions. In 1996, the Asian Development Bank acquired 1.9% share in China Everbright Bank, which made the latter the first domestic bank with foreign minority ownership. A few other foreign institutions, such as International Finance Corporation (IFC), Hong Kong and Shanghai Banking Corporation (HSBC), and Citigroup, followed the practice and acquired equity stakes in carefully selected JSCBs and CCBs. Motivated by the desire to attract foreign strategic investors for domestic banks, the authorities have relaxed the provisions relating to business cooperation and equity links between the domestic and foreign banks. At the end of 2003, the maximum equity share of total overseas investment in any Chinese financial institution was increased to 25%, of which the maximum equity share of a single overseas investor was 20% (www.cbrc.gov.cn).

Acquiring equity stakes in domestic banks became a popular move among foreign banks, which give investors immediate access to well-developed distribution networks and help them to position a strategic seat before fully opening up the banking market. Although foreign banks and institutions would be granted a full range of banking services and financial products to domestic customers in 2007, most of them

Table 2.1 Foreign direct investment in domestic banks

Chinese Bank	Date	Share %	Foreign strategic investor
China Everbright Bank	Dec-96	1.9	Asian Development Bank
	Jun-97	21.2	China Everbright Limited (HK)
Bank of Shanghai	1999, 2001	7.0	IFC
	Dec-01	8.0	HSBC
Bank of Nanjing	Nov-01	15.0	IFC
	Jan-06	19.2	BNP Paribas
Shanghai Pudong Development Bank	Dec-02	5.0	CITI Group (increased to 19.9 in 2005)
Industrial Bank	Dec-03	15.98	Hang Seng Bank
	Dec-03	4.0	IFC
	Dec-03	5.0	GIC Special Investments
Shenzhen Development Bank	May-04	17.9	Newbridge Capital
Bank of Communications	Aug-04	19.9	HSBC
Minsheng Bank	Oct-04	4.6	Temasek
Ji'nan City Commercial Bank	Nov-04	11.0	Commonwealth Bank of Australia
Xi'an City Commercial Bank	Nov-04	5.0	IFC and Bank of Nova Scotia
Bank of Beijing	Mar-05	19.9	ING group
Bank of Hangzhou	Apr-05	19.9	Commonwealth Bank of Australia
	Jun-06	5.0	Asian Development Bank
China Construction Bank Corporation	Jun-05	9.0	Bank of America
	Jul-05	5.1	Temasek
Nanchong City Commercial Bank	Jul-05	10.0	DEG
	Jul-05	3.0	SIDT & SBFIC
Bank of China	Aug-05	10.0	Royal Bank of Scotland & co-investors
	Aug-05	10.0	Temasek
China Bohai Bank	Sep-05	19.9	Britain's Standard Chartered
	Sep-05	19.9	Goldman Sachs
ICBC	2006	4.93	DRESDNER BANK
	2006	1.93	LUXEMBOURG S.A.
Huaxia Bank	Oct-05	14.0	Deutsche Bank AG
Bank of Ningbo	May 2006	12.2	Oversea-Chinese Banking
China Guangfa Bank	Nov 2006	20	CITI Group
	Nov 2006	4.74	IBM Credit LLC
Bank of Chengdu	2007	19.99	Hong Leong Bank Berhad

(continued)

Table 2.1 (continued)

Chinese Bank	Date	Share %	Foreign strategic investor
Shanghai Rural Commercial Bank	Sep 2007	19.9	Australia and New Zealand Banking Group
Bank of Yingkou	Mar 2008	19.99	Commerce International Merchant Bank
Ximen Bank	2008	19.99	Fubon bank
Hengfeng Bank	2008	15.38	United Overseas Bank
Bank of Jilin	2010	18.27	South Korean Hana Bank

Source banks' website, official press, etc. Information is correct to our best knowledge on the date of producing this table in April 2017

chose to acquire equity stakes in domestic banks as a means of entering this emerging and attractive market. By doing so, foreign investors avoid potential low efficiency associated with foreign-owned banks in developing and transitional countries and avoid significant investment in establishing a branch network to serve their customers. The combination of these factors resulted in a surge of foreign direct investment in domestic banks in 2004 and the following years. For instance, British-based HSBC bought 19.9% of the Bank of Communications for \$1.74 billion and Newbridge Capital became the biggest shareholder of Shenzhen Development Bank in 2004. In 2005, total foreign investment in Chinese banks reached \$24 billion (including \$8 billion and \$1.9 billion raised by CCBC and the Bank of Communications in their IPOs on the Hong Kong Stock Exchange). International financial giants also embraced SOCBs and invested a significant amount of capital to acquire minority stakes of SOCBs after their radical joint-stock restructuring. Table 2.1 provides a list of domestic banks that have teamed up with foreign strategic investors. Foreign strategic investors come from more than 20 countries around the world, targeting all types of Chinese domestic commercial banks. They are also trying to participate in the management of the partner bank and exert influence on the business development. Chinese banks, on the other hand, benefited by obtaining much-needed capital, advanced technology, management skills, operational expertise, good corporate governance structure, and so on. The opening up policy achieved a “win-win” situation between the Chinese and foreign banks.

2.2 The Theoretical Underpinnings of Banking Reform and Development

The importance of a well-functioning banking system for economic growth has been well appreciated by governments in developing and transitional economies (La Porta et al. 2002). As a result, the reform of the banking system has become a high priority on the policy agenda of these countries in recent years. The market-oriented banking reform in China has been to improve domestic banks' performance, strengthen risk management, enhance competitiveness, and ultimately to build a sound and viable banking system in the long run that better serves economic development. The banking reform strategies have been formulated in accordance with economic theories from three perspectives.

The first theoretical perspective guiding banking reform in China is related to industrial organization theories. These theories indicate that competition, as in other industries, promotes production efficiency, improves product quality, widens product range, and stimulates innovation thereby maximizing social welfare. Any constraints, like regulations in resources allocation, increase the costs of production and induce inefficient resource allocation because of the lack of competition. In the past, government protective policies and financial depression prevailed in developing and transition economies. A monopolistic banking market induces moral hazard problems as these banks are well aware of the arguments of "too-big-to-fail" or "too important to fail." Such a market lacks competition and undermines the access of firms and households to financial services, which affect overall economic growth. Accordingly, banking reform commonly began with financial deregulation aiming at creating a competitive and flexible environment in which banks have more freedom over their operations. The unleashed competitive pressure forces banks to be more efficient by altering their input and output mix, upgrading technologies, and basing their operational decisions on market principles. Chinese banking reform at an early stage focused on deregulation. For example, institutional restructuring allowed more banks to enter into the market and the removal of business restrictions on SOCBs freed them to compete with their peers.

The second theoretical perspective guiding banking reform in China is related to the budgetary constraints theory that was first introduced by Kornai (1979). When a firm can expect to get financial subsidies in the future in case of financial distress and economic failure, it is considered to face a soft budget constraint. One argument for the existence of a soft budget constraint is that government bailout appears necessary and cheaper when the political and/or social price of the bankruptcy of firms is high due to unemployment that could lead to social unrest. The argument becomes especially stronger for sectors, like the financial sector, that are of strategic importance for the stability of the economy. However, literature has generally suggested that the adverse effects of a soft budget constraint outweigh its benefits. A soft budget constraint was common practice in banking. Typically, state-owned banks are faced with a soft budget constraint and largely capitalized by state funds. In transition economies, governments are under various pressures during the transformation of the economy from a centrally planned to a market-oriented one. Government bailout appears necessary to the financial sector for maintaining employment and social stability. The expected bailouts inevitably lead to a moral hazard problem and low performance.

A hard budget constraint implies that a firm has no access to government financial subsidies. The determination of a firm's continuation or bankruptcy should be purely based on market disciplines and considerations on performance, re-allocating capital to more productive firms in the best interests of shareholders as well as the economy as a whole. The theory suggests that the state needs to abandon the role of being the last resort for state-owned banks. The hope is that banking commercialization will harden budget constraints and the state will never have to bail banks out in the future. Banks have to rely more and more on raising capital from shareholders, rendering them responsible for shareholders' interests rather than the state's. The competitiveness of these banks will depend on their ability to earn profits and paying dividends to shareholders. In the short run, the state has a responsibility to remove all or much of the NPLs and let them have a fresh capital structure similar to that of a truly commercial bank so that they can compete with the incoming foreign competitors on a level playing field. In the long term,

the state banks will have to be entirely responsible for their own profits and losses without any political or administrative interference.

The third theoretical perspective guiding the banking reform in China is related to the agency theory (Jensen and Meckling 1976; Jensen 1986). The principal-agent problem arises in an agency relationship where one party (the agent) acts on behalf of another party (the principal) under the principal's delegation. When there is a separation between owners and management, owners (principals) delegate the responsibility and related authorities of daily management and even strategic management to senior managers (agents). There is a danger that the agent may not act in the best interests of the owners (shareholders), for example, they may not work as efficiently as they could. They may also pursue their own interests at the expense of the shareholders' interests. This is because of the information asymmetry problem that the agents are involved in daily operations and possess more information than the principals. The central dilemma of the principal-agent theory is how to ensure the agent (the manager or employee) acts in the best interests of the principal (the shareholder or employer), given the agent has more information on the business than the principal and different, possibly conflicting, interests from the principal. The principal has to exercise due care in running the business and monitoring the management. The principal needs to assess the management performance exceptionally and periodically through mechanisms such as external auditing and a board of directors. The principal also needs to ensure these governance mechanisms are in place and well functioning. However, the corroboration of agents' behaviours and the evaluation of actual performance could be difficult or costly.

Firms with different ownership types have different corporate governance mechanisms to solve the agent-principal problem, resulting in variations in performance (Williams and Nguyen 2005). The principal-agent problem becomes more prominent in the case of state ownership of banks. Being the only influential representative of principals, the state pursues multiple and maybe conflicting commercial and social goals. Its role is ambiguously defined being both the owner and regulator. This rather complex situation makes the agents (the bank managers) unclear regarding what the principal exactly expects from them. In the past,

the Chinese banking system was dominated by the wholly state-owned banks and these banks historically acted as government agents to finance the country's economic development plan. Whatever these state banks did, the principal (the state) had to bail them out if the banks ran into difficulty, as they always did. The agents (the banks), knowing that the principal was the last resort for help, lent relentlessly to whatever clients they considered to be trustworthy, resulting in mounting NPLs in the late 1990s that could never be recovered. In other words, the huge volume of NPLs was partially the result of moral hazard problems. The solution is to provide appropriate incentives so that agents are more likely to act in the best interest of the principal. Ownership reform that changes the state banks into joint-stock companies with multi-ownership aims at enhancing corporate governance and improving incentive structure, which is expected to address more effectively the agent-principal problem.

2.3 A Snapshot of the Chinese Banking System

2.3.1 The Status Quo of the Chinese Banking Sector

China's unremitting efforts on banking reform have resulted in a comprehensive and multi-layered banking system, providing a full range of banking products and services to the economy. The structure of the present banking system is illustrated in Fig. 2.1. The top tier includes two regulatory bodies—the PBOC and CBRC. The mainstay of the second tier is domestic commercial banks, including central government-controlled large banks, JSCBs, CCBs, and RCBs. Policy banks, foreign banks, rural credit cooperatives, postal savings banks, and other banking institutions (such as financing companies, new-type rural financial institutions of village or township banks, and consumer financing companies) are important complements, playing significant roles in serving the economy with wide coverage. According to CBRC, as of the end of 2015, the number of incorporated banking institutions

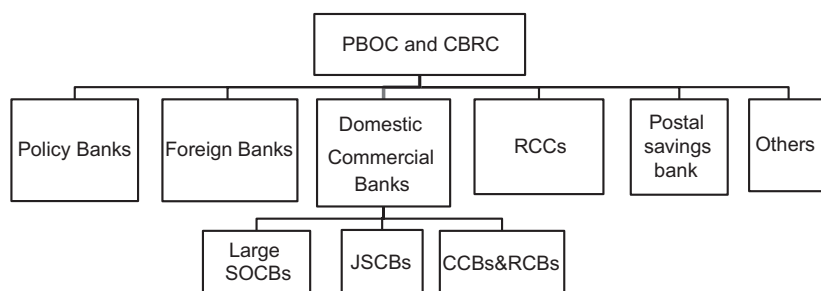


Fig. 2.1 Structure of the Chinese banking system. *Notes* PBOC = People's Bank of China, CBRC = China Banking Regulatory Commission, RCC = rural (and urban) credit cooperatives, SOCB = large state-controlled commercial bank, JSCB = joint-stock commercial bank, CCB = city commercial bank, RCB = rural commercial bank

was 4262 with 3.8 million employees. In particular, there were 3 policy banks,⁶ 5 large commercial banks, 12 JSCBs, 133 CCBs, 5 private banks (under the pilot program of establishing entirely private-funded banks in 2015), 1 postal savings bank, 4 asset management companies,⁷ 40 locally incorporated foreign banking institutions, 859 RCCs, 1311 village or township banks, and more than 1800 other banking institutions.

Table 2.2 gives an overview of the market structure of the Chinese banking system. Five large commercial banks, JSCBs, and CCBs together control about 70% of total banking assets. Five large central government-controlled banks (four former SOCBs plus the Bank of Communication) are the key players in the Chinese financial sector even though their market share in total banking assets declined by nearly one-third from 58% in 2003 to 39% in 2015. Over the same period, the market share of JSCBs and CCBs increased by about 8 and 6 percentage points, respectively. RCCs' market share increased by

⁶China Development Bank Corporation was incorporated in December 2008 as a commercial bank, while the State Council officially defined it as a development finance institution in March 2015. Thus it is essentially still a policy bank.

⁷Four assets management companies are Cinda Asset Management Company, China Great Wall Asset Management Company, Oriental Asset Management Company, and China Huarong Asset Management Corporation.

Table 2.2 The share of banking assets by institution types

	2003		2015	
	Total assets (RMB billion)	Share %	Total assets (RMB billion)	Share %
SOPBs	2125	7.68	19,285	9.67
SOCBs (Large banks)	16051	58.03	78,163	39.21
JSCB	2960	10.70	36,988	18.55
CCBs	1462	5.29	22,680	11.38
RCBs	39	0.14	15,234	7.64
RCCs	2651	9.58	8,654	4.34
New-type rural Fls & Postal savings bank	898	3.25	8,302	4.16
Others	1473	5.32	10,039	5.04
Total	27,658	100.00	1,99,345	100.00

Notes SOPB = state-owned policy banks, SOCBs = state-owned commercial banks (including Bank of Communication according to regulators classification), JSCB = joint-stock commercial bank, CCB = city commercial bank, RCB = rural commercial bank; RCC = rural credit cooperatives, Fls = financial institutions.

Source www.cbrc.gov.cn

7.5 percentage points, partially due to the restructuring of RCCs whose share declined from 9.58 to 4.34%. Meanwhile, policy banks have played a more active role with an increase in market share in total assets by 2 percentage points from 2003 to 2015.

2.3.2 An Assessment of Major Commercial Banks' Soundness and Performance

To probe how the Chinese banking system's soundness and performance have evolved over the past two decades, this section analyses a set of core financial soundness indicators developed by the IMF. The IMF finalized a core set and an encouraged set of financial soundness indicators in the *Compilation Guide on Financial Soundness Indicators* (2004). Core financial soundness indicators for deposit-taking institutions include regulatory capital to risk-weighted assets, regulatory Tier 1 capital to risk-weighted assets, nonperforming loans net of provisions to

capital, nonperforming loans to total gross loans, sectoral distribution of loans to total loans, return on assets, return on equity, interest margin to gross income, noninterest expenses to gross income, liquid assets to total assets, liquid assets to short-term liabilities, and net open position in foreign exchange to capital (www.imf.org). These financial soundness indicators cover the main development in income statements, balance sheet conditions, capital adequacy, and asset quality, providing insights into the financial health and soundness of a country's financial institutions.

Ratio analysis is widely applied to financial institutions because of its clarity and simplicity. Its potential limitation is that it assumes that all other factors are held constant when considering a particular ratio. To overcome this limitation, a wide range of financial soundness indicators are selected to evaluate banks from different dimensions (profitability, capital adequacy, asset quality, and liquidity) and over a longer period 1995–2015.

2.3.2.1 Capital Adequacy

Banking is a highly leveraged industry. According to regulatory minimal capital requirements, shareholders' equity capital only accounts for about 8% of total assets with the remaining 92% financed by depositors and other creditors. Such a small portion of equity capital plays a fundamental role in the banking business and it is vital to the survival and growth of banks in the long run. Bank capital functions as a source of funds, a cushion to absorb unexpected operating losses, and the final safeguard against bank insolvency. When losses exceed bank capital in the extreme, banks become insolvent and face closure. It is important for banks to have adequate capital. The IMF has introduced four financial soundness indicators for capital adequacy, including two core indicators—regulatory capital to risk-weighted assets and regulatory Tier 1 capital (core capital) to risk-weighted assets—and two additional indicators—equity capital to total asset ratio (E/A ratio) and large exposures to capital. We focus on the first three indicators due to the lack of data on the last indicator. Regulatory capital adequacy ratios measure the capacity of the financial sector to absorb losses and indicate bank solvency and are regulated in most countries for the purposes of maintaining a sound banking system

and protecting depositors. The E/A ratio reflects the proportion of total assets financed by equity capital.

Tier 1 capital is common in all countries and it is the most important capital because of its greatest ability to absorb losses. It is related to bank profitability and competitiveness and has become an informative basis for interested parties to judge a bank's capital adequacy. The Basel Capital Accord sets minimum capital requirements for banks: 8% for total regulatory capital ratio and 4% for Tier 1 core capital ratio (Basel III sets Tier1 capital ratio at 6%). Generally, the higher the ratio, the safer the bank is. Adequate banking capitalization is crucial for a sound banking sector, while over-capitalization may also imply economic inefficiency, waste, and opportunity cost for both shareholders and society (Cade 1997).

In China, authorities have internally monitored banks' capital adequacy in accordance with the Basel Capital Accord since 1998. The CRBC issued the *Regulation Governing Capital Adequacy of Commercial Banks* in 2004; it came into effect on 1 March. Commercial banks had a transition period up to 1 January 2007 with a feasible phase-in plan to meet the minimum capital requirements. The disclosure of capital adequacy ratios is not an official requirement for banks before 2004. After the crisis, authorities have focused on prudential regulations and risk control, and committed to global regulatory reform. Chinese embraced the Basel III framework and issued the *Capital Rules for Commercial Banks* in 2012 that came into force on 1 January 2013 with full implementation by March 2019.

Low capitalization has been one of the major plights haunting the Chinese banking system. In order to increase banks' capital adequacy, the government had made considerable efforts since 1998, including two rounds of capitalization and two rounds of NPLs off-loading. After a capital injection of RMB 270 billion in 1998, SOCBs met minimum requirement of 8%, while by 2003 all commercial banks in China were under-capitalized according to Basel standards. Under the challenges from WTO accession, the government initiated banking modernization reform. To boost banking capital, the government adopted a variety of measures, including injecting capital into the banking sector using state funds, attracting foreign strategic investors, raising capital in the capital market, and allowing private capital to enter into the banking sector.

In 2004, nearly half of commercial banks (47.5%) met minimum capital requirement, and by 2009 all banks held capital well above regulatory minimum requirements. As of the end of 2015, the average Tier 1 capital ratio and total regulatory capital ratio of commercial banks were 11.3 and 13.5%, respectively.

Figure 2.2 plots Tier 1 capital ratio and total capital ratio of SOCBs over the period 2003–2015. In 2003, all SOCBs had total capital adequacy ratio below the minimum requirement of 8%, while their Tier 1 capital ratio was above the minimum requirement of 4%. To make SOCBs ready for the opening up of the banking sector in 2006 under the WTO agreement, Chinese authorities sped up the SOCBs reform and as a result, all SOCBs increased capital rapidly, except for ABC whose reform lagged behind and started in 2008. From 2004, both Tier 1 capital and total capital ratio of SOCBs were well above regulatory requirements and increased further to a higher level of 11.2 and 13.25% (on average), respectively in 2006. Affected by the global financial crisis, capital ratios declined slightly in 2009 and then increased steadily until 2012, which is partially due to the government stimulus package and partially due to the continuous rapid expansion of the economy at a GDP growth rate of 10% in 2010, 9.5% in 2011, and 7.8% in 2012. In the last two years of the sample period, SOCBs' capital adequacy ratios gained momentum and increased at a faster speed. On average, CCBC and ICBC have slightly higher risk-weighted regulatory capital ratios than BOC, while ABC holds the lowest regulatory capital ratios.

E/A ratio is a risk-unweighted measure since total assets (not adjusted for risks) and equity (including capital and reserves) are taken from banks' balance sheets directly. Although less risk-sensitive than regulatory capital ratios, the changes in E/A ratio reveal shifts in bank balance sheet structure and shifts in bank risk taking. Figure 2.3 plots the E/A ratio of SOCBs over the period 1997–2015. In general, the movement of E/A ratio is consistent with that of risk-adjusted regulatory capital ratios. In the first half of the sample period, SOCBs were wholly state-owned and the government implemented the first round of banking recapitalization in 1998 that lifted their E/A ratio. Afterwards, SOCBs' capital level diverged. While BOC managed a steady increase in E/A ratio, the E/A ratio of CCBC and ICBC declined slightly and that of

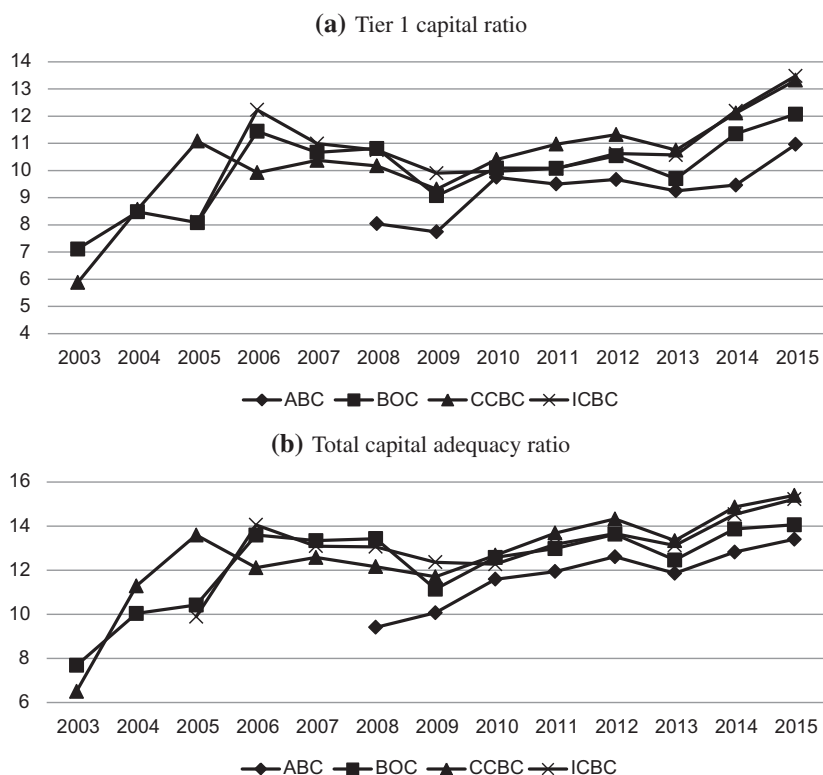


Fig. 2.2 Tier1 capital ratio and total capital ratio of SOCBs (2003–2015). Notes ABC = Agricultural Bank of China, BOC = Bank of China, CCBC = China Construction Bank Corporation, ICBC = Industrial and Commercial Bank of China. Sources CBRC, the Banker, Almanac of China's Finance and Banking, and press release

ABC deteriorated further to a level below 2%. By the end of 2006, BOC had the highest E/A ratio at 7.75%, which is nearly five times that of ABC (1.67%). In the second half of the period, the E/A ratio of SOCBs was lifted by the second round of banking recapitalization and then followed a consistent movement pattern—a steady increasing trend, especially after the reform of ABC in 2008.

2.3.2.2 Asset Quality and Non-Performing Loans

The quality of a bank's loan portfolio is of fundamental importance to profitability and long-run viability. A commonly used asset quality indicator is NPL ratio—the ratio of loans that are non-performing to gross loans. It is a backward-looking measure based on historical information on bank loan portfolio. A higher ratio indicates lower asset quality.

Detailed NPL information had been unavailable until 2000 when the central bank required other banks to disclose NPL ratios in accordance with the newly adopted internationally accepted, five-category loan-classification system. Since 2002, all banks were officially required to disclose NPL figures in their annual reports. In 1998, for the first time, the government disclosed SOCBs' NPL ratio of less than 30%. However, based on officially released information, our estimate was much higher (as shown in Table 2.3) and consistent with those of 35–50% by international agencies (such as Standard & Poor's and Moody's).

Unlike bank NPLs in other countries that are caused by losses from managerial and operational failure, much of SOCBs' NPLs occurred in the process of economic transition in China and were caused by a

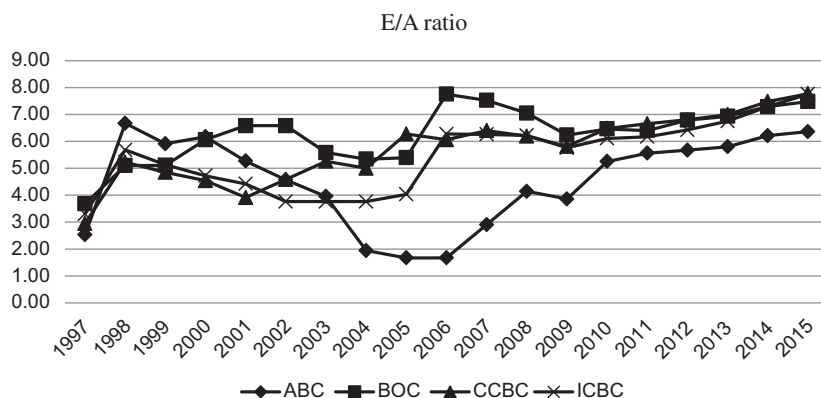


Fig. 2.3 Equity to total asset ratio of SOCBs (1997–2015). *Notes* ABC = Agricultural Bank of China, BOC = Bank of China, CCBC = China Construction Bank Corporation, ICBC = Industrial and Commercial Bank of China. *Source* BankScope, banks' annual reports

number of factors. Such factors include government intervention to support loss-making SOEs, excessive credit expansion to finance the overheated economy during the economic bubble in the early 1990s, the lack of commercial banking experiences in a market-oriented environment, a weak supervisory and regulatory system, and the under-developed legal and accounting framework. SOCBs' NPLs were the costs of the transition from a planned economy to a market-oriented one for maintaining social stability and sustaining high economic growth. SOCBs were the main contributor of massive NPLs in the Chinese banking system. The NPL problem was the key issue for banking reform in China and the central government made considerable efforts to solve it. As shown in Table 2.3, in 1999, the total amount of NPLs in SOCBs reached RMB 3.35 trillion and the NPL ratio was 43% under the four-category loan-classification system, accounting for about 40% of the country's GDP in that year. This figure would be higher if NPLs had been identified under the five-category loan-classification system. After the first round of NPL divestment by RMB 1.4 trillion in 1999, the total amount of NPLs rebounded to RMB 2.29 trillion and the NPL ratio of the banking sector was 31% in 2001 under the newly adopted five-category loan-classification system. After 2001, NPLs declined dramatically.

Figure 2.4 plots NPL ratio of different types of banks over the period 2001–2015. Prior to the 2008 global financial crisis, SOCBs had the highest NPL ratio, followed by CCBs, RCBs, JSCBs, and foreign banks. From 2006, commercial banks' NPL ratio entered into a single-figure era, and dropped further down to 2.8% in 2008. The rapid decline in SOCB's NPL ratio in the crisis time was partially attributable to the government's RMB 4 trillion stimulus package. This stimulus package was implemented mainly through the banking system via SOCBs, which, however, have raised concerns regarding asset quality and NPL problems in the future. From 2010 onwards, NPL ratio has been around 1% without much variation among different types of banks, lower than the internationally widely accepted level of 2%. Overall, foreign banks had the lowest NPL ratio over the sample period. JSBCs had the lowest NPL ratio among domestic banks, indicating better asset

Table 2.3 NPLs of four state-owned commercial banks

	Four-category system			Five-category system		
	Ratio (%)	Balance (RMB trillion)	Share of GDP (%)	Ratio (%)	Balance (RMB trillion)	Share of GDP (%)
1999	42.83	3.35	40.76			
2000	29.18	1.95	21.82			
2001	25.37	1.88	19.29	31.02	2.29	23.49
2002				26.10	2.21	20.99
2003				19.74	1.96	16.75
2004				15.57	1.58	11.54
2005				10.49	1.07	5.88

Note NPL = non-performing loan. *Sources* CBRC, Almanac of China's Finance and Banking, China Statistical Year book and author's calculation

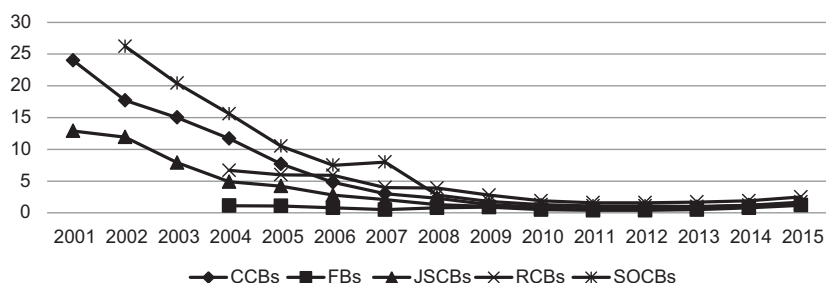


Fig. 2.4 NPL ratio of different types of bank 2001–2015. *Notes* CCB = city commercial bank, FB = foreign bank, JSCB = joint-stock commercial bank, RCB = rural commercial bank; SOCBs = large state-owned commercial banks. *Source* www.cbrc.gov.cn

quality control and risk management practice compared with SOCBs and CCBs.

Figure 2.5 plots SOCBs' NPL ratio over the period 2001–2015, which is consistent with the main trend in Fig. 2.4. Under a sequential SOCBs reform program, all SOCBs have dramatically reduced their

NPLs ratio from a sky-high level of 17–37% in 2002 to 5% or lower in 2005, except for ABC that was restructured and achieved this target in 2008. In the second half of the sample period, all SOCBs had low NPL ratios with trivial differences. The remarkable decline in the NPL ratio and year-end NPLs volume is largely due to the massive disposal of bad assets. Following the first round of NPLs divestment in 1999, the second round of NPLs divestment was implemented in 2003 and 2005 totaling RMB 1.18 trillion and in 2008 by RMB 815 billion. These divestments reduced absolute value of NPLs in SOCBs, significantly improving their asset quality. Moreover, the decline in SOCBs' NPLs is also attributable to the favourable economic environment and the rapid expansion of the credit market. Total loans extended by SOCBs increased one-third from RMB 6.4 trillion in 1999 to RMB 10 trillion in 2005, then increased four times in 10 years—reaching 40.46 trillion in 2015. The expansion helped reduce the NPLs ratio in the short run irrespective of the quality of new loans. Furthermore, the significant improvement in NPLs condition is the result of the ongoing bank reform that enhances internal control, risk management, the decision-making mechanism of credit expansion, disclosure requirements, and quality control for new loans.

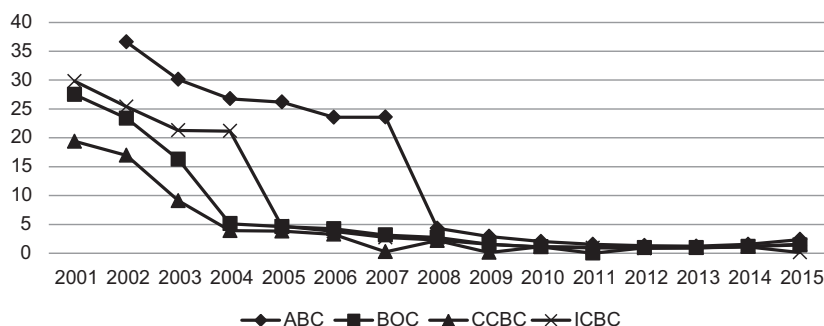


Fig. 2.5 NPL ratio of SOCBs (2001–2015). *Note* ABC = Agricultural Bank of China, BOC = Bank of China, CCBC = China Construction Bank Corporation, ICBC = Industrial and Commercial Bank of China. *Source* www.cbrc.gov.cn and others such as press release

2.3.2.3 Profitability

Bank profitability is evaluated by two frequently used performance measures—return on assets (ROA) and return on equity (ROE). ROA (ROE) is defined as the ratio of net income to average total assets (equity), measuring how well banks use their assets (capital) to generate profit. ROE needs to be interpreted in connection with indicators of capital adequacy, as it contains information on both profit and capital adequacy. A high ROE could result from high profitability and/or low capitalization.

Figure 2.6(a,b) plots the average ROA and ROE of different types of commercial banks in China. All banks' profitability experienced a systematic shock in 1997—the adverse effect of the Asian financial crisis, which lasted until 1999 when the Chinese government had to implement the first round of bailouts to SOCBs to stabilize the banking sector. CCBs and JSCBs outperformed SOCBs by both ROA and ROE during the first half of the period and slightly underperformed SOCBs and newly restructured RCBs during the second half of the period. The outstanding performance of CCBs in the early years is mainly due to sample bias, as only a few CCBs are included in the sample for the first five years. These CCBs are under better governance structure and better management and they operate in well-developed economic regions, such as Shanghai, Beijing, Tianjin, Shenzhen, and Xiamen. During the second half of the sample period, with the inclusion of more CCBs, their performance becomes in line with the industry average. JSCBs were established during the late 1980s and the early 1990s as profit-oriented commercial banks and these banks are under less government intervention and hence bear less political burden compared with SOCBs. SOCBs were the least profitable banks in China until 2004 and the subsequent SOCBs reform improved their performance significantly, making them the most profitable banks in terms of both ROA and ROE since 2005. Foreign banks' profitability has been stable over the whole sample period. They were the best performers in terms of ROA in the first few years and from 2005 became the least profitable banks in the Chinese banking market in terms of both ROA and ROE. One reason could be their smaller assets size and a higher level

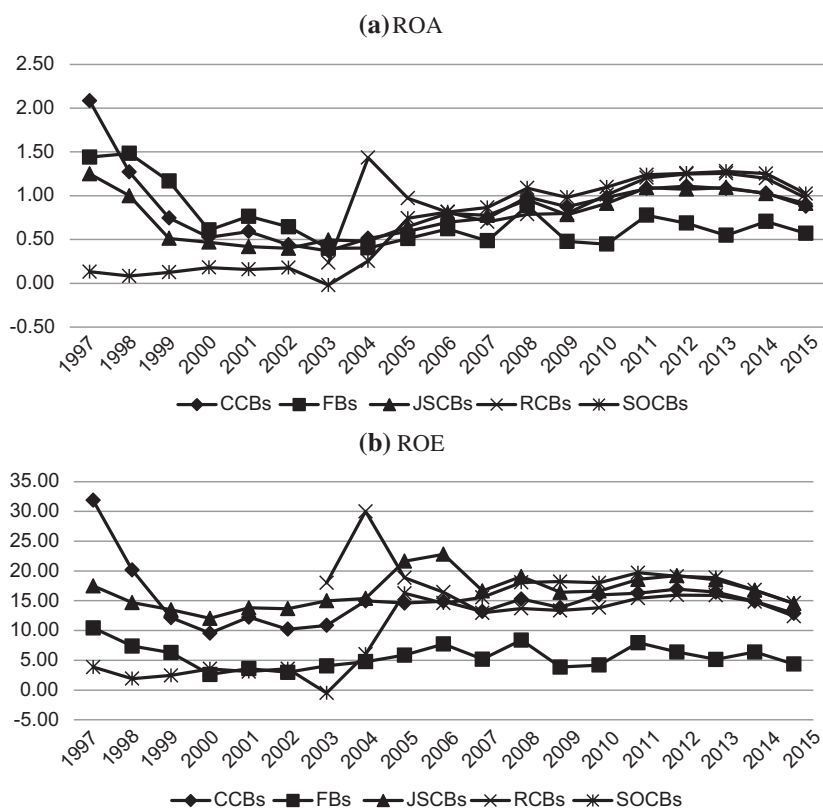


Fig. 2.6 ROA and ROE of different types of bank (1997–2015). *Source* BankScope and banks' annual reports. *Notes* ROA = return on assets, ROE = return on equity, CCB = city commercial bank, FB = foreign bank, JSCB = joint-stock commercial bank, RCB = rural commercial banks, SOCB = state-owned commercial bank

of capitalization, relative to their domestic counterparts. Overall, the banking modernization reform started in 2003 has led to significant improvement in banking profitability, which has been stable.

The four SOCBs are at pivot of the Chinese banking system and were at the forefront of the banking reform. After sequential successful reforms started in 2004, they are now the top four largest banks in the world by total assets. Figure 2.7(a,b) plots SOCBs' ROA and ROE over

the period 1997–2015.⁸ The 1997 Asian financial crisis hit ABC and BOC the hardest and their ROA and ROE decreased by half in 1998. The first round of SOCBs recapitalization in 1998 stabilized these banks' profitability up to 2002 and their ROA and ROE rose sharply during 2003–2008. Unexpectedly, all SOCBs achieved further improvement in profitability during the crisis time and remained highly profitable for the rest of the period. In 2004, CCBC was the most profitable bank in the world with ROE of 25.4%.

2.3.2.4 Liquidity

Liquidity represents the extent to which bank funds are available to meet the most important cash demand for deposit withdrawals, loans, and profitable investment opportunities. The banking system is a highly leveraged industry, and it is important for banks to maintain a prudent level of liquid assets. Serious problems in banking liquidity could cause financial losses, bankruptcy of an individual bank, and bank run due to contagion effect. It could even trigger a financial crisis in a country, or a region, or internationally in an extreme case as witnessed in 2008. As a result, banking liquidity has been closely monitored by the authorities.

There exists a trade-off between asset liquidity and profitability—highly liquid assets are associated with lower profitability. It is necessary to maintain a certain level of liquid assets to meet cash demand in daily operations, while excessive liquid assets have an adverse impact on profitability. Lower level of liquid assets to total assets may result in the risk of being unable to meet cash demand from depositors or more profitable investment opportunities. Financial losses might occur when banks have to liquidate assets or raise more expensive funds to meet cash demand in case of depositors' withdrawals to avoid adverse publicity and maintain reputation. Therefore, liquidity management is important for smoothing banks' daily operations, controlling systemic risk, and thus the well-being of the economy.

⁸The ROE of ABC in 2006 and 2007 reported in annual reports is not under normal business conditions due to financial restructuring and ownership reform. To avoid abnormal trends, we use an interpolation method to obtain ROE in 2006 and 2007 based on ROE in 2005 and 2008, assuming a constant growth rate.

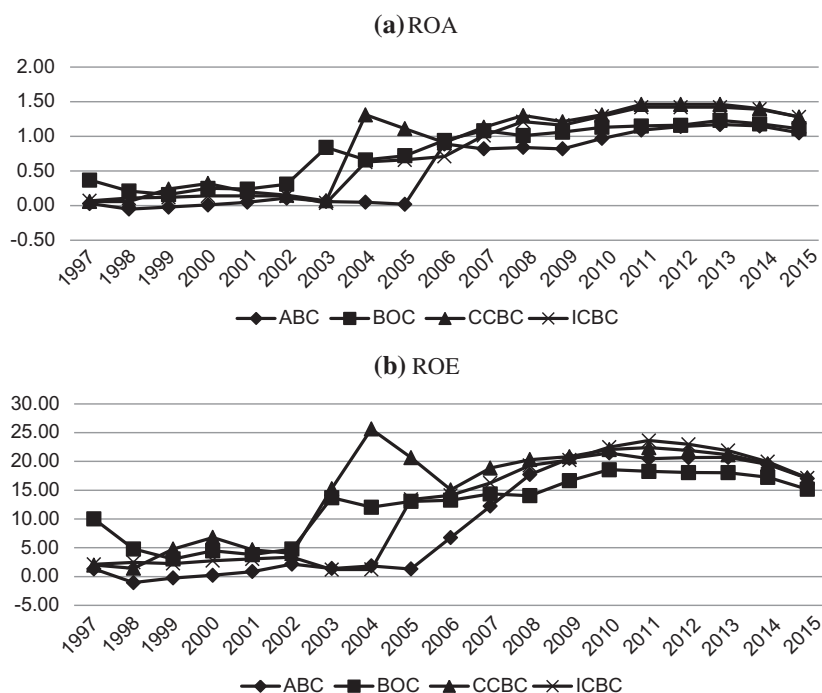


Fig. 2.7 ROA and ROE of large commercial banks (1997–2015). *Source* BankScope and banks' annual reports. *Notes* ROA = return on assets, ROE = return on equity, ABC = Agricultural Bank of China, BOC = Bank of China, CCBC = China Construction Bank Corporation, ICBC = Industrial and Commercial Bank of China

Liquid assets are those that can be readily converted into cash without significant loss under normal business conditions. It is difficult to measure and assess liquidity because of the involvement of subjective judgment when identifying liquid assets. There is no exact benchmark specifying the extent to which liquid assets holding is adequate. The IMF suggests two liquidity indicators—the ratio of liquid assets to total assets (liquidity ratio) and the ratio of liquid assets to short-term liabilities. Liquidity ratio indicates the proportion of liquid assets held by banks for meeting expected and/or unexpected demand for cash. The higher the ratio, the lower the liquidity risk a bank faces. In 1995, on average, 43% of banking assets were liquid assets, ranging from the highest of 48% (SOCBs) to the lowest of 39% (JSCBs). In

the following few years, banking liquidity deteriorated. By the end of 2003, the banking liquidity ratio decreased to 13% and SOCBs were the worst bank group holding liquid assets less than 10%. Following the banking modernization reform, bank liquidity improved. The average liquidity ratio of commercial banks was 45% and fluctuated between 38% and 49% during the period 2010–2015.

Figure 2.8 plots SOCBs' liquidity ratio over the period 1997–2015. All SOCBs experienced a rapid decline in liquidity ratio in the first few years and decreased to less than 10% by the end of 2000. BOC made the first move to improve liquidity and its liquidity ratio increased by more than 15 percentage points in one year from 6.6% in 2000 to 22.3% in 2001. CCBC boosted liquidity dramatically in 2002 and ICBC made significant improvement since 2003. As the last reformed SOCB, ABC lagged behind but started catching up in liquidity ratio from 2006. In the post-crisis era, all SOCBs held 40–50% of their total as liquid assets and ABC was the most liquid bank.

The ratio of liquid assets to short-term liabilities captures the liquidity mismatch of assets and liabilities. It reflects a bank's ability to meet short-term liabilities without serious liquidity problems. As shown in Fig. 2.9, the trend of the liquid asset to short-term liabilities ratios of SOCBs

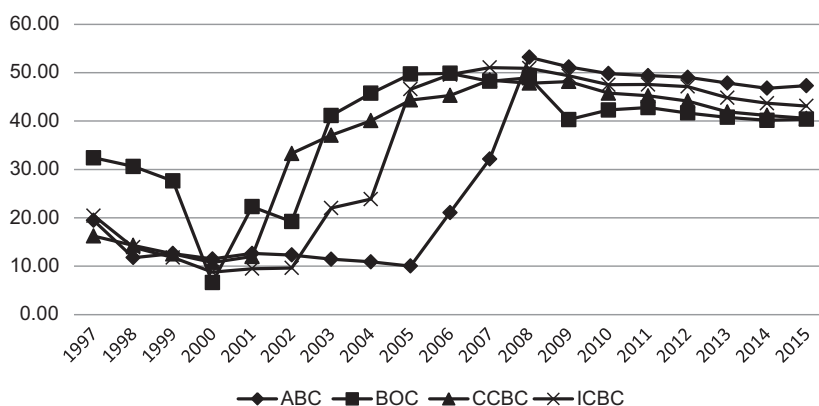


Fig. 2.8 Liquid assets to total assets ratio of SOCBs (1997–2015) Notes ABC = Agricultural Bank of China, BOC = Bank of China, CCBC = China Construction Bank Corporation, ICBC = Industrial and Commercial Bank of China. Source BankScope, banks' annual reports

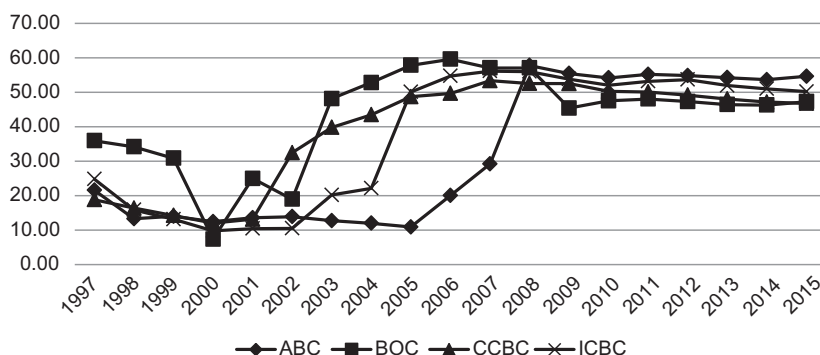


Fig. 2.9 Liquid assets to short-term liabilities ratio of SOCBs (1997–2015). *Source* BankScope. *Notes* ABC = Agricultural Bank of China, BOC = Bank of China, CCBC = China Construction Bank Corporation, ICBC = Industrial and Commercial Bank of China. *Source:* BankScope, banks' annual reports

mirrors that shown in Fig. 2.8; declined at the beginning, improved significantly during the radical banking reforming period 2003–2007, and remained stable at about 50% from 2008 onwards. Two liquidity indicators are consistent. In the past, SOCBs were able to operate at a low liquidity level without facing serious liquidity problems. These banks were wholly state-owned and domestic depositors believed they were guaranteed by the state. Bank run was highly unlikely even though SOCBs were technically insolvent. After ownership reform, these banks have become profit-oriented commercial banks and operated according to industry norms—maintaining a stable and relatively high level of liquidity.

2.4 Conclusion

Since its establishment in 1949, the Chinese banking system has experienced significant changes, from acting as government agents to serve the centrally planned economy prior to the economic reform to undergoing radical market-oriented reforms to perform commercial banking practices. The banking reform has been motivated and guided by a number of theoretical considerations, including the industrial organization theory, budget constraint theory, and agency theory. The goal is to

transform the banking system to a market-oriented one that is viable in the long run thereby better serving the economic development of the country. When the 2008 global financial crisis seriously hit major advanced economies and their banking sectors, the Chinese authorities took up with the challenge and turned it into an opportunity for catching up. Both the banking sector as a whole and major commercial banks individually have made impressive progress in improving performance and soundness. In the post-crisis era, the Chinese banking sector has been stable and sound based on a systemic assessment using IMF's key financial soundness indicators. The assessment covers four dimensions: profitability captured by ROA and ROE; asset quality proxied by NPL ratio; capital adequacy measured by regulatory total capital ratio, Tier1 capital ratio and risk-unweighted equity to capital ratio; and liquidity indicated by liquid assets to total assets ratio and liquidity asset to short-term liabilities. Now the Chinese banking system has become a multi-layered system with more than 4000 banking institutions providing a full range of banking products and services to serve the economy. It also plays an increasingly important role in the world financial arena—it is home to the four largest banks in the world in terms of market capitalization.

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