

Maintaining Financial Stability in the People's Republic of China during Financial Liberalization

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Abstract

The banking system of the People's Republic of China (PRC) is now the largest in the world, and its capital markets are rapidly approaching the size of those in the advanced economies. This paper traces the evolution of the PRC's financial system away from a traditional bank-dominated and state-directed financial system toward a more complex, market-based system and analyzes the optimal sequence of financial reforms needed to manage the new risks accompanying this evolution.

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After a period of rapid growth and development, the financial system of the People's Republic of China (PRC) has now taken on global importance. The country's banking system is now the largest in the world, and its capital markets are rapidly approaching the size of those in the advanced economies. During this period of growth, the underlying structure of the financial system has evolved significantly. Previously characterized by a traditional banking model, the Chinese financial system has become much more complex over the past decade. A large and dynamic shadow banking system now plays an important role in the allocation of credit. These new developments have helped create a more market-based financial system, but they have also brought along new risks.

Over the past decade and a half, the Chinese financial system has progressed through many stages. The late 1990s and early 2000s were a period of important structural reforms following the nonperforming loan crisis. With the onset of the global financial crisis, financial reforms slowed and the government encouraged rapid credit growth to stimulate the economy. As a result, significant risks have accumulated within the financial system, which have the potential to threaten the entire economy. Aware of these growing risks, the new Chinese leadership has renewed its commitment to financial reform. A wide range of reforms, many of which have been policy goals for more than a decade, are now being implemented with a renewed sense of urgency.

Many of the existing problems in the financial system stem from the inconsistent policy priorities of financial regulators. Government intervention is excessive in some areas of the financial system and wholly insufficient in other areas. For example, while much of the rest of the economy has been opened to competition from private and foreign enterprises, the financial sector is still dominated by large state-owned institutions. Similarly, market-determined prices are the norm in most sectors, except in the financial sector, where the government carefully controls the cost and quantity of capital. At the same time, a shadow banking system has emerged over the past several years, bringing with it many risks, primarily due to insufficient regulation.

The path towards resolving these risks involves implementation of the financial liberalization agenda outlined in the Third Plenum of the 18th Chinese Communist Party Congress in November 2013. The reforms include establishing private financial institutions, expanding the capital markets, allowing market-determined interest rates, further opening the capital account, creating a deposit insurance system, allowing the market-based exit of failing financial institutions, and experimenting with mixed ownership reforms. However, without careful sequencing these same reforms could trigger many of the risks policymakers are seeking to avoid. For example, opening the capital account without addressing many of the underlying imbalances in the domestic financial system could increase the probability of a financial crisis. Financial reform must strike a balance between implementing reform and allowing incumbents sufficient time to adapt to the new system.

Though the PRC's financial system is unique in size and structure, many of the challenges it faces are common in other Asian economies. State-owned financial institutions remain an important part of many Asian financial systems. The PRC's experience with restructuring and reforming its state-owned banks contains valuable insights for countries seeking to reform their own state banks. Additionally, lessons can be drawn from the PRC on the difficulty in rooting out moral hazard and addressing regulatory arbitrage occurring via the shadow banking system. These lessons may help other Asian policymakers avoid the pitfalls of financial reform.

REFORMS IN THE 1990S AND 2000S

At the end of the 1990s, the Chinese financial system faced both international and domestic economic crises. Internationally, the Asian financial crisis was wreaking havoc on many of the PRC's economic partners, countries whose economic models PRC policymakers had consciously emulated. The Republic of Korea, Thailand, Malaysia and others faced attacks on their currencies and capital flight. The PRC's leaders recognized that absent structural reforms and improved regulation, the PRC would also be vulnerable to this type of international volatility (Zhou 2013). Domestically, the Chinese financial system experienced a massive increase in the amount of nonperforming loans, primarily originating in inefficient state-owned borrowers. Dai Xianglong, who served as governor of the central bank during this period, declared in 1998 that 25 percent of total loans were nonperforming (Lardy 1998). By the late 1990s, most of the major banks in the PRC were effectively bankrupt (Huang 1998). Internal and external pressures had put the Chinese financial system in an extremely vulnerable position.

The response of Chinese policymakers to the accumulating risks in the financial system was dramatic. In December 1997, the State Council released the *Notice Concerning Deepening Financial Reform, Rectifying Financial Order and Preventing Financial Risk*, which outlined the risks facing the financial system and set forth a plan for reform (Chinese Communist Party News and Documents 1997). In a speech at a national financial work conference held shortly afterward, Premier Zhu Rongji identified excessive government interference in bank lending decisions, overheating in the real estate market, heavily indebted state-owned enterprises, unnecessary government investment projects, and misappropriation of bank funds as sources of the problems in the financial system (Zhu 2013). Over the next several years, the premier would spearhead an ambitious financial restructuring program, which spanned a decade and required more than RMB4 trillion in financial commitments, an amount equivalent to half of the GDP at the beginning of the process in 1998.

The first phase of the reform was designed to fix the balance sheets of banks and improve their efficiency. In 1998, the Ministry of Finance issued a RMB270 billion bond, which was sold to the four big state-owned commercial banks. The funds raised from the bond issuance were then used to

significantly increase the capital base of the banks. At the same time, large state-owned banks initiated a restructuring campaign designed to increase efficiency and cut costs. Between 1998 and 2002, the banks laid off 556,000 employees and closed more than 40,000 branches (China Finance Society 1999, 2003). In 1999, the government established four asset management companies to dispose of the nonperforming loans held by the large state-owned banks. The first round of bad asset disposal involved transferring RMB1.4 trillion in nonperforming loans, or 20 percent of the total loan balance. The nonperforming loans were transferred from the books of the banks to the newly created asset management companies at par value. As with the capital injections by the Ministry of Finance, the asset management companies were largely financed by selling bonds to the banks and then using those proceeds to purchase the bad loans. As a result of capital infusions, cost-cutting measures, and the disposal of bad assets, the financial situation of the banks improved rapidly.

The next phase of reform included a series of changes to the financial regulatory structure. In 2003, the State Council moved banking regulatory responsibility away from the People's Bank of China to the newly established China Banking Regulatory Commission (CBRC). The commission was tasked with monitoring and assessing risks in the banking system, protecting depositors, and formulating new supervisory rules and regulations. The government believed the creation of an independent banking regulator would be an improvement over delegating that responsibility to the central bank, which has numerous, and often conflicting, mandates set for it by the State Council. The government also reformed the ownership structure of the banks in 2003. Central Huijin, a government-owned holding company, was established to exercise the government's shareholder rights in the large state-owned commercial banks. Creating a consolidated owner was designed to remove conflicts of interest between the ownership and operation of the banks. That year Huijin made a capital investment of \$45 billion in China Construction Bank and Bank of China, acquiring almost all of their equity (Walter and Howie 2011). A similar transaction was made in 2005 with Industrial and Commercial Bank of China for \$15 billion and half of the bank's equity.

The final phase of the restructuring of banks was the corporatization and public listing of the major national banks. Between 2002 and 2006, foreign financial institutions were encouraged to make strategic investments in Chinese banks. These strategic partners helped establish modern corporate governance structures and implement international best practices for operations. They also contributed \$17 billion in new capital in return for equity stakes in the banks (Leigh and Podoiera 2006). After these internal reorganizations, the large state-owned commercial banks were listed on the stock exchanges in Hong Kong, China and Shanghai, raising \$74 billion (Turner 2012). In addition to raising new funds, an important benefit from the public listing was imposing greater disclosure and transparency on the banks as required by the exchanges and shareholders.

RESPONSE TO THE GLOBAL FINANCIAL CRISIS

The onset of the global financial crisis precipitated a transformation in the PRC's financial development. In the fall of 2008, the Chinese government approved a large stimulus to support the economy. Most of the stimulus was transmitted through the financial system through a large increase in the stock of credit.¹ Between 2008 and 2009, the flow of new social financing almost doubled, from RMB6.98 trillion to RMB13.91 trillion.² Most of this increase in credit was in the form of bank loans, since commercial banks were encouraged to lend freely to stimulate investment. Another RMB2.5 trillion of credit was extended outside of traditional bank loans through products like entrusted loans, trust loans, banker's acceptances, and corporate bonds. The stimulus was quite successful in offsetting shortfalls in external demand. Fueled by cheap credit, the investment share of GDP increased from 42 percent in 2007 to 48 percent by 2010. As a result, while much of the world fell into recession, the Chinese economy continued to grow rapidly, dipping to 9.2 percent in 2009 before accelerating to 10.4 percent in 2010. However, the financing of this investment became increasingly dependent on new credit. Figure 1 shows the sharp decline in the share of investment of nonfinancial corporations financed by the retained earnings. As a result of this shift, Chinese economic growth has become significantly more credit intensive.

After 2009, credit continued to grow rapidly, but the composition of the growth changed significantly in at least two dimensions. First, the share of bank loans made to private enterprises rose substantially. In 2009, state firms accounted for 56 percent of all bank loans outstanding to enterprises while the share of private firms was only 26 percent.³ But in the ensuing three years, on average 52 percent of all new loans to enterprises went to private firms while the share of state firms was only 32 percent. As a result, by the end of 2012 the share of loans outstanding to private firms had increased to 36 percent (Lardy 2014, 104–108). This shift in the ownership profile of bank borrowers reflects the increasingly commercial orientation of PRC banks. The return on assets of state industrial companies has declined substantially since 2006, and on average they earn less than the cost of capital. In contrast private firms' returns continued to rise, with the result that by 2012 their return on assets was more than twice that of state

1. For this analysis, credit is defined as borrowing by households and nonfinancial corporations, including local government financial vehicles and state-owned enterprises. Borrowing by the central government and financial institutions is not included.

2. Total social financing is a monthly time series produced by the People's Bank of China that measures the flow of new credit to the nonfinancial sector. The subcategories of social financing include renminbi loans, foreign currency loans, entrusted loans, trust loans, corporate bonds, and banker's acceptances. New issuances of equity by nonfinancial corporations, a noncredit measure of financing, are also included in social finance. However, equity issuances account for a small share of total social financing.

3. These data on lending by ownership are classified based on the concept of control. That means lending to state firms includes not only lending to traditional state-owned companies but also to limited liability companies and shareholding limited companies in which the state is the sole, majority, or dominant owner. Similarly lending to private companies includes loans to registered private companies and to limited liability companies and shareholding limited companies in which the sole, majority, or dominant owner is private.

companies. As a result the interest coverage ratio of private industrial firms, an important indicator of creditworthiness, by 2012 was more than twice that of state firms (Lardy 2014, 110).

The second change in the composition of credit after 2009 was that the growth rate of bank loans moderated while other financial products, such as entrusted loans,⁴ trust loans, bankers' acceptances, and corporate bonds, expanded rapidly. By 2013, new renminbi bank loans accounted for only 51 percent of new social financing, a sharp divergence from 2002, when renminbi bank loans accounted for 92 percent. The growth of financial products other than traditional bank loans did not signal a decline in the role of banks in the financial system. Instead, faced with binding constraints in the form of a loan-to-deposit ratio, required reserve ratio, capital requirements, and the less formal but equally important window guidance on loan quantities from the central bank, banks turned to these new methods of financing as a way to continue to extend credit (IMF 2014).

Motivated by regulatory arbitrage, the growth of these alternative financial products has created new risks in the financial system. While regulators have done much to tighten supervision of traditional banking activities, these fast growing products are often off-balance sheet and are less well supervised. The degree of risk varies by type of product. Corporate bonds appear to be relatively safe given their higher levels of disclosure and issuance by established state-owned enterprises or local government-affiliated financing companies. Entrusted loans are typically made within corporate groups, with a bank acting as middleman, but a portion is made to unrelated third parties.⁵ Bankers' acceptances are short-term debt instruments that are ultimately settled by funds from a corporate depositor and are guaranteed by the issuing bank. Trust loans are made by Chinese-style shadow banks called trust companies, which collect funds from individuals and financial institutions.

On the liability side, the composition of financial activities has changed as well. Wealth management products, a type of deposit-like financial product, started growing quickly in 2008. Offered by banks or third-party companies, wealth management products are short-term and offer a return that is frequently several hundred basis points higher than the retail deposit rate set by the central bank. These products are largely unguaranteed, but many investors assume they have an implicit guarantee given that they are sold by banks or in banks. Regulators have taken steps to address some of the more acute risks posed by wealth management products, such as asset pooling and investing funds in illiquid financial products. However, the larger problem of implicit guarantees remains unsolved. By the end of May 2014, the outstanding amount of wealth management products had reached RMB12.8 trillion, compared with half a trillion

4. Entrusted loans are corporate-to-corporate loans in which banks act as an intermediary. Banks often provide guarantees and other credit enhancements to these loans.

5. Two studies reviewed by reporters at the *Wall Street Journal* found that around 20 percent of entrusted loans were made to unrelated third parties. Dinny McMahon and Lingling Wei, "A Partial Primer to China's Biggest Shadow: Entrusted Loans," *Wall Street Journal*, May 2, 2014, <http://blogs.wsj.com> (accessed on May 2, 2014).

at the end of 2007.⁶ This amount is equivalent to 25 percent of total household deposits in the banking system.

The other component of banking liabilities that is growing quickly is interbank borrowing. After the global financial crisis, small and medium-sized banks in the PRC expanded rapidly. The growth rate of urban commercial bank assets in the PRC, for example, was twice that of the large national banks, made possible by smaller banks borrowing through the interbank market. Large banks, endowed with national deposit networks, are large net lenders via the interbank market. This created a new vulnerability in the financial system through the reliance of smaller banks on potentially unstable wholesale funding markets. The interbank credit crunch of June 2013 illustrated the volatility of short-term funding markets in the PRC when overnight rates shot up by as much as 1,000 basis points. Borrowers in the interbank market were unable to find sufficient funding or funding at a reasonable price. The crisis abated only when the central bank stepped in to provide funding and put pressure on the large banks to begin lending again.

The overall impact of the global financial crisis on the PRC's financial system is remarkable. Not only did the structure of assets and liabilities transform significantly but also the overall size of the financial system increased by an enormous margin. Between the fourth quarter of 2008 and the fourth quarter of 2013, the credit-to-GDP ratio, measured by the stock of credit to households and nonfinancial corporations, increased by 69 percentage points. Starting from an already high level of credit relative to GDP, the PRC now has an almost unprecedented level of indebtedness given its level of economic development. Periods of rapid credit growth, especially relative to the size of GDP, are a reliable early warning indicator of subsequent financial distress. Looking at a sample of 43 countries over 50 years, economists at the International Monetary Fund (IMF 2014) found only four episodes of credit growth similar in scale to the PRC's current boom. Each of those four countries experienced a banking crisis within three years of the boom period. The growth and evolution of the Chinese financial system after the global financial crisis has in many ways set back much of the reform achieved during the 2000s and created significant new risks.

THE CURRENT FINANCIAL REFORM AGENDA

Chinese policymakers have not been complacent in addressing the accumulating risks in the financial system. In November of 2013, the Central Committee of the Chinese Communist Party convened to set the agenda for the country's next wave of economic and political reform. During the Third Plenum, the party issued a document entitled *A Decision on Major Issues Concerning Comprehensive and Far-Reaching*

6. Zhang Chen, "The Value of Wealth Management Products Reaches RMB12.8 trillion," *People's Daily*, June 23, 2014, <http://finance.people.com.cn/money/n/2014/0623/c218900-25184608.html> (accessed on December 2, 2014).

Reform, which included a clear outline for financial reform.⁷ The main reforms set forth in the document include:

Establish Private Financial Institutions. The creation of private financial institutions is a new addition to the PRC's financial reform plans. Currently, financial institutions in the PRC are predominately state-owned. Figure 2 shows that the large national commercial banks are majority-owned by Central Huijin, the holding company for state-owned banks established in 2003, and the Ministry of Finance (MoF).⁸ The average share held by the central government in these institutions was 69 percent at the end of 2013.⁹ For smaller financial institutions, the share of private capital is higher. At the end of 2011, private shareholders held 42 percent of joint-stock bank capital. The figure for urban commercial banks was 54 percent. For small and medium-sized rural financial institutions, private capital accounted for 92 percent of the total (CBRC 2014). The central government directly owns the PRC's national policy banks, China Development Bank, Agriculture Development Bank of China, and the Export-Import Bank of China.

In March 2014, the CBRC accepted applications from five investor groups to establish private banks. The applications were accepted in two groups in July and September with the expectation that operations would begin in 2015. The scope of operations for these new banks will be more limited than that of traditional banks. Each bank will select a relatively narrow focus for its lending operations and will initially be confined to one preapproved test city. The primary motivation behind allowing the creation of fully private financial institutions is that they will be completely free from implicit guarantees by the government. With no government shareholders, these banks will be forced to bear full responsibility for any risks they take. Firms that fail will be forced to exit the market, currently a rare occurrence for financial firms. Policymakers believe applying this rule to these newly created banks, rather than the much larger existing banks, will provide a buffer against possible financial contagion from failing institutions.

Develop the Capital Markets. The expansion and development of capital markets are a major component of the Third Plenum financial reforms. The new reforms aim at improving access to financing for small and medium-sized firms, establishing a registration-based stock issuing system, and increasing the proportion of direct financing. Direct financing refers to financial transactions that occur through capital markets, such as stocks and bonds, rather than intermediated via banks. As figure 3 shows, the PRC's share of direct financing is well below that of advanced economies. Historically, this is quite natural since the share of direct finance typically increases as countries develop economically. However,

7. Xinhua News, "Authorized Release: A Decision on Major Issues Concerning Comprehensive and Far-Reaching Reform," November 15, 2013, http://news.xinhuanet.com/politics/2013-11/15/c_118164235.htm (accessed on August 25, 2014).

8. The MoF exercises considerable indirect influence over Central Huijin and its parent company, China Investment Corporation.

9. The next largest shareholder in these institutions is Hong Kong Exchanges and Clearing Limited, which is the clearing house representing the shares floated in Hong Kong, China. These shares are owned by a mix of private and state-owned investors.

the Chinese share of direct finance is even lower than that of other emerging markets, such as India and Indonesia. The Chinese government has sought to increase the country's proportion of direct finance for more than a decade.

The PRC's capital markets are not especially small, even when compared with its enormous economy. Measured by value of bonds outstanding, the Chinese bond market is now the world's third largest, and its corporate bond market is the largest in Asia. It accounts for 62 percent of the entire East Asian ex-Japan bond market (ADB 2014). The Shanghai stock exchange is currently the seventh largest in the world in terms of market capitalization and the fourth largest in terms of trading volume. Looking at combined market capitalization of all national exchanges, the PRC's equity markets are the second largest in the world, after those in the United States.¹⁰

However, the share of financing that the PRC's corporations obtain from the capital markets is relatively insignificant. Issuances of new equity by nonfinancial corporations accounted for only 1.3 percent of total social financing in 2013, down from 7.3 percent in 2007. The share of corporate bonds in new financing was 10.4 percent in 2013, down from 14.3 percent the previous year. The distribution of total financial assets also makes the dominance of the banking system clear. The stock of corporate bonds was slightly over RMB10 trillion at the end of 2013. In contrast, bank loans to enterprises and other institutions¹¹ were around RMB55 trillion. Overall, nonbank financial institutions accounted for only 2.6 percent of total financial assets at the end of 2013.

A larger problem is that the capital markets allocate capital in a suboptimal manner, biased in favor of state-owned enterprises. The Chinese private sector accounts for two-thirds to three-quarters of all economic output. Yet private sector firms receive a disproportionately small share of capital market funding. In the corporate bond market, private enterprises account for only 10 percent of the total amount outstanding. The situation is only marginally better in the equity markets, where state-owned enterprises account for 70 percent of the market capitalization of listed A-share firms. Access to capital markets for private firms has been improving in recent years, but their share of financing is still well below their contribution to the overall economy.

Accelerate Interest Rate Liberalization. The Third Plenum reaffirmed the commitment of Chinese policymakers to liberalize interest rates. The process began almost two decades ago with the interbank rate (Li 2014). Soon afterward, bond repurchase rates were liberalized and government bonds were offered via a bidding process. In the late 1990s, banks were allowed to make loans to certain classes of enterprises

10. For the PRC, this includes both the Shanghai and Shenzhen stock exchanges. See "China overtakes Japan in stock market cap," *Financial Times*, November 27, 2014, www.ft.com/intl/fastft/242222/china-overtake-japan-stock-market-cap (accessed on January 25, 2015).

11. Other institutions include organizations that are not classified as corporations, such as hospitals and schools. The number of strictly enterprise loans was 45 trillion renminbi.

at multiples of the benchmark interest rate. Deposit rates remained subject to a ceiling imposed by the central bank. In the mid-2000s, the upper limit on the lending rate was removed. In 2012, some flexibility was granted for deposit rates, allowing banks to pay a rate of interest that was 1.1 times the benchmark rate. In 2013, the lending rate was fully liberalized, removing any downward rate restrictions. Also in 2013, banks were permitted to issue large-scale negotiable certificates of deposit in the interbank market. In 2014, the flexibility around the benchmark deposit rate was increased from 1.1 times to 1.2 times.

The PRC has made substantial progress on interest rate liberalization over the past two decades. However, financial repression remains a significant problem. Figure 4 shows that throughout most of the last decade, Chinese real deposit rates have been at or near zero. The low rate on deposits filters through to low lending rates, which have been strikingly low in the PRC compared with other Asian nations. Figure 5 shows that between 2007 and 2013, the average real lending rate in the PRC was 1.8 percent, around half the average real lending rate for Thailand, the Republic of Korea, Japan, Indonesia, and India during the same period. The low lending rate in the PRC is one of the driving factors behind the credit and investment boom and the regulatory arbitrage that occurs via the shadow banking system.

Move towards a Market-Based Exchange Rate. Mirroring the progress on interest rate liberalization, the renminbi exchange rate has been on a long and uneven path towards liberalization. In 1994, the PRC merged its dual-track exchange rate system to a unified regime and implemented a tightly managed float versus the dollar (Yi 2013). Beginning in the mid-2000s, the intervention required to keep the exchange rate from appreciating more rapidly led to the massive accumulation of foreign exchange reserves. Figure 6 shows the increase in the stock of foreign exchange reserves held by the central bank during the past 15 years. In 2005, the renminbi was unpegged from the dollar and instead tracked a basket of currencies. This new approach resulted in a modest appreciation of the currency. Appreciation was suspended during the global financial crisis, not resuming until mid-2010. Since then, the renminbi has gradually become less undervalued as reflected by declines in the PRC's large external current account surpluses. The central bank has taken steps to increase the flexibility of the day-to-day rate by expanding the daily trading band to 1 percent in 2012 and 2 percent in 2014.

Although the renminbi is less undervalued now than during the 2000s, it remains subject to occasional heavy government interference. The accumulation of new reserves on an annual basis peaked at 13 percent of GDP, before declining to 2 percent of GDP in 2012. However, in 2013 the accumulation of reserves climbed back up to 5 percent of GDP despite statements by top officials that acquiring additional reserves is detrimental.¹² Establishing a market-based exchange rate is important for reducing

12. "PBOC Says No Longer in China's Interest to Increase Reserves," Bloomberg News, November 20, 2013, www.bloomberg.com/news/2013-11-20/pboc-says-no-longer-in-china-s-favor-to-boost-record-reserves.html (accessed on January 24, 2015).

internal imbalances within the Chinese economy. Previously, the undervalued exchange rate favored the development of export- and import-competing industries at the expense of the nontradable part of the economy. This harmed the growth of the service sector and led to a more capital-intensive model of growth throughout the 2000s. A market-determined exchange rate is also important for the conduct of monetary policy. Intervention in the foreign exchange markets requires offsetting sterilization measures in the banking system to prevent inflation. Reducing the degree of currency intervention will give the central bank greater flexibility by eliminating the need to impose strict sterilization requirements on banks. This will make it easier for the central bank to focus its policy tools on achieving economic and financial stability.

Promote Capital Account Convertibility. Chinese authorities have pursued the goal of achieving full convertibility of the renminbi since 1993 (Lardy 2011). Despite this long-standing policy goal, parts of the PRC's capital account remain closed. Foreign direct investment (FDI) is relatively open, apart from a few restricted sectors, but portfolio inflows and outflows are high constrained. The PRC's capital account controls are judged significantly more restrictive than the advanced economies and even more restrictive than those present in India (Hooley 2013). Despite the closed nature of the capital account, regulators have taken steps to increase cross-border flows in certain areas. Institutional investors are permitted to make cross-border investments in securities through the Qualified Foreign Institutional Investors (QFII), the Renminbi Qualified Foreign Institutional Investors (RQFII), and Qualified Domestic Institutional Investors (QDII) programs. Authorities have taken steps recently to reduce and simplify the process for approving new FDI and obtaining foreign currency. Additionally, new reforms in the China (Shanghai) Pilot Free Trade Zone will relax restrictions on foreign borrowing. In 2014, the Chinese government approved the Shanghai–Hong Kong Connect program, which allows investors in Hong Kong, China and the PRC to purchase eligible listed securities in both markets, subject to a quota.

Even with these measures, the share of Chinese financial assets available for purchase by foreigners is extremely small. At the end of 2013 the total amount of offshore renminbi liquidity was \$300 billion to \$400 billion (Anderson 2014). The total amount of QFII and RQFII assets was equivalent to \$82 billion during the same period. In its initial phase, the Shanghai–Hong Kong Connect program has an aggregate quota of RMB300 billion (\$49 billion) once it is fully utilized. Combined, these amounts are well below 10 percent of 2013 GDP. For comparison, foreign ownership of US financial assets is in excess of 100 percent of GDP.

Establish a Deposit Insurance Scheme. As with many of the reform priorities outlined in the Third Plenum, the establishment of a deposit insurance scheme in the PRC has been on the policy agenda for more than a decade (World Bank 2013). Despite having the largest banking system in the world, the PRC has lacked this basic safety net for depositors, which all other major financial systems have established.

In place of a formal deposit insurance scheme, the government has provided an implicit guarantee to deposit-taking financial institutions of all sizes. Many factors have delayed the implementation of a deposit insurance scheme. Various potential regulators have disagreed over who will be granted authority over funds collected and leadership over resolution of failing banks. Additionally, banks have been reluctant to pay additional insurance premiums, and smaller banks have objected to paying higher rates based on risk. These obstacles have finally been surmounted, and the State Council released a draft proposal for the system at the end of 2014. The new scheme will include a new deposit insurance agency and will cover deposits up to RMB500,000 per account. Implementation of the deposit insurance system is likely to begin sometime during 2015.

Creation of a Market-Based Exit Mechanism. The Third Plenum financial reform agenda calls for the creation of a market-based exit mechanism for financial institutions. At present, the failure of financial institutions, especially banks, is exceedingly rare in the PRC. Financial institutions with shares owned by the government, which is the majority of financial institutions in the PRC, are widely believed to have implicit guarantees from the government. These widespread implicit guarantees have contributed to misallocation of credit and overinvestment (IMF 2014). The new reform would aim to create procedures for the orderly resolution of failing financial institutions, similar to the “living will” reforms embodied in the Dodd-Frank Act in the United States. The details on how and when these new policies will be implemented have not yet been released.

Experiment with Mixed Ownership Reform. The Third Plenum included a call for vigorously developing a mixed ownership economy, allowing state-owned enterprises to attract capital from private sources. At present, this reform has mainly been implemented by nonfinancial companies. Sinopec, for example, has sold a 30 percent stake in its distribution business to a consortium of private businesses. Sinopharm Group and China National Building Material Group are also considering partial privatization. At the local level, Shanghai and Guangdong have taken the lead on implementing the mixed ownership reform. Guangdong has a stated target of putting 80 percent of its local state-owned enterprises into mixed ownership reform by 2020. The first major financial institution to explore the mixed ownership reform is the Bank of Communications (BoCom). In July 2014, BoCom announced that it was studying the feasibility of deepening its existing mixed ownership structure and improving its corporate governance system. In September 2014, the bank’s management began to buy significant numbers of shares using their own personal funds. The next stage of reform may include increasing employee ownership and reducing the number of shares held by the Ministry of Finance, which currently stands at 26 percent of total shares. If BoCom’s experiment with mixed ownership advances, many other banks will likely follow suit.

SEQUENCING AND RISK MANAGEMENT

Financial reform is a risky process that often exacerbates the very problems it is seeking to address. There is a strong tendency for banking and currency crises to follow financial liberalization (Kaminsky and Reinhart 1999). Yet, there are also dangers from inaction. Delaying financial reforms can allow the buildup of imbalances and the misallocation of capital, both of which can significantly impede growth and create financial crises. Successful implementation of the financial reforms outlined in the Third Plenum will therefore require careful sequencing to minimize the potential risks.

International experience shows that it is critical to address domestic financial weaknesses and imbalances before opening up the financial system to foreign capital inflows and outflows (Chalk and Syed 2013). International capital flows tend to be volatile, and policymakers lose much of their ability to influence these flows once capital controls are abandoned. Without effective regulation, domestic banks often borrow heavily from foreign lenders. Negative shocks to the economy can spark capital flight and lead to a disorderly deleveraging of the financial system. This was one of the key triggers of the Asian financial crisis. In the PRC, external debt levels, both official and private, are currently relatively low. Yet if barriers are lowered, existing distortions in the domestic financial system could encourage disruptive capital flows in both directions. An undervalued exchange rate will encourage hot money to flow into the country and exacerbate existing asset price bubbles. If deposit interest rates remain artificially low, savings may flee the domestic banking system in search of higher returns. Smaller banks, which generally have weaker deposit bases, would be hit especially hard. These potentially volatile inflows and outflows could destabilize the entire financial system. Thus it is incumbent on policymakers to address these underlying domestic distortions before opening the capital account.

There are three main priorities for reforming the domestic financial system. The first priority is ending the systematic underpricing of capital. Resolving this distortion and moving towards a more market-determined interest rate requires eliminating the deposit ceiling. After liberalization, large deposits, money market rates, short-term bond rates, and small deposit rates are all likely to increase (He, Wang, and Yu 2014). This increase in the cost of funding will, in turn, lead to higher borrowing rates. Faced with higher funding costs, many borrowers and projects will be less creditworthy. Banks, which have become increasingly profit-oriented following the restructuring of the 2000s, are likely to allocate an increasing share of their lending to more efficient borrowers. This will improve the allocation of capital while offsetting some of the negative impact of a slowdown in credit growth (Borst 2014).

The People's Bank of China has outlined a sensible framework for deposit interest rate liberalization based on three principles. First, interest rates on foreign currency deposits will be liberalized before renminbi deposits. Second, long-term deposits will be liberalized before short-term deposits. Third,

large-scale deposits will be liberalized before small-scale deposits.¹³ The logic behind this sequence is that the more stable and secure types of deposits will be liberalized first. This gives banks adequate time to adapt to a change in their business environment and gain experience with more volatile interest rates. However, despite having this framework for a decade, implementation has been slow. Only rates on large-scale foreign currency deposits have been fully liberalized.¹⁴ Financial institutions are permitted to issue large-scale domestic currency negotiable certificates of deposits in the interbank market, but that right is only slowly being extended to corporates. The vast majority of bank deposits remain subject to the same controls that existed a decade ago.

The reason deposit interest rate liberalization has progressed so slowly is the fear that fully liberalized rates could lead to unhealthy competition for deposits among banks. Competition for deposits is frequently a trigger for financial distress because banks promise unsustainably high rates to hold onto funds. In an attempt to generate the income to pay these higher deposits rates, banks often lend to riskier borrowers at high yields. Inevitably many of these loans go bad and force some banks into failure, ultimately imposing losses on depositors. If this type of deposit competition took hold, especially among the smaller and regional banks, the Chinese government would face large contingent liabilities given its implicit guarantee for all deposits in the banking system. To prevent this, regulators seek to implement a formal deposit insurance scheme that would remove the implicit guarantee in favor of a formal system with measures to discipline riskier banks. The establishment of a deposit insurance system is therefore seen as a prerequisite for moving forward more aggressively with deposit rate liberalization. The delay in the creation of the deposit insurance system has thus stymied the larger project of interest rate liberalization. With the draft proposal for a new deposit insurance system now released, this obstacle may be removed.

The second priority for domestic reform is capital market development. Expanding the PRC's capital markets is an important step in the sequencing of financial liberalization for two principal reasons. First, capital markets can help reduce the degree of moral hazard in the currently bank-dominated financial system. The bank restructuring in the late 1990s and 2000s confirmed the government's willingness to offer substantial aid to failing banks, both small and large. As long as most banks remain predominantly state-owned, which is likely for the foreseeable future, some level of implicit government support will be assumed. This leads to the problem of moral hazard for both the management and nonstate shareholders of these banks. Banks that are too big to fail have incentives to take on additional risks because they know that the government will save them. Strong regulation can help control these risks but it cannot alter the underlying incentives at play. Increasing the share of credit allocated through the capital markets will

13. For an explanation of the central bank's interest rate liberalization strategy, see www.pbc.gov.cn/history_file/files/att_12766_1.pdf.

14. Interest rates on small-scale deposits have recently been liberalized in the Shanghai area.

reduce the role of the banks in the financial system. However, moral hazard will decline only if regulators reduce state involvement in the capital markets. Intervention to prevent bond defaults and heavy restrictions placed on companies seeking initial public offerings have impaired market discipline in the capital markets.

The second benefit from developing the PRC's capital markets is their potential to improve the allocation of capital. As mentioned above, in their current form the PRC's capital markets do not appear to be better at allocating financial resources than banks. State-owned enterprises continue to occupy an outsized position as borrowers in the capital markets, which is completely disproportionate to their share of economic output and inconsistent with their very low returns compared with private firms.¹⁵ Part of this is the result of the current structure of the economy. In general, state-owned enterprises tend to be larger and better established than private enterprises in the PRC. Therefore, it is easier for these firms to undertake the costs and regulatory requirements of issuing securities. However, much of the bias towards state-owned enterprises is also explained by government policy. Until 2000, the PRC had a quota system for stock listings (Lardy 2014). Under the quota system, the State Planning Commission, government ministries, and local governments mostly selected state-owned enterprises for listing. These trends have improved in recent years, but this historical bias continues to distort the makeup of the equity markets.

Similar problems exist in the corporate bond market. State-owned enterprises dominate all three types of corporate bonds in the PRC—enterprise bonds, exchange-traded corporate bonds, and medium-term notes. Enterprise bonds are issued by nonlisted firms and are approved by the National Development and Reform Commission (NDRC). Exchange-traded corporate bonds, regulated by the China Securities Regulatory Commission, are issued by listed companies and thus distorted by the same historical bias as the stock market. Medium-term notes are approved by the People's Bank of China and trade over-the-counter in the interbank market. Despite what appear to be easier requirements for issuance, private firms have struggled to make inroads into this market thus far.¹⁶

The third major component of the sequencing of domestic financial reform involves establishing a market-based exchange rate and creating a more effective framework for monetary policy. Ending routine intervention in the foreign exchange market is necessary for the establishment of a market-determined exchange rate.¹⁷ A market-determined exchange rate, in turn, will help improve the conduct of monetary policy. Zhou Xiaochuan, the governor of the People's Bank of China, publicly declared in November

15. In the industrial sector, the gap between the returns of private and state firms is close to 3:1. The return on assets of private firms was almost 15 percent versus less than 5 percent for state firms. The ratio for the service sector is 2:1 (Lardy 2014, 97–99).

16. An estimate by Barclays put the private share of the medium-term note market in 2013 at around 8 percent. Barclays, *Financial disintermediation: acceleration of corporate bonds—good or bad?* China Banks: Cross Asset Report, November 28, 2012.

17. This does not preclude all intervention. Monetary authorities around the world reserve the right to intervene during exceptional circumstances.

2013 that the central bank would begin to phase out routine intervention. Despite this statement, the PRC accumulated another \$292 billion in foreign reserves in the fourth quarter of 2013 and the first half of 2014.

Once the degree of intervention is reduced and the exchange rate becomes more flexible, monetary policy can be handled more effectively (Roache and Maziad 2013). Many core tools of monetary policy in the PRC currently are primarily used to offset the effects of the PRC's currency policy. To maintain an undervalued currency and provide stability, the PRC must sterilize its intervention in foreign exchange markets using tools such as the required reserve ratio and open market operations. Figure 7 shows the amount of foreign reserves relative to the economies of several Asian nations. Asia as a whole has very large reserves relative to the world average, and the PRC is among the top reserve holders in the region. Although on a flow basis the amount of sterilization in relative terms has declined in recent years, an immense stock of sterilization liabilities remains to be unwound.¹⁸ Once this is accomplished and the currency becomes market-determined, many of the tools available to the central banks will be freed up for the normal management of monetary policy instead of sterilization operations (Chalk and Syed 2013). The central bank will then have greater leeway in dealing with the potential volatility created by financial reform.

If the reforms mentioned above are put into place and macroeconomic conditions are stable, policymakers can move forward with capital account opening. The three main categories of financial flows to liberalize are FDI, portfolio investment, and bank cross-border transactions. The PRC's international liabilities are dominated by FDI. At the end of 2013, FDI accounted for nearly 60 percent of total international liabilities (Hanemann 2014). This is a source of strength because FDI tends to be stable and long-term. During the Asian financial crisis and global financial crisis, FDI flows were less volatile than portfolio investment and bank cross-border transactions in Indonesia, Malaysia, the Republic of Korea, the Philippines, and Thailand (Jeanne 2014). In an open capital account environment, this pattern is likely to hold true for the PRC as well.

In general, FDI is the most open component of the capital account in the PRC. Over the past several decades, authorities have gradually opened up much of the economy to foreign investment, particularly in the manufacturing sector. More recently Chinese enterprises have been encouraged to invest abroad as part of the Going Out Policy. Project approvals, a requirement for new investments to be approved by the NDRC, were significantly relaxed following the Third Plenum.¹⁹ In 2014, the State Council eased barriers to establishing foreign-invested enterprises by removing the registered capital requirement in

18. The PRC's required reserve ratio is extraordinarily high. The ratio is 20 percent for large banks and 18 percent for small and medium-sized banks. In 2014 authorities made a small cut in the ratio, 0.5 percent, for banks that had met a certain threshold for loans to small and rural borrowers.

19. FDI into sectors which are labeled "encouraged" or "permitted" in the investment catalogue no longer require approval from the central or local NDRC if the amount is less than \$300 million. For outward investments, this threshold is set to \$1 billion.

most circumstances. However, despite these improvements many barriers to inbound direct investment remain. Many foreign investments are still subject to a complex web of approval requirements from local and central authorities. Moreover, much of the service sector and some strategic areas of the industrial sector remain off-limits to foreign investment. The new Chinese leadership appears to be committed to addressing these issues. It recently agreed to negotiate a bilateral investment treaty with the United States on the basis of a negative list approach to investment approval.²⁰ This will potentially remove many of the remaining restrictions on investment. Continuation of these trends towards full liberalization of inward and outward direct investment is unlikely to cause financial instability.

Relaxing rules on portfolio investment and cross-border borrowing is more complicated. With respect to portfolio investment, institutional investors tend to have a longer-term perspective and therefore play a stabilizing role in financial markets. Portfolio investment for institutional investors is already partially liberalized, but the overall amounts of portfolio investment are strictly controlled via the QFII, RQFII, and QDII programs. These quotas have increased rapidly over the past several years, with the QFII quota now almost six times larger than it was at the beginning of 2008. However, the quotas' overall size relative to the total financial market is insignificant. Encouraging growth of portfolio inflows and outflows will require expanding the quota amounts, continuing to ease the process of qualification for a quota, and removing restrictions on the type of securities that can be held. Once foreign institutional investors have a greater presence in the PRC's securities markets, policymakers should increase investment opportunities for retail investors. Full and unrestricted portfolio investment by foreign retail investors should be considered only as a final step.

The cross-border activities of Chinese banks have grown steadily, but overall the financial system remains domestically focused. Between January 2011 and June 2014, the stock of foreign assets held by Chinese banks increased by 73 percent. However, because of rapid growth of the financial system during this period, the share of foreign assets remained virtually unchanged at 2.1 percent of total assets. Foreign liabilities are also minimal, equaling 1.5 percent of total banking liabilities during the same period. Figure 8 shows the share of the "other investments" component of the PRC's international investment position, which includes cross-border lending, trade credits, foreign currency, and deposits, relative to GDP. The figure reveals a significant decline in cross-border activity during the global financial crisis followed by a recovery in recent years. In comparison to many developed economies, these numbers remain quite low. For example, at the end of 2013, other investment assets and liabilities relative to GDP for Japan were equal to 37 and 40 percent, respectively.

20. A negative list approach means that areas not specifically prohibited to investment will be open. In contrast, a positive list approach requires approvals for areas not specifically listed.

As the capital account opens, it is likely that Chinese banks will further increase their cross-border activities. Greater openness will increase competition within the domestic banking system, forcing Chinese banks to become more efficient or lose market share to foreign competitors. Loosening restrictions on cross-border lending can also help Chinese banks diversify their range of borrowers and transform themselves into true multinational banks. However, increasing banking openness is not without risks. Reliance on foreign funding, particularly short-term wholesale funding markets, can turn into an acute financial risk during periods of financial distress (Jeanne 2014). Currently, the overwhelming domestic focus of Chinese banks means that this type of dependence is unlikely to occur in the near term, even if restrictions are eased. If Chinese regulators maintain strong prudential standards, this risk can be avoided, and increasing the share of cross-border banking activity can be a net positive for the financial system.

Overall, the priorities for the sequencing of financial reform are clear. Policymakers should first strengthen the domestic financial system by simultaneously implementing three broad reforms. First, distortions to interest rates, primarily in the form of the ceiling on deposits rates, should be eliminated. Second, financial deepening should be promoted by expanding the PRC's capital markets. Third, the exchange rate should become market-determined, freeing up the PRC's central bank to concentrate on domestic economic management. Once these prerequisites are in place, policymakers can move forward with opening the capital account, gradually removing restrictions on portfolio investing and overseas borrowing and lending.

LESSONS FOR OTHER ASIAN COUNTRIES

Drawing lessons for the rest of Asia from the PRC's experience is difficult given the unique characteristics of the country's financial system. The Chinese financial system is set apart by having grown to a very large size, relative to GDP, at an early stage in economic development. Figure 9 plots out the stock of credit, measured as borrowing by households and nonfinancial enterprises, relative to GDP and per capita GDP, a proxy for level of economic development. The PRC stands out in terms of having a stock of credit relative to GDP that is comparable to that of the Republic of Korea and Japan, yet having a much lower level of per capita income. In general, as countries grow richer they undergo financial deepening, that is, the size and complexity of the financial system increase. East Asian economies tend to have particularly large financial systems at an earlier stage of development.²¹ However, the PRC is an outlier even in this group with a stock of credit much larger than that of Malaysia and Thailand, two countries at similar levels of economic development.

21. Much of this can be attributed to extremely high saving and investment rates in East Asia.

The large size of the Chinese financial system is not a recent phenomenon. In fact, the PRC may have been even more of an outlier in the past. In the early 1990s, the PRC's credit-to-GDP ratio was already near 100 percent at a time when per capita income levels were much lower. The roots of this can be traced back to the old model of the financial system in which the State Planning Commission and the central bank set lending targets and priorities for each of the banks. Facing soft budget constraints and easy access to credit, state-owned enterprises borrowed heavily during the 1980s and 1990s, inflating the size of the PRC's financial system. The other unique factor contributing to the size of the Chinese financial system is the financing of fiscal expenses through the banking system. Originally state-owned enterprises borrowed from banks to provide education, housing, and health care to workers and their families. More recently, the banking system has financed a spree of infrastructure projects through lending to local government-linked platform companies. If the government had financed these projects through more traditional borrowing methods, such as issuing bonds, explicit government debt levels would have been larger and the amount of corporate debt smaller.

In addition to size, the other distinguishing feature of the Chinese financial system is its bias towards serving corporate rather than household borrowers. Figure 10 shows the credit outstanding, relative to GDP, to both the corporate and household sectors. The skew in the direction of lending to companies is related to the relatively recent emergence of a private housing market in the PRC. Household borrowing is dominated by mortgage loans, with consumption and auto loans still accounting for a very small percentage of borrowing. In recent years, however, households are increasingly gaining access to financing. The share of new lending going to households increased to 42 percent in 2013, up from 14 percent in 2006. Regardless, even if these trends persist the Chinese financial system will be unusually dominated by corporate borrowing for many years to come.

Despite these differences, Asian economies implementing financial reform can draw several useful lessons from the Chinese experience. The first lesson is that it is possible to rapidly improve the efficiency of state-owned banks. The PRC's banks went from being technically bankrupt in the late 1990s to earning large profits less than a decade later. The turnaround initially required a large injection of capital from the central government and indirect support to offload bad loans to asset management companies. However, the reforms went farther than a simple bailout. State-owned banks dramatically reduced their employee and branch numbers to boost efficiency. An independent banking regulator was established and a separate body was created to manage the state's ownership interests. Chinese banks also brought in foreign strategic investors and listed on international exchanges to reinforce corporate governance improvements. These reforms dramatically increased the operational efficiency and profitability of the PRC's commercial banks, in part due to increased lending to private firms, which generate higher returns, and reduced lending

to state-owned firms, which on average earn substantially less on their assets (Lardy 2014).²² Table 1 shows that dramatic improvement in the performance of Chinese banks since the banking cleanup in the late 1990s. The table also shows that Chinese banks meet or exceed the performance of their G-20 counterparts on a variety of performance metrics.

State-owned banks are prevalent across many Asian countries. Figure 11 shows that in many financial systems state-owned banks account for more than 20 percent of total banking assets. These banks are often inefficient and in need of reform. In the process of cleaning up their banks, Chinese regulators undertook unusually large and dramatic interventions. Though other banking regulators may not have the need or desire to make such herculean efforts, the basic principles of the PRC's banking cleanup are transferable across borders. These lessons include reducing waste and inefficiency, establishing a banking regulator with a clear mandate, separating ownership and regulation, and bringing in international experience and scrutiny. Of course, there are inherent problems associated with maintaining a large role for state-owned banks in the financial system. Therefore, reforming state-owned banks as the PRC has done may be only a second-best solution to overall financial sector reform.

The second lesson to be drawn from the Chinese financial reform experience is that incrementalism can lead to unintended consequences. The big bang approach to financial reforms advocated to many developing countries in the 1990s was soundly rejected by Chinese authorities. In the wake of the economic collapse of many post-Soviet countries and the turmoil in Asia during the Asian financial crisis, the Chinese approach of slow and incremental financial reform seemed vindicated. However, the slow progress of many financial reforms, most notably liberalization of interest rates on deposits and exchange rate reform, has created adverse side effects. The glacial pace of interest rate liberalization has increased credit to unsustainable levels and created a large shadow banking system. On the deposit side, wealth management and trust products have proliferated as savers seek alternatives to artificially low bank deposit rates. On the lending side, low interest rates have led to excessive investment and regulatory arbitrage by banks to extend credit to borrowers. This created a boom in finance products like entrusted loans, trust loans, and bankers' acceptances. With respect to the exchange rate, policymakers' desire to maintain an undervalued exchange rate required the central bank to intervene on an unprecedented scale. As a result, drastic measures were imposed on the domestic banking system to prevent inflation. Measured and incremental financial reform may be preferable to overnight liberalization. However, lack of reform can also create risks within the financial system.

The final lesson from the experience of the PRC is the difficulty of rooting out implicit guarantees and moral hazard in a financial system dominated by state-owned actors. The PRC has the largest banking

22. It should be noted, however, that significant concerns exist with respect to the off-balance sheet activities of Chinese banks. Investors' calculation that these activities may ultimately lead to losses for the banks mean that Chinese bank stocks often trade below their book value.

system in the world, yet it has lacked the modern prerequisite of deposit insurance and is only now in the process of creating a deposit insurance system. The Chinese central government therefore has an implicit liability for more than RMB100 trillion in deposits, almost twice the PRC's GDP. Even worse, depositors assume that banks will make them whole for a variety of other financial products, such as trust and wealth management products, irrespective of whether the issuing bank has a legal responsibility to do so. The central government is therefore the ultimate guarantor of these products as well. In the capital markets, regulators have been reluctant to let market forces play out. Regulators manipulate stock prices by instructing state-owned enterprises to buy stocks on market dips and by restricting new offerings, primarily to bolster existing prices. Corporate bonds, dominated by state-owned enterprises, rarely go into default due to extensive work by the government behind the scenes to provide support to failing firms. These government actions distort the financial system by short-circuiting the price discovery mechanism and encouraging excessive risk taking. Without a paradigm change in the approach of regulators and the introduction of private financial institutions capable of failing, these problems seem destined to persist.

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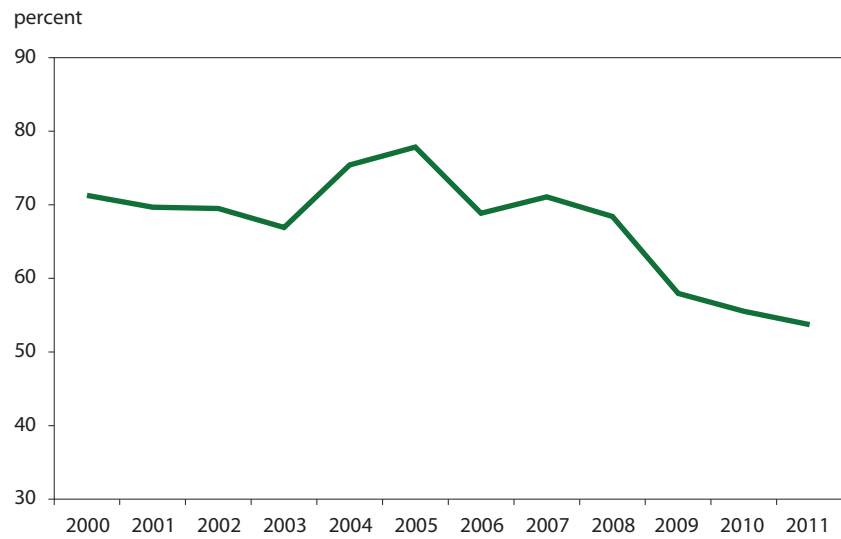
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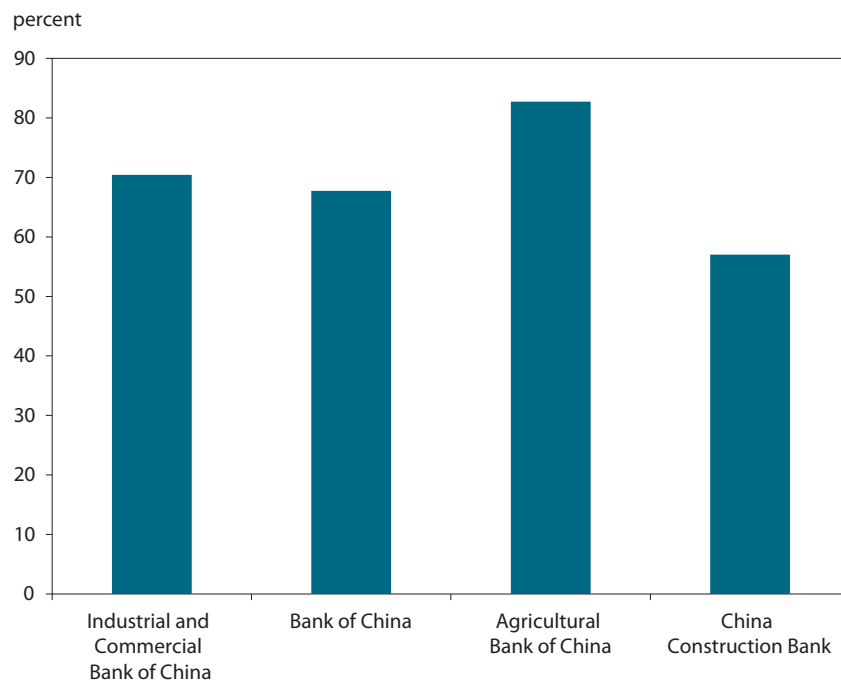
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Figure 1 Retained earnings share of gross capital formation, 2000–11



Source: China National Bureau of Statistics; authors' calculations.

Figure 2 Shares held by Huijin and Ministry of Finance, 2013



Source: Bank Annual Reports.

Figure 3 Proportion of direct financing in the financial system, 2012

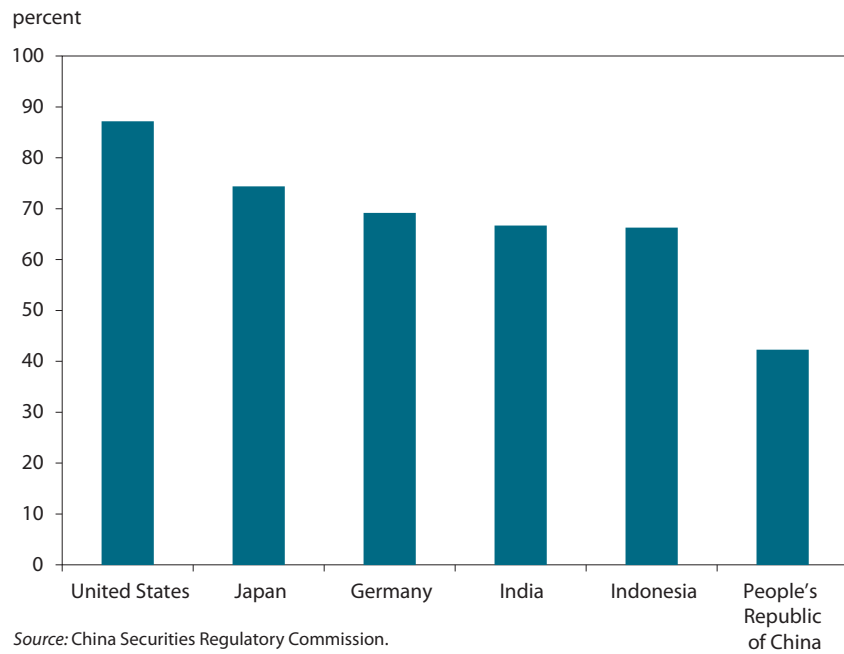


Figure 4 Real interest rate on one-year deposits, 2004–14

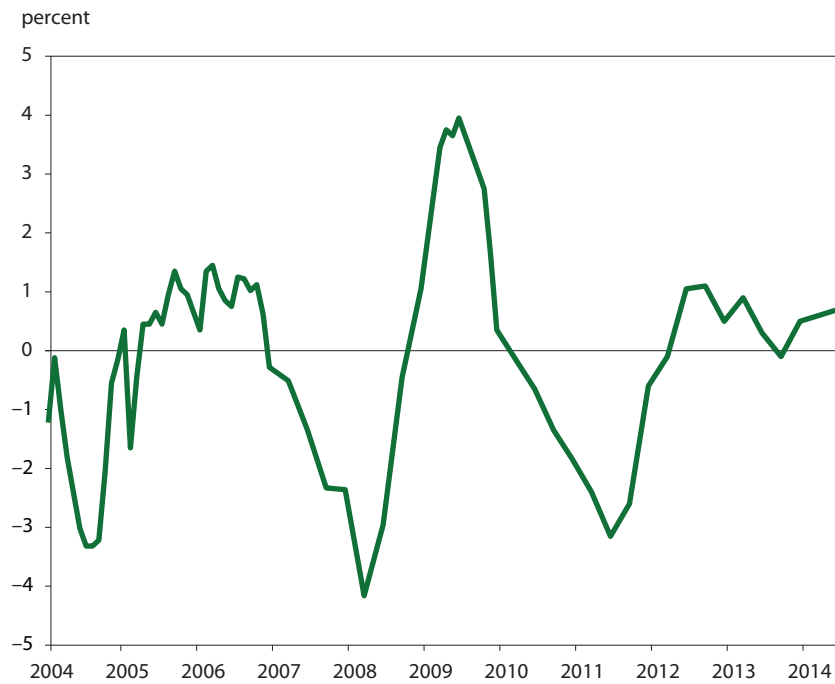
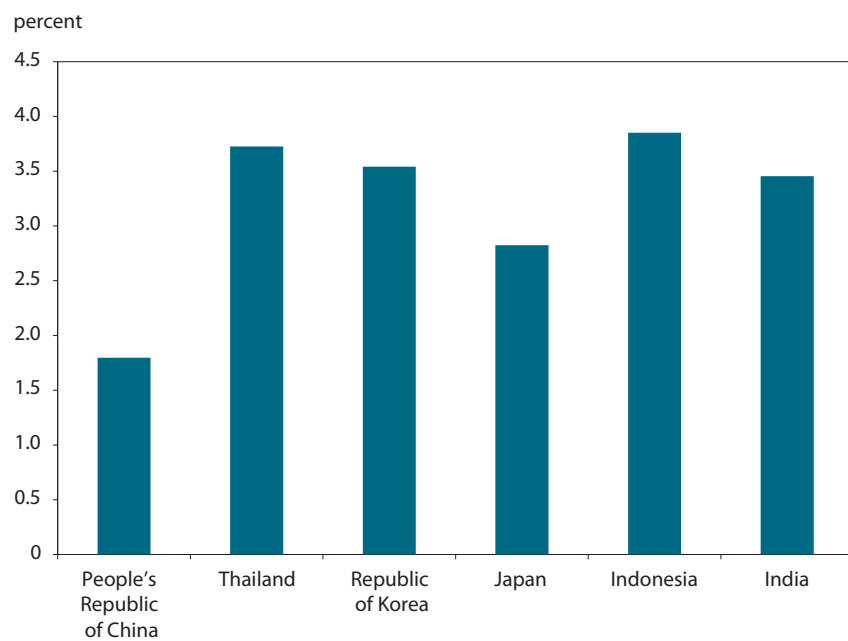
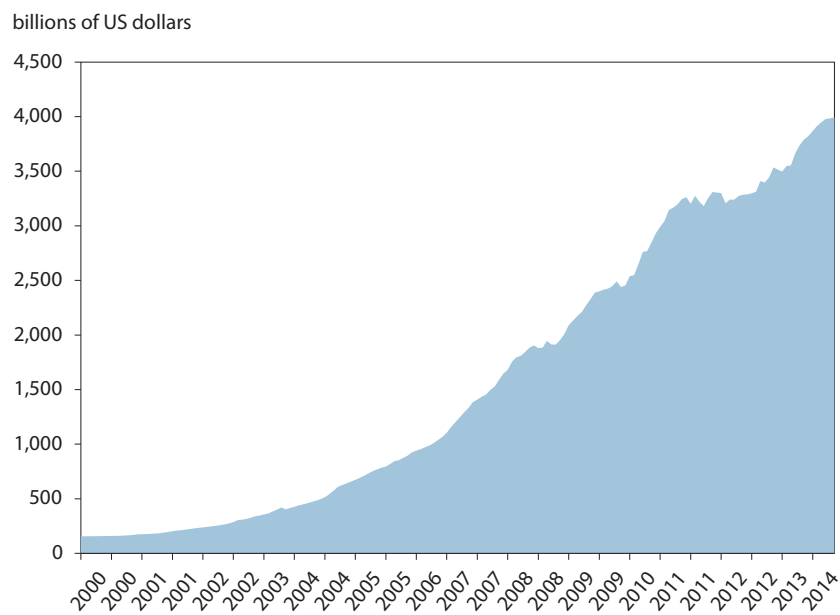


Figure 5 Average annual real lending rate, 2007–13



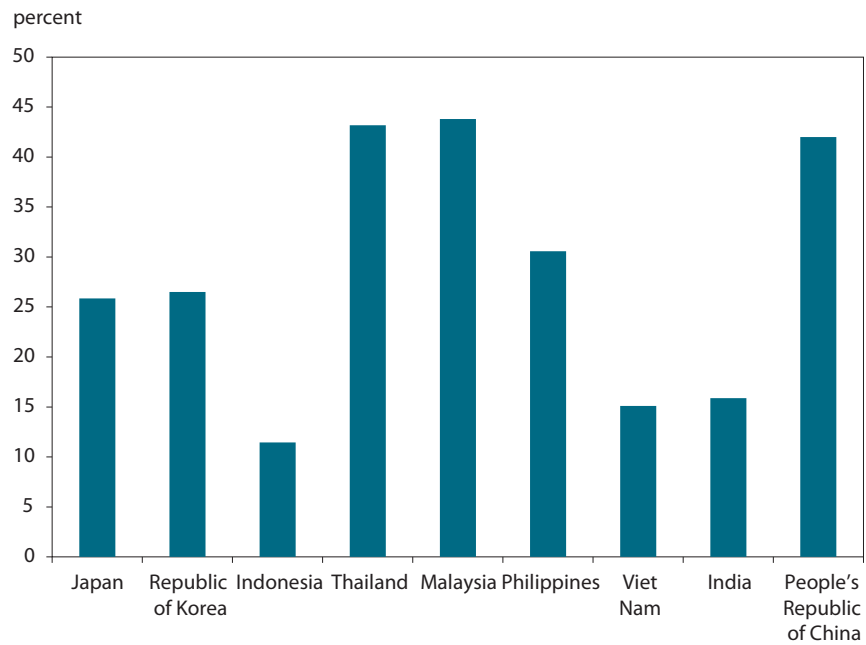
Source: World Bank, *World Development Indicators*.

Figure 6 Foreign exchange reserves, 2000–14



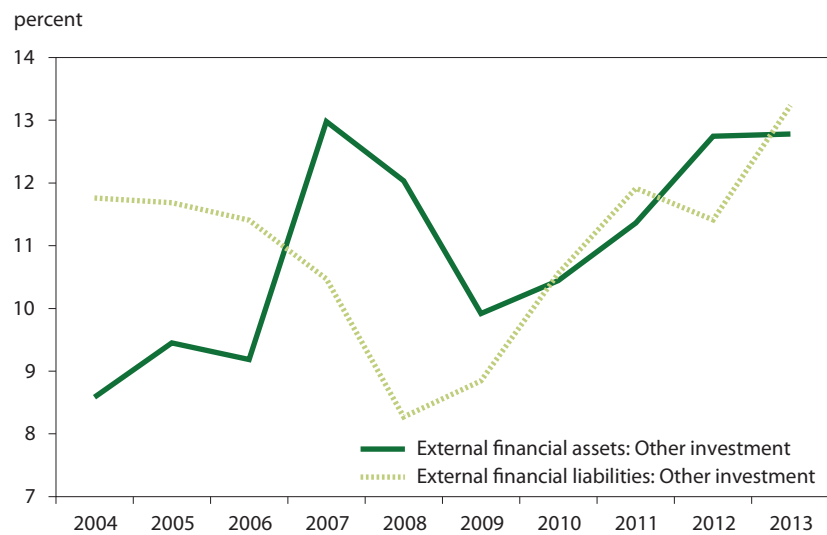
Source: People's Bank of China.

Figure 7 Foreign reserves relative to GDP



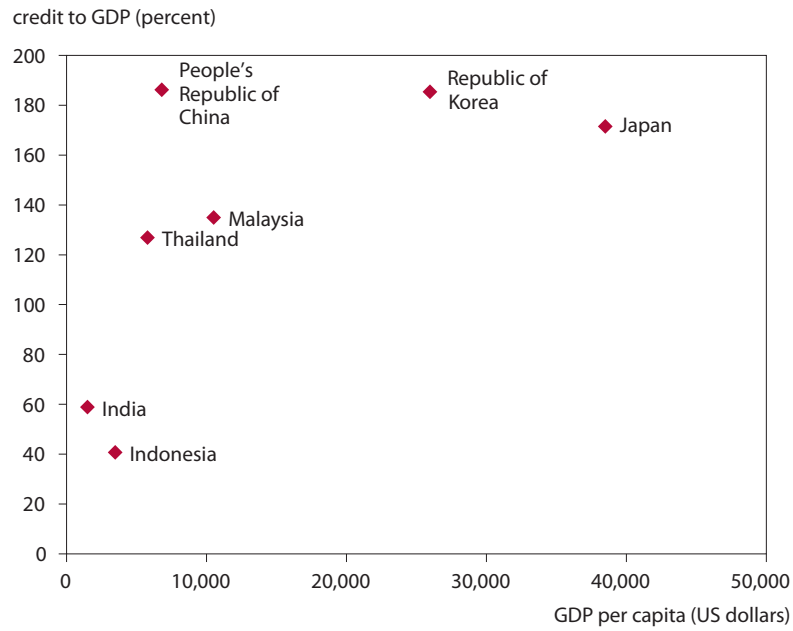
Source: World Bank; authors' calculations.

Figure 8 Other investments relative to GDP, 2004–13



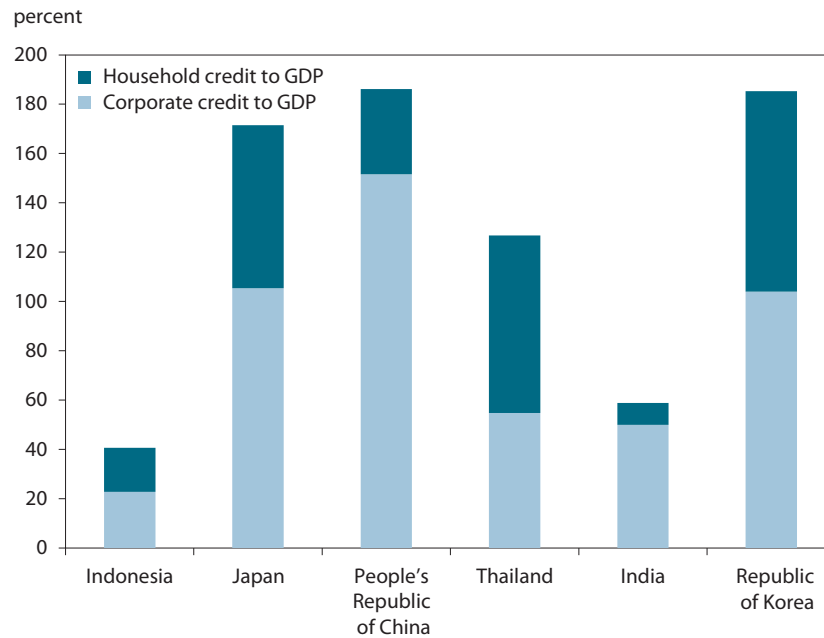
Sources: China National Bureau of Statistics; People's Bank of China.

Figure 9 Credit to GDP and per capita GDP, 2013



Sources: Bank for International Settlements; World Bank.

Figure 10 Corporate and household credit to GDP, 2013



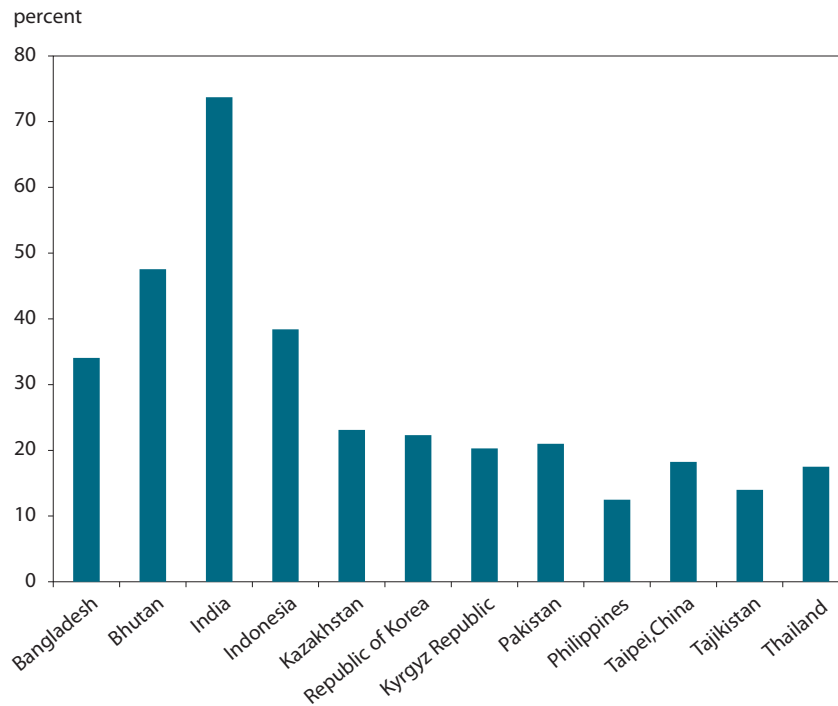
Sources: Bank for International Settlements; World Bank.

Table 1 Performance of Chinese banks versus G-20 average
(percent)

Year	Return on assets	Net interest margin	Return on equity	Cost to income ratio
The People's Republic of China, 1999	0.7	1.9	9.8	65.5
The People's Republic of China, 2011	1.1	2.9	18.3	38.3
G-20 2011 average	1.2	3.0	13.5	59.3

Source: World Bank, *Global Financial Development Database*.

Figure 11 Share of banking assets held by entities with more than 50 percent state ownership, 2010



Source: World Bank, *Banking Regulation and Supervision Survey*.