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RESEARCH ARTICLE



Chinese state-owned commercial banks in reform: inefficient and yet credible and functional?

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ABSTRACT

After the initial public offerings of state-owned commercial banks (SOCBs) in 2005–2010, the transformation of the property structure blurred the conventional boundaries between public and private property in China while the state continued to play an important role in the regulation and operation of this ‘hybrid property’: the mixed public-private ownership structure adopted for previously wholly SOCBs. It is could be that the perceived lending bias against private enterprises was a rational decision made by SOCBs in China, partly due to the high transaction costs of risk evaluation and the lack of any formal channels to mitigate the credit risks of such loans. The hybrid nature of SOCBs property rights makes them a credible and convenient channel for the state to provide counter-cyclical lending to contain any exogenous (economic) shocks that might occur as well as long-term financial support for development purposes in the transitional economy and thus contribute to socio-economic and political stability in China. Instead of a stumbling block for economic reforms in China, as posited by the conventional institutional analysts, the ambiguous property rights of SOCBs and their practice of offering favourable loan conditions to state-owned enterprises could actually contribute to their profitability and thus the continuity of hybrid property banking systems and their credibility in China.

Abbreviations: ABC: Agricultural Bank of China; BOC: Bank of China; BOCOM: Banks of Communications; CBIRC: China Banking and Insurance Regulatory Commission; CBRC: China Banking Regulatory Commission; CCB: China Construction Bank; ICBC: Industrial and Commercial Bank of China; IPOs: initial public offerings; JSCBs: joint stock commercial banks; NBS: National Bureau of Statistics; NDRC: National Development and Reform Commission; NPLs: non-performing loans; OECD: Organisation for Economic Co-operation and Development; PBoC: People’s Bank of China; RCCs: rural credit co-operatives; SOCBs: state-owned commercial banks; SOEs: state-owned enterprises; WTO: World Trade Organization

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1. Introduction

It is widely accepted that institutions are central to political and socio-economic development. For new institutional economists, well-defined private property rights are necessary conditions for efficient economic development. The partial collapse of Western banking systems during the global financial crisis has caused the importance of the form of institutions in the financial system to be questioned.

The proponents of institutional function claim the continuation of institutions and their credibility is axiomatic. Instead of focusing on the public-private dichotomy debate and the relative superiority of each over the other, and whether the template of institutional form (e.g. well-defined property rights) has to be adopted, they argue that institutions are the result of endogenous development and the state is simply one of several actors. The persistence of specific forms of institution indicates their credibility in that they carry out certain functions for both social and economic actors.¹

The banking system in China is an interesting case as the state-owned commercial banks (SOCBs) have been criticized for being inefficient, with poorly defined property rights after their initial public offerings (IPOs), and yet they continue to offer favourable loans to state-owned enterprises (SOEs).² Given the inherent contradictions and social tensions arising from the reforms of SOCBs, SOEs and the subsequent redundancies, a number of analysts have long argued that such dysfunctional and decentralized institutions under predatory Chinese state control would collapse with little warning.³ However, the financial crises in developed countries with their well-defined property rights and the relative economic stability in China with its ambiguously defined property rights, demands a recalibration of views of the importance of the form of institutions.

The literature on China has two major related, but separate strands: the expansion of foreign banks in China and the potential impact of banking reforms on Chinese banks, including the lending practices of SOCBs;⁴ the second strand of literature has focused on the potential impact of banking reforms on Chinese banks.⁵ For instance, Bonin and Huang examined the implications for domestic banks of China's accession to the World Trade Organization (WTO), while McGuinness and Keasey investigated the competitiveness of SOCBs after their public listing.⁶ It is generally argued that following the opening up of the Chinese banking industry, it can improve its governance by introducing the Anglo-American form of banking institution.

Specifically, while some researchers have examined the importance of property rights and the lending policies of Chinese banks, and Yeung investigated the lending criteria of SOCBs, others have examined the lending practices of Chinese banks.⁷ Based on data from 370 cities between 1989 and 1991, Wei and Wang found evidence that Chinese SOCBs positively discriminated in favour of SOEs.⁸ Gregory and Tenev reported that only four percent of the 600 private firms they surveyed in Beijing, Chengdu, Shunde (Guangdong), and Wenzhou (Zhejiang) secured finance from bank loans in 1999.⁹ Based on a sample of about 700 SOEs in Shanxi, Jilin, Jiangsu and Sichuan provinces between 1980 and 1994, Cull and Xu argued that SOCBs tended to grant loans to profitable SOEs, especially those that had the potential for good future performance.¹⁰ All these studies are valuable for an understanding of the banking

industry but most are based on conventional institutional analyses and implicitly assume that well-defined property rights are crucial for the development of the banking industry in China.¹¹ As the surplus funding produced by high saving rates and trade surpluses cannot forever sustain any inefficiency in the operation of SOCBs, Berger *et al.*'s 'empirical results suggest strong favorable efficiency effects from reforms that reduce state ownership of banks in China and increase the role of foreign ownership'.¹² How can we reconcile the rapid growth in China at a time when its banking system is regarded as inefficient and with lending policies unfavourable to private enterprises?

To address this gap in the literature, this paper examines the functions SOCBs may fulfill for economic actors which contribute to their credibility and persistence during the transition to a market-oriented economy. The primary evidence of this paper is based on two rounds of field surveys of Chinese banking conducted between November 2004 and December 2006, and July 2010 and July 2014 respectively. A total of 79 semi-structured interviews with senior managers in the Chinese banking industry were conducted through accessibility sampling, and each interview lasted for about an hour. In addition, to clarify the lending criteria of SOCBs, the interviews focused on the conditions attached to various types of loan and their impact on various groups of customers. We specifically asked senior SOCB managers of the possible function bank loans may serve for economic agents during the second round of the survey. Information from interviewees is anonymously referred to as 'field survey' in the paper since the interviews involved potentially sensitive information about the operations of SOCBs.

After four decades of economic reform and two decades after the accession to the WTO, the commercial banking system in China is still dominated by five SOCBs. SOCBs have been criticized by mainstream institutional economists as being inefficient state-owned institutions due to their ambiguously defined property rights.¹³ After the IPOs of SOCBs in 2005–2010, the transformation of the property structure blurred the conventional boundaries between public and private property, while the state still played an important role in the regulation and operation of these 'hybrid properties', previously wholly SOCBs, with their mixed public–private ownership structure. The perceived bias against lending to private enterprises could be a rational decision made by SOCBs, partly due to the high transaction costs of risk evaluation and the lack of formal channels to minimize the credit risk of such loans. The hybrid nature of SOCB property rights maintains its credibility by allowing the state to provide counter-cyclical lending to contain any exogenous (economic) shocks and provide long-term financial support for development purposes in the transitional economy and can thus contribute to the socio-economic and political stability of China. That is, SOCBs provide specific socio-economic functions for economic agents by, for instance, lending to SOEs to finance local governments' massive infrastructure projects during the 4 trillion *yuan* (US\$586 billion) stimulus plan. Instead of carrying out unsustainable operations, as posited by conventional institutional analysis, the ambiguously defined property rights of SOCBs and their favourable lending conditions for SOEs could actually contribute to their profitability and thus their continued existence as a type of hybrid property with credibility in China.

The relative importance of the form and function of institutions as articulated by new institutional economists and institutional functionalists, the privatization and functions of public banks, and the concept of hybrid property in transitional economies are discussed in the next section to provide the analytical framework for this paper. A brief overview of the banking industry is then followed by an examination of the lending criteria and practices of SOCBs, especially to private enterprises and SOEs. Section five reappraises whether SOCB lending is functional, rational, and profitable, before the concluding section.

2. Institution: form vs function

Before a brief review of the functions of public banks and property rights in transitional economies, we provide an overview of the importance of institutional form and function posited by various scholars.

2.1. Institutional function and credibility

New institutional economists posit that it is institutions that shape the development path of an economy by highlighting the importance of private property rights for the efficient allocation of resources in a market economy.¹⁴ A well-defined property right with effective enforcement is a necessary condition for economic agents to engage in long-term and multiple-contract exchanges, as ‘institutions ... are the underlying determinant of the long-run performance of economies’.¹⁵ They therefore advocate that policy makers establish their preferred forms of institution to attain sustainable economic development and these particular institutions gain credibility from the endorsement of rational economic agents. In a word, the specific form of institution matters for development.

Advocates of a neo-classical reading of institutional change argue that institutional forms converge across countries. For instance, Acemoglu et al. reported that institutions account for three quarters of the income gap between the top and bottom of the world’s income distribution, while Rodrik et al. suggest that economic integration has no direct effect on income levels once institutional quality is controlled, in their cross-countries analysis.¹⁶ To highlight the importance of Anglo-American democratic institutions for long-term economic growth, Acemoglu and Robinson referred to the history of the UK and the US and argued that citizens create ‘inclusive’ economic institutions and create a society based on political pluralism.¹⁷ In contrast, the persistence of inefficient institutions in developing countries is largely due to the hegemonic power of unsustainable regimes, e.g. China’s rapid economic growth is based on unsustainable ‘extractive’ political institutions within a political hegemony.

The importance of institutional functions is highlighted in the functional model of the varieties of capitalism outlined by political scientists, notably Peter Hall and David Soskice.¹⁸ The functional approach model suggests that the two main types of national capitalist system (the Anglo-American ‘liberal market economies’ and the German ‘coordinated market economies’) are the outcome of differences in their institutional structures and endowments (and public policies), which, in turn, is causally

explained by their functions for economic efficiency.¹⁹ In other words, institutional function follows from form, and institutions can be designed and redesigned easily in the functional model, as in the case of rational choice institutionalism.

This analysis of institutions ignores the local socio-economic and political factors that could affect its credibility. Aron concluded that there is only a non-robust link between the quality of institutions and economic growth in her extensive review.²⁰ Other heterodox institutional theorists have also highlighted the lack of empirical evidence for the convergence thesis.²¹ Although the property rights may be insecure and ill-defined, advocates of institutional function argue that the persistence of certain forms of institution indicates their credibility in that they serve specific functions for economic actors, i.e. the policies that support the development of institution are credible because they are regarded as effective by economic actors.

Instead of being the result of deliberate design and implementation, institutional functionalists argue that institutions are the product of endogenous and spontaneously ordered development where the state is only one of the actors shaping of their specificities.²² In other words, a country cannot just establish 'one-size-fits-all' institutions according to the gold standard, as implementation could be incompatible with local (informal) institutions.²³ The credibility of economic policy is based on the endorsement of (local and foreign) economic agents and multinational organizations, and hence the continuation of institutions and their credibility is inherently endogenous rather than exogenous. In other words, for institutional functionalists, the credibility rather than the convergence or divergence of a specific form of formal or informal institution matters for development, i.e. function and credibility are more important than the form of institutions.²⁴

Importantly, the unequal power relationships between (local and foreign) economic agents and multinational organizations could shape the collective perceptions of institutional credibility as well as its dynamic change over time and space. To understand the credibility of certain forms of institution and how it could be both a cause and an effect of development, proponents of institutional function highlight the importance of understanding institutional structure over time and space as well as its corresponding (changing) levels of credibility, i.e. no institution is credible forever.²⁵ This is especially the case in a transitional economy where the credibility of its policies and thus institutions are at stake during their rapid socio-economic transformations.²⁶ Notwithstanding conflicts over the appropriation of land and the insecure tenure of the household contract responsibility (rural lease) system, Ho demonstrated that the changing structure of land tenure in both rural and urban areas still acts as a safety net for peasants and this serves an important function for the regime by maintaining socio-economic stability and its institutional credibility in China.²⁷

Banking is an important sector in the functioning of modern economies. It is of interest to examine whether a specific form of banking institution could facilitate the financial integrity and security of all countries, given the international standards of regulatory and supervisory practices through the Basel Committee on Banking Supervision.

2.2. Privatization and the functions of public banks

The conventional argument on institutional function follows from its form having a significant impact on the structural deregulation of Anglo-American commercial banks, including the industrial consolidation through mergers and acquisitions since the 1970s.²⁸

For proponents of the form of institutions, the liberalization of the banking sector through the privatization of ownership and formalization of operations is vital to improve its efficiency and competitiveness and thus the viability of the financial system.²⁹ They have argued that lending decisions in public banks could be distorted by political agendas and suffer from agency problems (multiple objectives with no clear responsibility for monitoring)³⁰, which then result in the misallocation of capital, weak financial performance, higher levels of non-performing loans (NPLs) and lower levels of profitability than their private counterparts.³¹ Notably, La Porta et al. reported a significant negative relationship between government ownership of banks and average growth rates in their cross-country analysis.³² Berger et al. provided evidence indicating that the post-privatized banks in Argentina did lend more prudently in the 1990s, while Bonin et al. and Cornett et al. had similar findings in transitional economies in Eastern Europe and state-owned banks in 16 Asian countries, respectively.³³ In China, SOCBs are less profitable and less efficient, and have lower asset quality than other types of banks in China.³⁴ Based on 1994 and 2003 data on profit and cost efficiency, Berger et al. further argued that the SOCBs are the least efficient, partly due to the availability of the surplus funding contributed by high saving rates and trade surpluses.³⁵

However, Andrianova et al. question the validity of such empirical evidence. They revealed that public banks were associated with long-run higher growth rates in their cross country analysis between 1995 and 2007, which effectively refuted La Porta et al.'s findings.³⁶ Based on 1993 and 2000 data, Chen et al. also found the SOCBs have higher levels of cost efficiency than the medium-sized joint-stock commercial banks (JSCBs).³⁷

Instead of subscribing to the 'one-size-fits-all' privatization policy of neo-liberalism, scholars have argued that an institution is neither socially nor politically neutral as it maintains its credibility by serving important functions for actors. Property rights theory is not applicable to banks as they serve important functions through the provision of credit, and facilitate the functioning of the economy, i.e. they are institutions rather than firms.³⁸ In China, Ho and Marois argued that four 'bad banks' (Asset Management Corporations) established by the China Banking and Insurance Regulatory Commission (CBIRC) to take over the NPLs from SOCBs before repacking (including debt-to-equity swaps) for resale is an institutionalized form of state spatial-temporal strategy rather than merely the creation of problem-solving institutions, as they not only maintain the stability of the Chinese banking system by transferring present financial costs into the future but also globalize the Chinese financial system.³⁹

Moreover, states have the capacities to socialize financial costs to resolve crises, partly through important functions performed by public banks, notably the provision of counter-cyclical lending and long-term financial support for development and financial stability purposes. As government-owned banks have different priorities from

private banks and can access additional funds for recapitalization, Brei and Schclarek hypothesized that government-owned banks provide more loans to the real economy during economic crises while profit-maximized private banks focus on the reserve ratio and liquidity by reducing lending in their model.⁴⁰ Without counter-cyclical lending by public banks, production in the real economy could suffer from a credit crunch and the economy could subsequently suffer from financial turmoil.⁴¹ Based on an analysis of 1633 banks from 111 countries between 1999 and 2010, Bertay et al. argued that state banks could stabilize the provision of credit over the business cycle and provide useful buffers during periods of financial instability due to their less pro-cyclical or even counter-cyclical lending and relatively balanced NPLs reports over time.⁴² Based on the balance sheet information of 764 major banks headquartered in 50 countries in 1994 and 2009, Brei and Schclarek argued that public banks could have a higher level of tolerance of high-risk projects that could have long-term beneficial effects for the economy.⁴³

2.3. Institutional development in transitional economies

Property rights in transitional economies are ambiguously defined and yet the persistence of these institutions indicates their credibility. In contrast to the 'shock therapy' of rapid economic liberalization policies, the 'gradual' approach to economic reforms adopted by China could have a higher level of credibility in the transitional economy.⁴⁴

Scholars and policy analysts of the formerly planned economies in Eastern Europe and China have debated the role and mix of plans and markets for decades.⁴⁵ Szelényi used the term 'socialist mixed economy' to describe the economic structure of a planned economy moving towards a market economy.⁴⁶ The debate shifted from the combination of planned and market to the combination of public and private property in the mid-1980s. Instead of a 'socialist mixed economy' with well-defined public and private sectors, Stark argued that the institutional reforms implemented in formerly planned economies resulted in 'hybrid mixtures of public ownership and private initiative' that crossed and blurred the conventional boundaries between public and private property.⁴⁷ To respond to the uncertainty created by institutional reforms in post-socialist Hungary, Stark coined the term 'recombinant property' to explain a distinctive form of organizational hedging through the diversification, redefinition and recombination of assets by actors.⁴⁸

Similar ideas were also expressed in scholarly research in China. For instance, Oi introduced the concept of 'local corporatism' to explain the fiscal reforms of taxation that had allowed local governments to be involved in the establishment of township and village enterprises in China.⁴⁹ Nee argued that ownership reforms implemented in China have resulted in 'hybrid organizational forms' (a mixed form of public and private property) rather than a simple mixed economy.⁵⁰ When the structure of property rights is poorly defined in a transitional economy, actors can use their personal connections (*guanxi*) to lower the transaction costs of 'hybrid organizational forms' and be more responsive to market demands. Consequently, there can be a transformation of property without privatization (from the fully publicly-owned to hybrid property).

This paper uses the term hybrid property, proposed by Nee and further conceptualized by Stark, to explain the blurring of boundaries between public and private property rights in the Chinese banking industry.⁵¹

The above conceptualization of institutional function and hybrid property effectively rejects the developmental state argument where the Chinese state has effective control over the economy.⁵² The next section provides a brief review of the development of the banking industry in China before an examination of the changing roles of SOCBs in [section 4](#).

3. Chinese banking industry in reform

Along with the market-oriented reforms in the manufacturing sector, there has been a massive restructuring of the Chinese banking industry during the last few decades. The change in the ownership structure of banks reflects the changing role of the state in the economy and thus the institutional environment in China.

After the establishment of the People's Republic of China in 1949, the central bank monopolized almost all the banking services in China. This situation remained unchanged for almost three decades until economic reforms were implemented in China in 1979. There was still no direct competition between the commercial banks due to the 'sector-specific segmentation' policy in China: industrial enterprises dealt with the China Construction Bank (CCB), peasants banked with the Agricultural Bank of China (ABC), while trade or foreign-financed companies had to channel their foreign exchange through the Bank of China (BOC). This policy literally created three monopolies in the agricultural, industrial, and trade sectors. This institutional setting was unable to respond to the needs of the economy.

The retail banking industry in China exhibits features typical of a transitional economy, with some of the largest publicly listed banks in the world co-existing with hundreds of thousands of less-regulated rural co-operative institutions. The present Chinese banking industry, regulated by the People's Bank of China (PBoC, the central bank) and the CBIRC, includes the SOCBs, JSCBs, city commercial banks, rural financial institutions, foreign banks, and the three policy banks ([Figure 1](#)).⁵³ The SOCBs include the 'Big Four' – the Industrial and Commercial Bank of China (ICBC); BOC; CCB and the ABC – and also the Bank of Communications (BOCOM) ([Table 1](#)). The three policy banks are the China Development Bank, The Export-Import Bank of China, and the Agricultural Development Bank of China.

The Chinese government is under tremendous pressure to reform the banking system. On the one hand, the state is under internal pressure to reduce the financial burden on the Ministry of Finance. Between 1998 and 2003, the SOCBs began to restructure their loan portfolios by adopting the strategy of commercial lending. In addition to an injection of 270 billion *yuan* (US\$32.61 billion) into the banking system in 1998, the central government transferred 1.4 trillion *yuan* (US\$169.1 billion) of pre-1996 NPLs to the four newly created Asset Management Corporations: namely, the China Orient; the China Huarong; the China Cinda; and the China Great Wall.⁵⁴

To reduce the financial burden of the state, the State Council allows a number of Chinese SOCBs and SOEs to issue IPOs of minority equities in local and/or overseas

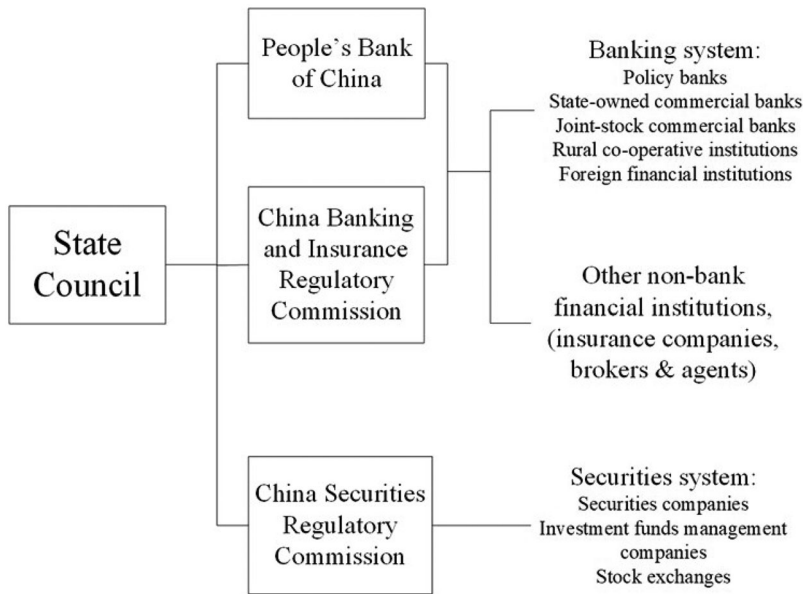


Figure 1. Structure of the financial system in China. *The China Banking and Insurance Regulatory Commission (CBIRC) was established in April 2018, after the merger of the China Banking Regulatory Commission (CBRC) and the China Insurance Regulatory Commission (CIRC). *Sources:* compiled from Yeung, et al. "Centralization and Marginalization," 854–867 and CBRC 2018.

Table 1. Four major types of banking institution in China.

Type of bank	Names	Remarks
<i>Market-oriented banks</i>	State-owned commercial banks (Industrial and Commercial Bank of China, ICBC; Bank of China, BOC; China Construction Bank, CCB; Agricultural Bank of China, ABC; Bank of Communications, BOCOM) and 12 joint-stock commercial banks	Largely state-owned, but listed on stock markets
<i>Policy-oriented banks</i>	China Development Bank, The Export-Import Bank of China, Agricultural Development Bank of China	State-owned
<i>City commercial banks</i>	City commercial banks and city credit cooperatives	Local government and privately-owned, but some are partly owned by foreign investors
<i>Rural financial institutions</i>	Traditional rural financial institutions: Rural credit cooperatives, rural cooperative banks, rural commercial banks, postal savings institutes New rural financial institutions: village-township banks, lending companies, and rural mutual cooperatives	Local government and privately-owned
<i>Source:</i>	Compiled by	the author.

stock markets. SOCBs thus became, by definition, international financial holding institutions once their IPOs were on the Stock Exchange of Hong Kong in 2005–2010. The state is still the majority equity holder in all SOCBs, with at least 54 percent of equity (in the case of BOCOM). In 2019, the SOCBs controlled 41 percent of the 284.67 trillion *yuan* banking assets in China, a decrease from about 54 percent in 2007 due to the rapid development of JSCBs and city and rural commercial banks (Table 2).⁵⁵ With the

Table 2. Major Chinese commercial banks' share of the banking industry equity, 2003–2019.

	SOCBs	JSCBs	City commercial banks	Rural commercial banks	Rural credit cooperatives	Foreign banks
2003	58.03%	10.70%	5.29%	0.14%	9.58%	1.50%
2004	56.91%	11.54%	5.40%	0.18%	9.74%	1.84%
2005	56.06%	11.92%	5.44%	0.81%	8.39%	1.91%
2006	55.15%	12.39%	5.90%	1.15%	7.85%	2.11%
2007	53.66%	13.69%	6.29%	1.15%	8.18%	2.36%
2008	51.58%	13.99%	6.54%	1.47%	8.25%	2.13%
2009	51.31%	14.86%	7.14%	2.35%	6.91%	1.70%
2010	49.20%	15.64%	8.24%	2.90%	6.71%	1.83%
2011	47.34%	16.22%	8.81%	3.75%	6.36%	1.90%
2012	44.93%	17.61%	9.24%	4.70%	5.95%	1.78%
2013	43.34%	17.80%	10.03%	5.63%	5.68%	1.69%
2014	41.21%	18.21%	10.49%	6.69%	5.12%	1.62%
2015	39.21%	18.55%	11.38%	7.64%	4.34%	1.34%
2016	37.29%	18.72%	12.16%	8.73%	0.19%	3.42%
2017	36.77%	17.81%	12.57%	9.39%	0.14%	2.91%
2018	37.24%	17.34%	12.52%	9.12%	–	–
2019	40.74%	17.60%	12.67%	13.02%	–	–

Notes: The total percentage is less than 100 as it excludes policy banks, postal savings banks, lending companies, etc. The 2003–2006 data only include domestic assets but the 2007–2015 data include assets owned by the same legal entity (i.e. including overseas assets). Rural credit cooperatives are grouped under rural commercial banks and foreign banks come under other financial institutions from 2018.

Sources: Compiled from CBRC, 2006 and 2017 issues of *CBRC Annual Report* and CBIRC, 2019 Statistics.

exception of twelve JSCBs, both SOCBs and SOEs are ultimately owned by the central or local governments.⁵⁶ A number of other city commercial banks are also partly owned by foreign investors but local governments are the majority shareholders. As China is still undergoing a process of institutional change, the transformation of the property structure from wholly publicly-owned to a mixture of public and private property in the Chinese banking industry has engendered a hybrid property.⁵⁷ Importantly, SOCBs still have to perform their socio-economic functions to maintain their credibility.

On the other hand, the state had to open up the banking market to foreign banks as stipulated in the WTO accession treaty, signed in 2001. Foreign banks have been allowed to provide local currency services to Chinese companies since 11 December 2003 and had full market access all over China from 11 December 2006. Under the CBIRC's policy of ownership control, the pace of opening up the banking sector was scheduled to allow the Chinese banks to develop competitiveness before the market was fully opened in late 2006. The CBIRC also pushed the SOCBs to strengthen their capital adequacy ratios to prepare for the implementation of Basel II and Basel III.⁵⁸ Foreign banks were encouraged to establish joint ventures with Chinese banks. Ownership by a single foreign investor was limited to 20 percent, while the combined share of all foreign investors in one bank was limited to 25 percent before December 2006. By 2017, 38 locally incorporated solely foreign-owned banks were operating in China but they only accounted for 2.91 percent of the total banking assets in China.⁵⁹

From the above, SOCBs are clearly under substantial pressure from their stakeholders to maximize profits through the commercialization of lending. At the same time, however, the majority of SOCBs are still owned by the state, and the general public expect them to serve the same purpose as the pre-IPO public banks, i.e. to provide

counter-cyclical lending and support long-term economic development. These are typical hybrid properties, and where the boundaries between public and private property rights are blurred, so are their perceived roles and functions in the economy.⁶⁰ How may this impact on the roles and functions of SOCBs?

4. The changing roles and functions of SOCBs

To examine the effects of CBIRC directives on the role of SOCBs, the formalization of lending practices in SOCBs is presented in the next section before examining its impact on the real economy, i.e. whether SOCBs lend to private enterprises (section 4.2) or still favour SOEs in the granting of loans (section 4.3) as this serves a specific function in society.

4.1. Criteria for lending

It is necessary to understand the processes whereby lending decisions are made and the historical specificities within the Chinese banking system before assessing the credibility of CBIRC reform on commercial lending. All banking institutions have adopted the international five-tier risk-based classification system according to the CBIRC's *Guiding Principles on the Classification of Loan Risk Management* to rank loans as either 'pass', 'special mention', 'sub-standard', 'doubtful', or 'loss' since 2004.⁶¹

Since the establishment of the CBIRC in 2003, all SOCB credit managers have adopted the credit score (*xindai dafen*) system to evaluate and grade every loan application based on a verified business report (*gongshang baogao*) and three years of audited financial statements (*baobiao*) submitted by the loan applicant. In addition to the credit score, credit managers at SOCBs use the so-called '5Cs' criteria for loan assessment:⁶²

- Character: the reputation of the applicant in terms of credit record and the mutual trust (*xinyong*) between the loan applicant and credit manager.
- Capital: the leverage of the applicant, normally measured by debt-asset ratio.
- Capacity: the liquidity and loans-assets ratio, i.e. whether the applicant has the ability to repay the loans on time.
- Collateral: normally in the form of physical fixed assets, especially real estate.⁶³
- Cycle: the macro-economic cycle.

Lending decisions are based on the potential returns and costs of a loan where the returns are determined by the interest rates and the costs are determined by the cost of banking plus the risk of default. Based on the projection of revenues and other relevant documents, such as the market value of collaterals, credit managers are able to estimate the risk of default and the possibility of recouping the principal of loans.⁶⁴

Unless it can be demonstrated that they have followed the loan assessment procedures fully, credit managers are individually responsible for new NPLs incurred under their tenure. According to the CBIRC, 176 senior bank managers (involved in a total of 2.93 trillion *yuan*) were sacked for violation of CBIRC regulatory policies in 2017. The

CBIRC also warned that a lifetime ban from senior financial management posts would be imposed upon bankers responsible for large-scale irregularities.⁶⁵

Under the personal responsibility system of SOCBs, credit managers are supposed to make commercial decisions for lending. SOCBs, however, positively discriminate in favour of SOEs.⁶⁶ As bad debts accumulated by SOCBs had reached nearly 50 percent (4 trillion *yuan*) of the nation's gross domestic product (GDP) in 1999, and the NPL ratio of SOCBs reached 31 percent in 2001, critics pointed out that SOCBs, with their ambiguous property rights, are obliged to grant loans to moribund SOEs, largely as a result of political pressure from the local governments. Lardy went further and claimed that the banking sector in China would be technically insolvent if Western benchmarks for the liquidity ratio and NPLs were used in the Chinese system.⁶⁷ How can such apparently 'irrational decisions' by credit managers be reconciled? Is it because SOCBs gain credibility by serving specific functions in society?

4.2. Private enterprises and credit risks: (in)efficient and dysfunctional lending?

Although contributing to 60 percent of industrial output and employing 80 percent of employees in China, and generally with a higher level of profitability and return on assets (ROA), only one-fifth of small and medium scale private enterprises had ever granted a bank loan. Private enterprises also have to pay an additional interest of two percentage points (200 basis points) for their loans in 2019.⁶⁸ A number of private enterprises have had to resort to grey money markets (including borrowing from loan-sharks and pawn shops) at even higher interest rates. This partly explains why 92 percent of capital for fixed assets investment in small private enterprises comes from internal funding.⁶⁹

The perceived lending bias of SOCBs is due to a combination of factors, from the lack of a nationwide risk assessment database of private borrowers and the limited formalized channels of credit risks mitigation, to the corresponding high transaction costs of risk assessment.⁷⁰

It is well-known among SOCBs credit managers that a number of private enterprises have three sets of financial statements: one for owners, one for the Tax Bureau, and one for banks. Since banks in China do not have the legal right to access financial statements submitted to the Tax Bureau for the purposes of taxation, credit managers have to use other means (such as checking electricity bills and firm visits) rather than relying on (potentially falsified) audit reports submitted by loan applicants to assess their financial viability. In reality, it is up to the vigilance of credit managers as there is neither a systematic nor fault-free system of low transaction costs to ensure the accuracy of financial statements.⁷¹

This strong argument is partially supported by a series of high profile scandals involving Chinese private enterprises listed in overseas stock markets, notably the suspension of trading of Sino-Forest Corporation by the Ontario Securities Commission (OSC) in 2011 and subsequently filed for bankruptcy protection in 2012. Other cases include the trading suspension of China Metal Recycling by the Securities and Futures Commission (SFC) in Hong Kong in 2013, and its owner was jailed for inflating financial results by HK\$4.2 billion in 2020.⁷²

In addition to the fact that private property rights were not fully recognized by the Chinese government until an amendment to the constitution in 1999, the opaque ownership structure (a number of so-called private firms are actually controlled by local government officials), and ‘unsystematic management’ (*guanli buguifan*, i.e. business founders treat the companies’ accounts as personal bank accounts) of private firms in China explains why all the interviewed bankers at SOCBs regarded private enterprises in China as carrying the highest loan risk, well above that of the SOEs and foreign-financed firms.⁷³

The reputation of private enterprises has been tarnished further by high profile cases of embezzlement. The U.S. Securities and Exchange Commission opened 40 cases of possible fraud by Chinese listed firms, including an allegation that Puda Coal’s chairman sold off its coal mines and turned it into an empty shell company before the IPO.⁷⁴ The chairman and the executive director of the SRE Group, a real estate unit listed on the Stock Exchange of Hong Kong and owned by China’s largest privately owned financial services group China Minsheng Investment Group (CMIG), was detained by Shanghai police on embezzlement charges in 2020.⁷⁵

Private small and medium-size enterprises (SMEs) are generally perceived as carrying the highest level of loan risk, partly because of their limited fixed assets. The perceived lending bias against private SMEs is an unintended consequence of the implementation of SOCBs formalized lending policies. As explained by a branch manager with over two decades of experience at the ICBC: ‘The difficulties SMEs have to secure credits is not because of the reluctance of [SOCBs] to lend, but because of the unguaranteed high risk of lending to such customers. ... After all, we have to lend to make money. This is a deficiency in the formalized funding structure in China, e.g. there is a lack of well-funded venture capital to provide financial support for the SMEs’.⁷⁶ This clearly shows that SOCBs are still operating in a rational manner: the lack of a nationwide risk assessment database of private borrowers and the undeveloped channels of credit risks mitigation – such as credit risks reinsurance – rather than the hybridity of SOCBs property rights, contributes to the perceived lending bias against private enterprises in China.

It must, however, be emphasized that the importance of size (*de facto* an indicator of risk) in lending also exists in the Western banking system. Because of the problems of moral hazard and adverse selection, small firms are informationally opaque, and have to rely more on relationship lending, i.e. they may have higher levels of liquidity constraint.⁷⁷ Larger firms generally have a strong enough balance sheet to secure financial statement lending or sufficient available collateral to secure asset-based lending.⁷⁸

The difficulties private enterprises face in securing loans from SOCBs is one of the unintended consequences of standardizing the lending criteria of the CBIRC. Credit managers are, however, normally reluctant to embrace lending to private enterprises with any enthusiasm due to the high transaction costs of loan assessment and the unmitigated credit risks.

4.3. SOEs reform and ‘triangle debts’: inefficient but functional lending?

The conventional argument against lending to SOEs is based on the notion that local government officials use their political influence to secure bank loans for loss-making

SOEs because the social and political implications of large-scale collapses are unthinkable.⁷⁹ Credit managers thus treat these ‘triangle debts’ as balance sheet exercises by transferring the bad debts between different government institutions from SOEs to SOCBs. This inefficiency argument is supported by the 4 trillion *yuan* of NPLs accumulated by SOCBs, which accounted for 50 percent of GDP in 1999.⁸⁰

In addition to the (much) lower transaction costs of the assessment of credit worthiness (see the next section), the hybrid property rights of SOCBs maintain credibility by financing SOE industrial and economic development projects and thus contribute to political stability in China. To maintain political stability in the quest for a ‘harmonious socialist society’, the CBIRC has to implement policies that maintain the legitimacy of the Chinese Communist Party leadership.⁸¹ As pointed out by Setterfield, the persistence of inefficient institutions could be the result of avoiding conflict-laden choices that could involve the redistribution of resources, or other outcomes in addition to the hostile selection environment and the uncertainty of choices at the outset.⁸² This is especially the case given the increasingly frequent mass demonstrations about inequality and other major concerns, from unlawful land acquisition to corruption. The state is surely concerned about potential redundancies due to the restructuring of SOEs and the slowdown of major export markets, with their subsequent implications for socio-economic and political stability. As policy makers are fixated on socio-economic and political stability (or ‘social stability’ – *shehui wending* – in the official documents), the hybrid nature of SOCBs property rights provides a convenient channel for the state to inject capital into the economy indirectly.⁸³

To respond to the adverse effects of the 2008 global financial crisis on the economy, the Chinese government initiated a series of massive infrastructure-oriented projects that accounted for almost one-half (46.75 percent) of the 4 trillion *yuan* (US\$586 billion) ten-point stimulus plan in November, 2008. As the central government only contributed 29.5 percent of the total budget, local governments had to secure the remaining 2.82 trillion *yuan* using various forms of financing, from issuance bonds to bank lending.⁸⁴ SOCBs, especially the CCB, are willing to grant preferential loans to various SOEs involved in infrastructure projects, e.g. the Lhasa-Shigatse Railway. The most intense competition among SOCBs for lending is to national prioritized large-scale projects (*zhongdian xiangmu*). This form of lending is best summarized by the comment of a branch manager at the ICBC: ‘The SOCBs’ lending for huge infrastructure projects during the 4 trillion *yuan* programme largely follows banking regulations as local governments act as guarantors for such loans [so the risk costs are low]. From this perspective, SOCBs lend diligently, and some of these high leveraged loans are more a reflection of aggressive borrowing by local governments, [i.e. borrowing more than they can afford to pay for, etc.]’⁸⁵

Part of this lending could be interpreted as an indirect capital injection by the state through the SOCBs to stimulate local demand and offset the adverse effects of the global financial crisis. Support for national ‘key infrastructure projects’ and ‘industrial upgrading’ by SOCBs was actually highlighted in the *CBRC Annual Report*, and further emphasized in State Council Document number 67 in 2013.⁸⁶ SOCBs clearly behave more like their public bank counterparts elsewhere by providing counter-cyclical lending to stabilize the external economic shocks and provide long-term financial support

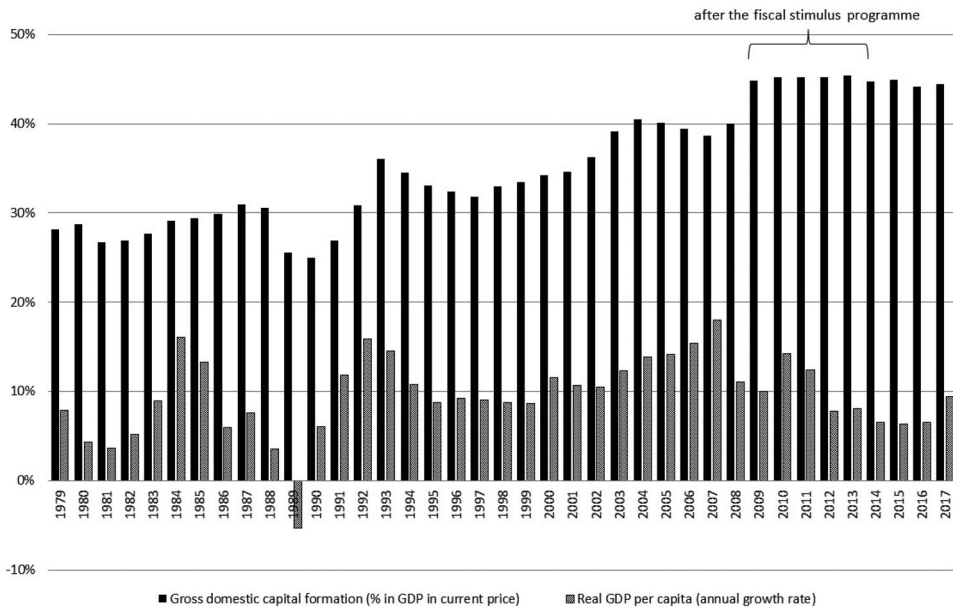


Figure 2. Percentage share of gross domestic capital formation in nominal GDP and annual growth rate of real GDP per capita in China, 1979–2017. *Source:* Compiled from NBS, various issues of *Statistical Yearbook of China*

for development purposes.⁸⁷ These loans are crucial to mitigate external shocks and stabilize the Chinese economy as there are simply no alternative sources of credit, apart from the shadow banking sector in China. China's economic growth has been capital-intensive. Gross fixed capital formation has accounted for about 30 percent of China's GDP since 1979 and this ratio has increased to 35–40 percent since 2000 (Figure 2). Partly the result of the 4 trillion *yuan* stimulus plan, gross fixed capital formation accounted for 45 percent of GDP for the first time in 2009 (an increase of 4.4 percentage points at current prices over 2008), and it maintained that level until reaching an all-time high of 45.4 percent in 2013. This massive monetary injection along with expansionary monetary policies balanced the shock of the global financial crisis, with a real GDP per capita growth rate of 10 percent in 2009, 14.2 percent in 2010, and 12.4 percent in 2011, before slowing down back to about 7–9 percent in 2012–2017.⁸⁸

Furthermore, favourable lending to SOEs could illustrate why SOCBs are reluctant to change, and explain why the CBIRC formal regulatory policy for lending is ineffective. As argued by Chang, institution building is not just a technocratic exercise to establish pre-determined institutions according to certain golden standards, because such transplantation could be incompatible with local (informal) institutions.⁸⁹ The idea of SOCBs operating as business entities is not entirely compatible with the informal institutions where the mentality of credit and branch managers could still be influenced by the legacy of the planned economy. Such inertia to change can be best illustrated by the admission of a very experienced branch president at the CCB: 'Some of us have been working in SOCBs for decades, ... it is not easy for us to change,

despite the institutional reforms. ... *The idea of giving SOEs higher priority is deeply ingrained in our minds, consciously and subconsciously (genshen digu)*.⁹⁰ This can be partly explained by the fact that the chief executive and other senior management positions in the 'Big Four' are still central government appointments and thus the Chinese Communist Party secretaries at central and local levels retain significant influence over both the selection of candidates and the operation of SOCBs.⁹¹

Under these circumstances, the formal lending criteria of SOCBs has become a 'symbol[ic] law' where CBIRC regulations cannot be implemented effectively.⁹² The hybrid nature of SOCB property rights maintains credibility by providing a convenient channel for the state to provide counter-cyclical lending to contain exogenous (economic) shocks and provide long-term financial support for development purposes in the transitional economy.

5. Reappraisal of SOCBs lending: functional, rational and profitable?

Although far from an ideal institutional form from the perspective of new institutional economics, the above discussions clearly suggests that the hybrid nature of SOCBs property rights maintains credibility by serving vital functions for the economy. The hybridity of SOCB property rights may be functional but to what extent are their lending decisions rational or profitable?⁹³

5.1. Functional and rational?

The perceived lending bias against private enterprises could be a rational decision made by SOCBs, partly due to the high transaction costs of risk evaluation and the associated risks of such loans.

Different from lending to private enterprises, the transaction costs incurred by SOCBs in assessing the credit worthiness of SOEs is lower due to the stricter regulations of the relevant government bureaux. Moreover, part of the default risk of lending to SOEs is reduced by the guarantees of the corresponding 'guarantee institution' (*danbao gongsi*): a company – normally funded by local government but unregulated by the CBIRC – acts as a guarantor for a loan applicant. Such companies were commonly used for loan applications in the 1990s, when the official criteria for loan assessment had not been fully formulated.⁹⁴ Although the usage of these 'guarantee institutions' has been highly regulated since the 2000s, SOCBs still lend to SOEs as these loans maintain their profitability (see the next section) and credibility by serving specific functions within the economy.⁹⁵

SOEs are the major clients of SOCBs partly because the state banking system was originally established to serve as the fiscal arm of the state, and funnelled funds to and from SOEs. Laurenceson and Chai have argued that SOCBs in China have the strong characteristics of development banks, so the conventional evaluation criteria for commercial banks, such as ROA and liquidity ratios, are not applicable.⁹⁶ They have further argued that SOCBs have an overall positive and sustainable impact on China's economic development, despite their poor commercial performance. The provision of long-term funding support with low(er) interest rates is crucial for the

construction of large-scale infrastructure projects, which, in turn, are vital for long-term economic development. The hybrid nature of SOCBs property rights allows them to perform functions normally undertaken by public banks elsewhere.⁹⁷ Most SOEs, especially in the coastal provinces, are profitable (partly because they have regional monopolies), have higher value-added clients and well-organized managements (partly due to the intense competition and learning by doing with foreign joint ventures). Credit managers at SOCBs have the incentive to allocate credit to profitable endeavours so that they can qualify for bonuses, which are dependent on the bank's profitability.

The hybrid ownership structure of SOCBs allows them to function and gain credibility, and thus their lending decisions may not necessarily indicate SOCB decisions in China are irrational.

5.2. Functional and profitable?

The conventional argument that SOE loans are inefficient does not preclude profitability in such lending. The profitability of loans is an important factor for the continuation and credibility of the hybrid property of SOCBs. Obviously, it can be argued that the profitability of SOCBs is at least partly due to its oligopolistic large-scale lending and well-funded capital bases (by controlling the largest share of deposits) and the inconvertibility of Chinese currency, whereby foreign banks have to secure their capital in *Renminbi* from the Chinese banking system.⁹⁸

The profitability of SOCBs is influenced by the massive pre-IPO US\$560 billion recapitalization, including the transfer of 1.4 trillion *yuan* of NPLs to Asset Management Corporations (and perhaps the subsequent disposal of 3.7 trillion *yuan* of NPLs between 2011 and 2016), and the massive drive for the centralization of banking operations and subsequent redundancies.⁹⁹ The scale of restructuring and its impacts on NPLs and profitability is clearly illustrated by the ABC. To prepare for the IPO on the Stock Exchange of Hong Kong in 2010, the ABC underwent massive restructuring to improve its balance sheet, including its separation from Agricultural Development Bank of China (ADBC) operations, the transfer of billions of NPLs to the China Great Wall Asset Management Corporation, and the centralization of its banking operations after 2004.¹⁰⁰ Subsequently, the ABC reduced its NPLs at an unprecedented rate and pace, from 30.62 percent in 2003 to 23.43 percent in 2006, then a massive decrease to 4.32 percent in 2008, further falling to 2.03 percent in 2010.¹⁰¹

Nonetheless, these facts are still unable to satisfactorily explain the profitability of SOCBs during the post-IPO era. This is an enigma for conventional institutional analysis, which posits that the undefined property rights of SOCBs are economically inefficient and thus their operations are unsustainable.

According to the official figures, SOCBs are profitable and financially sound. Although SOCBs have accounted for a lower proportion of asset value in the banking system since 2003 (a decrease from 58 percent in 2003 to 41 percent in 2019, mainly due to the rising shares of JSCBs and city commercial banks), the return on average assets (ROA, defined as net profit-asset ratio) of SOCBs has mirrored the trend in the banking industry in China since 2005 – it improved significantly from the loss-making

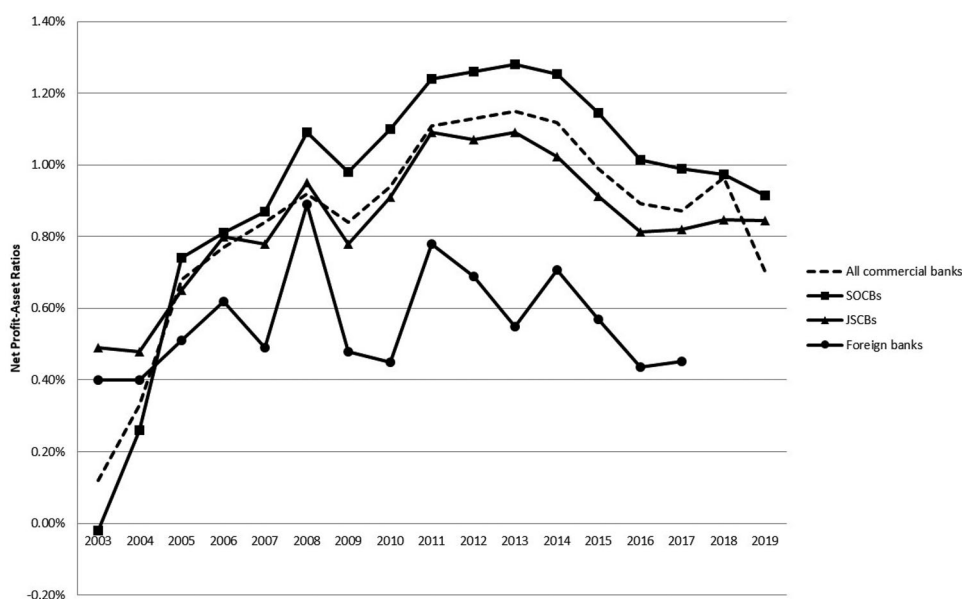


Figure 3. Return on Assets of Chinese Commercial Banks, 2003–2019. *Note:* 2003–2006 are based on gross profits due to the unavailability of net profits data. *Sources:* Compiled from CBRC, 2006 and 2017 issues of *CBRC Annual Report* and CBIRC, 2019 Statistics.

–0.02 percent in 2003 to profit-making a year after, before increasing consistently from 0.74 percent in 2005 to 1.28 percent in 2013, before decreasing to 0.91 percent in 2019 (Figure 3). The ROA of SOCBs has not only been much higher than that of foreign banks (0.45–0.78 percent) since 2010 in China, but also consistently higher than that of JSCBs (0.91–1.09 percent).¹⁰² As a comparison, the ROA of the banking industry in the US ranged between 0.37 in 1987, to 1.3 in 2019. The ROA for three of the biggest four commercial banks in the US (Bank of America, Citigroup, and Wells Fargo) was comparable, at 0.92–1.08 in 2019. Only JP Morgan Chase, with an ROA of 1.27, had a higher yield than the SOCBs in China.¹⁰³

Moreover, the financial sector is most profitable (by value) in large corporations in China, hence contributes to government taxation revenue. Six banks, with a combined profit of 1034 billion *yuan*, dominated in the top 10 most profitable companies in China in 2017. The ‘Big Four’ were the most profitable companies in China: 286 billion *yuan* by the ICBC, 242 billion *yuan* by the CBC, 193 billion *yuan* by the ABC, and 172 billion *yuan* by the BOC, well ahead of around 70 billion *yuan* profit recorded by the two internet giants, Tencent and Alibaba (Table 3).

After the capital injection into the system, the CBIRC estimated that the NPLs of the ‘Big Four’ were 1.06 trillion *yuan* (NPL ratio at 8.2 percent) at the end of March, 2007.¹⁰⁴ The NPL ratio of SOCBs declined significantly, to 2.8 percent in 2008, and continued to improve to 1 percent (350 billion *yuan*) in 2013. In 2019, the NPLs of SOCBs had increased to 1.86 percent, compared with the 0.67 percent of foreign banks incorporated in China, 1.38–1.64 percent of JSCBs and city commercial banks, and 3.09 percent of rural commercial banks (higher than the 1.5 percent of banks in the US but much lower than the 3.41 percent in the EU) (Table 4).¹⁰⁵ Partly as a response to the

Table 3. The top ten most profitable companies in China, 2017.

Names	Profits (in billion RMB)
ICBC	286.01
CCB	242.26
ABC	192.96
BOC	172.41
China Mobile	114.28
Ping An Insurance	89.09
Tencent	71.51
BOCOM	70.22
China Merchants Bank	70.15
Alibaba	67.07

Source: Yu, "Tencent, Alibaba make Fortune's top 10 most profitable companies".

Table 4. The NPL ratios of major Chinese commercial banks, 2006–2019.

	All commercial banks	SOCBs	JSCBs	City commercial banks	Rural commercial banks	Foreign banks
2006	7.1	7.5	—	4.8	5.9	0.8
2007	6.1	8.0	2.1	3.0	4.0	0.5
2008	2.4	2.8	1.3	2.3	3.9	0.8
2009	1.6	1.8	1.0	1.3	2.8	0.9
2010	1.1	1.3	0.7	0.9	1.9	0.5
2011	1.0	1.1	0.6	0.8	1.6	0.4
2012	1.0	1.0	0.7	0.8	1.8	0.5
2013	1.0	1.0	0.9	0.9	1.7	0.5
2014	1.2	1.2	1.1	1.2	1.9	0.8
2015	1.7	1.7	1.5	1.4	2.5	1.2
2016	1.7	1.7	1.7	1.5	2.5	0.9
2017	1.7	1.5	1.7	1.5	3.2	0.7
2018	1.86	1.41	1.71	1.97	3.96	0.69
2019	1.86	1.38	1.64	2.32	3.09	0.67

Sources: Compiled from CBRC, 2006 and 2017 issues of *CBRC Annual Report* and CBIRC 2019 Statistics.

global financial crisis, the provision coverage ratio (loan loss provisions divided by gross NPLs) of SOCBs has increased significantly, from less than half NPLs in 2007 to about three times the value of NPLs in 2013, which was much higher than the international norm of 40 percent and the CBIRC's threshold of 150 percent.¹⁰⁶ Should the above conventional indicators prove reasonably accurate, SOCBs are clearly financially viable, making this finding quite different from the pessimistic scenario in public banks portrayed by new institutional economists.

In brief, SOCB favourable lending to SOEs could actually contribute to their profitability and thus their persistence as a hybrid property in China.

5.3. Functional for how long?

The function over form argument posited by the notion of institutional function does not mean the credibility of a specific form of institution can be maintained forever, nor that the form of institution is irrelevant to the credibility of its policies.

Notwithstanding the questionable long-term economic efficiency of some loans granted during massive infrastructure projects due to the diminishing returns of capital investment, we have to highlight the potential issues that could diminish the

function and thus the credibility of the hybridity of SOCBs, specifically the danger of hidden debts and their long-term impacts on the development of the banking industry.¹⁰⁷

The frantic rate of credit expansion during the implementation of stimulus projects could lead to an increase in the hidden debts of SOCBs, as some local governments may not be able to repay their debts. According to the National Audit Office, the debts incurred by local governments surged by 67 percent over two years, reaching 17.9 trillion *yuan* (US\$3 trillion) by the middle of 2013, and accounting for 58 percent of GDP. In terms of debt-to-GDP ratio, Guizhou ranked first, at 79 percent, followed closely by Yunnan—the two poorest provinces in China.¹⁰⁸ There is no recent breakdown of the debts incurred by local governments apart from their total value. The local government debt, measured in local government bonds, increased 14 percent to 21 trillion *yuan* (US\$2.97 trillion) in the first nine months of 2019, according to the Ministry of Finance. S&P estimated a much higher figure of 40 trillion *yuan* (US\$5.6 trillion) in 2017, if the hidden debt incurred by local governments, including those incurred by 700,000 local government financing vehicles, was included.¹⁰⁹ Moreover, the popularity of shadow banking, including off-balance sheet financial transactions and products marketed as high-yielding alternatives to bank deposits by SOCBs, and the subsequent maturity mismatch of using short-term financial instruments to fund long-term investment projects, could undermine the credibility of SOCBs if a significant proportion of them were to default. Although the central government has regulated and been deleveraging such forms of finance since 2014, Moody's estimated that financial products and the informal banking sector amounted to 61.3 trillion *yuan* (68 percent of China's GDP) in 2018 (below the 150 percent of GDP in the US in 2015).¹¹⁰ As the credit default option (CDO) and similar instruments are not used as collateral for new funds in China, the potential danger of hidden debts is still relatively low compared with the US or the EU, but there could be a time bomb in the making should economic growth slow down and local governments and lenders be unable to service their debts.

Furthermore, a lending spree by the SOCBs could lead to cost-inefficient infrastructure projects if growth-oriented local government officials have insulated from risk (moral hazard) secure funds for projects in the absence of careful financial viability studies, or if officials seek to exploit rent-seeking opportunities. A combination of a substantial increase in liquidity and minimal upward pressure on interest rates leads to asset inflation (and subsequently asset bubbles) and an inflow of speculative capital as well as the diminishing marginal returns on capital investment, culminating in the risk of an ultimate rise in NPLs among SOCBs, e.g. the nominal GDP per unit of new credit decreased from 8 to 1 in 2005, and to 3–4 to 1 since the financial crisis of 2008. According to Wei Jianing, the deputy director at the National Development and Reform Commission (NDRC), about half all new bank lending in the first half of 2009 was devoted to physical infrastructure projects, while the other half was diverted into the stock and property markets, and some of these projects have created unoccupied 'ghost towns'. Researchers at the NDRC even estimate that almost half the investment projects (valued at US\$6.8 trillion) between 2009 and 2013 are cost ineffective.¹¹¹

Although the recent rise of NPLs of SOCBs could be an issue of concern (Table 4, especially the ABC, where smaller scale firms account for a larger proportion of its lenders), it is important to clarify the distinction between SOCBs with regional banks, and other small and medium-sized banks which have rapidly expanded their on-balance sheet assets during the last decade through shadow banking, including so-called 'channel lending', i.e. informal lending to zombie companies in sectors with overcapacity, cash-strapped property developers and local governments, all structured to appear as holdings of third-party investment products in the bank's balance sheet (i.e. as 'investment receivables' or 'debt receivables', not loans), so their defaults are not reflected in these banks' NPL ratios.

6. Conclusions

New institutional economists claim that institutions shape the development path of an economy because well-defined property rights with effective enforcement are a necessary condition for sustainable economic development.¹¹² In other words, the specific form of an institution matters, in development terms, as an institution's function follows on from its form.

This analysis of institution ignores the (local) socio-economic and political factors that could affect an institution's credibility. Proponents of institutional function argue that the persistence of certain forms of institution, although their property rights may be insecure and ill-defined, indicates their credibility since they serve specific functions for economic actors. Institutions are the products of endogenous and spontaneously ordered development, so a country cannot just establish 'one-size-fits-all' institutions according to a gold standard, as transplantation like this could be incompatible with local (informal) institutions. Function and credibility rather than the form of institutions matter for development.¹¹³

The banking industry in China is an interesting case as the commercial banking system is still dominated by five SOCBs after four decades of economic reforms. Due to their ambiguously defined property rights, SOCBs have been criticized by mainstream institutional economists as inefficient state-owned institutions.

This paper argues that SOCBs, as hybrid properties, are able to maintain their credibility by serving important functions in society: the provision of credits, counter-cyclical lending and long-term financial support for financial stability and development purposes. SOCBs are typical hybrid properties after their IPOs: the transformation of the property structure blurred the conventional boundaries between public and private property, while the state continues to play an important role in the regulation and operation of these hybrid properties. Importantly, the state is still the majority SOCB stakeholder, and the general public expects them to serve the same role and functions as the pre-IPO public banks.¹¹⁴ In other words, SOCBs are neither socially nor politically neutral institutions. The findings of this paper partially reinforces Andrianova, et al.'s findings concerning the positive economic contribution of public banks and refutes La Porta et al.'s finding (a widely cited paper to support the proposition that institutional function follows from form).¹¹⁵

Under the personal responsibility system in SOCBs, credit managers are supposed to make commercial decisions on lending. SOCBs, however, positively discriminate in favour of SOEs.¹¹⁶ The perceived bias against lending to private enterprises could be a rational decision by SOCBs, partly due to the high transaction costs of risk evaluation and the lack of any formal channel of credit risk mitigation for such loans. The difficulties private enterprises experience in securing loans from SOCBs is one of the unintended consequences of the CBIRC's standardization of lending criteria.

SOCBs generally prefer to lend to SOEs, partly due to the specific functions such loans may serve, and partly due to the (much) lower transaction costs in the assessment of credit worthiness. The lending bias of SOCBs to SOEs is explained by their specific socio-economic function as economic agents, for instance, lending to SOEs to finance massive local government infrastructure projects during the 4 trillion *yuan* (US\$586 billion) stimulus plan. Instead of their operations being unsustainable, as posited by conventional institutional analysis, the ambiguously defined property rights of SOCBs and their favourable lending practices to SOEs could actually contribute to their profitability and thus their continuation as a hybrid property with credibility in China. Under these circumstances, SOBC formal lending criteria has become a symbolic law, whereby CBIRC regulations cannot be implemented effectively. The hybrid nature of SOCB property rights maintains their credibility by providing a convenient channel for the state to provide counter-cyclical lending to contain exogenous (economic) shocks and provide long-term financial support for development purposes in the transitional economy. Instead of focusing on the simplistic public-private dichotomy debate on the form of institution and their relative superiority, the notion of hybrid property in Chinese SOCBs presented in this paper suggests the functions these institutions perform for economic actors and their resultant levels of credibility require greater examination.

Although SOCBs have functioned to provide counter-cyclical lending to contain the exogenous shocks to the economy, this is not a magic bullet for all forms of economic problem, including structural issues, e.g. industrial excess capacity built up due to low interest loans for political rather than economic reasons. Local governments have been pushing local banks to support key SOEs during the ongoing trade friction with the US. For instance, the director of the Banking Regulatory Bureau in Heilongjiang coordinated with creditors to roll over loans to local coal and steel enterprises.¹¹⁷ After the collapsed of the Bohai Steel Group, a locally government-owned SOE, the Party Secretary at Tianjin openly asked local banks to support the municipal government's efforts 'to maintain financial stability'.¹¹⁸ Instead of leaving institutions to maneuver and perform their functions credibly within the CBIRC's regulatory framework, whether a higher level of intervention from local governments could reduce the credibility of SOCBs in the medium term, is an interesting topic for further research. Given the 'debt-trap' discourse promulgated by the mainstream media¹¹⁹, whether the provision of credit to various infrastructure projects embedded in the ambitious Belt and Road Initiatives could maintain the institutional credibility of SOCBs, both within China and in the region, is another important issue for further research.

Notes

1. Ho, "In Defense of Endogenous, Spontaneously Ordered Development," 1087–1118; Ho, "The 'Credibility Thesis' and its Application to Property Rights," 13–27.
2. Wei and Wang, "The Siamese Twins," 19–29; Lardy, *China's Unfinished Economic Revolution*; Cull and Xu, "Who Gets Credit?," 533–559.
3. Chang, *The Coming Collapse of China*; Pei, *China's Trapped Transition*; Shirk, *China*.
4. Examples of the former approach are Lu and Dewhurst, "Factors Influencing the Growth of Foreign Banks' Branches in China," 517–534; Chen, *Multinational Banking in China*; He and Yeung, "The Locational Distribution of Foreign Banks in China," 733–754.
5. Jia, "The Effect of Ownership on the Prudential Behavior of Banks," 77–87.
6. Bonin and Huang, "Foreign Entry into Chinese Banking," 1077–1093; McGuinness and Keasey, "The Listing of Chinese State-owned Banks and their Path to Banking and Ownership Reform," 125–155.
7. Yeung, "How Banks in China make Lending Decisions," 285–302.
8. Wei and Wang, "The Siamese Twins," 19–29.
9. Gregory and Tenev, "The Financing of Private Enterprise in China".
10. Cull and Xu, "Who Gets Credit?," 533–559.
11. Lin and Zhang, "Bank Ownership Reform and Bank Performance in China," 20–29.
12. Berger et al., "Bank Ownership and Efficiency in China," 128.
13. Berger et al., "Bank Ownership and Efficiency in China," 113–130; Lin and Zhang, "Bank Ownership Reform and Bank Performance in China," 20–29; Jia "The Effect of Ownership on the Prudential Behavior of Banks," 77–87.
14. Coase, "The Problem of Social Costs," 1–44; Alchian and Demsetz, "Property Rights Paradigm," 16–27. The opposing view on the importance of institutions is that market forces shape institutional structures through the change in factor prices: institutions do not matter and government policies are not effective.
15. North, *Institutions, Institutional Change, and Economic Performance*, 107.
16. Acemoglu et al., "The Colonial Origins of Comparative Development," 1369–1402; Rodrik et al., "Institutions Rules," 131–165.
17. Acemoglu and Robinson, *Why Nations Fail* and "De facto Political Power and Institutional Persistence," 325–330.
18. Hall and Soskice, "An Introduction to Varieties of Capitalism," 1–68.
19. Hall and Gingerich, "Varieties of Capitalism and Institutional Complementarities in the Political Economy, 449–482; Hall and Thelen, "Institutional Change in Varieties of Capitalism," 7–34. See also Streeck, "Pluribus Unum?" for a critical commentary on what he calls the rationalist-functionalist model.
20. Measurement indicators for institutions could at least be divided into three categories: (a) to measure the performance/quality of institutions (the implementation of property rights, social capital in terms of civic activity and organizations), (b) to measure the political and social characteristics of institutions (constitutions, elections, ethnicity, and religious), (c) to measure the political stability (riots, civil wars). Obviously, each of these aspects of institutions could affect economic growth in various ways. Most cross-country analyses in the existing literature are based on structural growth models (Solow growth equation) rather than reduced-form growth models where the investment variable is replaced with a set of exogenous variables that determine investment in the regressions. Moreover, most empirical evidence has limited robustness as most did not conduct the corresponding robustness tests on their statistically significant findings: sensitivity tests (on different model specifications), reverse causality and endogenous tests, and missing variables tests, etc. Aron, "Growth and Institutions," 100–101.
21. Campbell, *Institutional Change and Globalization*.
22. Moreover, in contrast to Parsons' structural functionalism, which assumes equilibrium changes, it is predicated upon the premise of Progressive Disequilibrium.

23. Chang, *Kicking Away the Ladder*; Chang, "Breaking the Mould," 539–559; Chang, *Institutional Change and Economic Development*, 6.
24. Grabel, "The Political Economy of 'Policy Credibility,'" 1–19; Ho, *Institutions in Transition*; 2013. Ho, "The 'Credibility Thesis' and its Application to Property Rights," 18 defined "credibility as a measure of individual actors' aggregate perceptions of an institution as a jointly shared arrangement". See also Dixon "Function before Form," 579–600. For the neo-classical and neo-liberal views of the theory of policy credibility, see Kydland and Prescott "Rules rather than Discretion" and Blackburn and Christensen, "Monetary Policy and Policy Credibility," 1–45. Granovetter, "Economic Action and Economic Structure" pointed out that the a priori assumption of the extreme functional approach has an implicit deterministic interpretation where activities undertaken by agents are explained as the products of specific functional constraints or a priori principles.
25. Ho, *Institutions in Transition*; Ho, "In Defense of Endogenous, Spontaneously Ordered Development," 1087–1118; Ho, "The 'Credibility Thesis' and its Application to Property Rights," 13–27.
26. Chang, "Globalisation, Global Standards and the Future of East Asia," 363–378; Chang, *Institutional Change and Economic Development*, Ho 2013.
27. Ho, "In Defense of Endogenous, Spontaneously Ordered Development," 1087–1118; Ho, "The 'Credibility Thesis' and its Application to Property Rights," 13–27.
28. Berger et al., "The Consolidation of the Financial Services Industry," 135–194; Dymski, *The Bank Merger Wave*.
29. Krueger, "The Political Economy of the Rent-seeking Society," 291–303; Shleifer and Vishny, "Politicians and Firms," 995–1025; La Porta et al., "Government Ownership of Banks," 265–301. After the Great Depression of the 1930s, John Maynard Keynes argued that the capitalist economy was fundamentally unstable. Keynes, *The General Theory*, 147–164. He proposed "a somewhat comprehensive socialization of investment [without social ownership of the means of production] will prove the only means of securing an approximation of full employment," Keynes, *The General Theory*, 378. Hyman Minsky, *Stabilizing an Unstable Economy*, further argued that 'big government' institutions, including the central banks, are essential for stabilizing asset prices and thus preventing a viscous cycle of asset deflation and recession during financial crises. The Keynes-Minsky financial market theory concludes that unregulated financial markets are inherently unstable and thus have to be regulated strictly, while neoclassical efficient market theories with optimal pricing create booms and bursts due to their crude and unrealistic assumptions. Crotty, "The Realism of Assumptions Does Matter".
30. Barth et al., "Bank Supervision and Regulation," 205–248; Dinç, "Politicians and Banks," 453–479; World Bank. *Global Financial Development Report 2013*.
31. Micco et al., "Bank Ownership and Performance," 219–241; Clarke et al., "Bank Privatization in Developing Countries," 1905–1930.
32. La Porta, et al. "Government Ownership of Banks," 265–301.
33. Berger et al., "Corporate Governance and Bank Performance," 2179–2221; Bonin et al., "Bank Performance, Efficiency and Ownership in Transition Countries," 31–53; Cornett et al., "The Impact of State Ownership on Performance Differences in Privately-owned versus State-owned Banks," 74–94.
34. Jia, "The Effect of Ownership on the Prudential Behavior of Banks," 77–87; Lin and Zhang, "Bank Ownership Reform and Bank Performance in China," 20–29.
35. Berger et al., "Bank Ownership and Efficiency in China," 113–130.
36. Andrianova, et al. "Government Ownership of Banks, Institutions and Economic Growth.," 449–469. See also Demetriades, et al. "Does Financial Development cause Economic Growth?," 387–411.
37. Chen et al., "Banking Efficiency in China," 229–245.
38. Equity ownership is not equivalent to firm ownership, as Fama once argued that "ownership of capital should not be confused with ownership of the firm". Fama, "Agency Problems and the Theory of the Firm," 290. See Butzbach, "Can Banks be Owned?" for a

- critical discussion on the notion of ownership in banks. Although focusing on the effect of bank regulatory and supervisory practices on bank development, Barth et al., *Rethinking Bank Regulation* pointed out that “one size may not fit” all countries as there is no evidence that any single set of best practices is appropriate for promoting well-functioning banks in every country in their analysis of 150 countries.
39. Ho and Marois, “China’s Asset Management Companies as State Spatial-Temporal Strategy,” 729–730. The China Banking and Insurance Regulatory Commission (CBIRC) was established in April 2018 after a merger of the China Banking Regulatory Commission (CBRC) and China Insurance Regulatory Commission (CIRC). To avoid confusion, with the exception of references, this paper uses CBIRC to refer to the banking regulatory authority in both eras.
 40. Brei and Schclarek, “A Theoretical Model of Bank Lending,” 298–307.
 41. Ivashina and Scharfstein, “Bank Lending during the Financial Crisis of 2008,” 319–338; Puri et al. “Global Retail Lending in the aftermath of the US Financial Crisis,” 556–578; Brei et al., “Rescue Packages and Bank Lending,” 490–505.
 42. Bertay et al., “Bank Ownership and Credit over the Business Cycle”.
 43. Brei and Schclarek, “Public Bank Lending in Times of Crisis,” 820–830. For country-specific studies, see Leony and Romeu, “A Model of Bank Lending in the Global Financial Crisis and the Case of Korea” for South Korea, and Onder and Ozyldirim, “Role of Bank Credit on Local Growth,” for Turkey.
 44. For liberalization policies, see Murphy et al., “The Transition to a Market Economy,” Sachs, *Poland’s Jump to the Market Economy*. See Dewatripont and Roland, “The Design of Reform Packages under Uncertainty” for the ‘gradual’ approach.
 45. This section is based on Yeung, “Hybrid Property, Path Dependence, Market Segmentation and Financial Exclusion”. See also Stark and Nee, “Toward an Institutional Analysis of State Capitalism,” 1–31.
 46. Szelényi, *Socialist Entrepreneurs*.
 47. Stark, “Coexisting Organizational Forms in Hungary’s Emerging Mixed Economy,” 167–168.
 48. Stark, “Recombinant Property in East European Capitalism,” 993–1027.
 49. Oi, “Fiscal Reform and the Economic Foundations of Local State Corporatism in China,” 99–126.
 50. Nee, “Organizational Dynamics of Market Transition,” 2.
 51. Nee, “Organizational Dynamics of Market Transition,” 1–27; Stark, “Recombinant Property in East European Capitalism,” 993–1027.
 52. See Evans, *Embedded Autonomy*, for the developmental state.
 53. The PBoC is responsible for formulating and implementing monetary policy (including setting minimum reserve requirements and interest rates, and money supply and exchange rate targets) to ensure the stability of the financial system. The CBIRC formulates the rules and regulations governing the banking institutions, and supervises all banking and non-bank financial institutions and their business activities in China. For the impacts of banking reforms on rural areas, see Yeung, et al. “Rural Banking in China, 173–191 and Yeung, et al. “Rural Banking in China: Geographically Accessible but still Financially Excluded?,” 297–312.
 54. Yeung, “How Banks in China make Lending Decisions,” 285–302. Refer to Dobson and Kashyap, “The Contradiction in China’s Gradualist Banking Reforms” for more details about the NPLs, Shih, “Dealing with Non-performing Loans” for an interesting analysis of the political considerations of central government for the management of NPLs, and Ho and Marois, “China’s Asset Management Companies as State Spatial-Temporal Strategy” for a detailed examination of Asset Management Corporations. China Cinda Asset Management and China Huarong Asset Management were listed in the Stock Exchange of Hong Kong in 2013 and 2015 respectively.
 55. Governments in other countries normally hold minority stakes in privatized banks, see Clarke et al. “Bank Privatization in Developing Countries,” 1905–1930.

56. The first JSCB was established in 1986. The governors of JSCBs are appointed by their Board of Directors rather than the Central Committee of the Chinese Communist Party, in the case of SOCBs.
57. Yeung, "Hybrid Property, Path Dependence, Market Segmentation and Financial Exclusion," 177–194.
58. Yeung, "Hybrid Property, Path Dependence, Market Segmentation and Financial Exclusion," 177–194; He and Yeung, "The Locational Distribution of Foreign Banks in China," 733–754.
59. CBRC, *CBRC Annual Report 2017*, 97.
60. Yeung, "Hybrid Property, Path Dependence, Market Segmentation and Financial Exclusion," 177–194; Yeung, et al., "Centralization and Marginalization," 854–867.
61. Field surveys 12,17–18 November 2004, 15 July 2014. Loans classified in the 'sub-standard', 'doubtful', and 'loss' categories are regarded as NPLs. CBRC, *CBRC Annual Report 2006*, 72–73; OECD, *OECD Economic Surveys*, 42,145.
62. Field surveys, 11–12 December 2006, 15 July 2014.
63. The usage right of land is classified as an invisible asset, while the properties built on the land are classified as visible assets in collateral by SOCBs in China. Field surveys 11–12 December 2006, 15 July 2014.
64. Field surveys, 27 April–15 July 2014.
65. CBRC, *CBRC Annual Report 2017*, 183; see also Yeung, "How Banks in China make Lending Decisions," 285–302.
66. Cull and Xu, "Who Gets Credit?," 533–559; Jia, "The Effect of Ownership on the Prudential Behavior of Banks," 77–87.
67. Lardy, *China's Unfinished Economic Revolution*, OECD, *OECD Economic Surveys*.
68. Tang, "Coronavirus"; Harrison et al., "Can a Tiger Change Its Stripes?"
69. The corresponding figure in developed countries is 70 percent. World Bank, "China—Financial sector assessment program," 15.
70. Field surveys 11–12 December 2004, 15 July 2014. China launched a nationwide online credit database for citizens and corporations in the second half of 2014, after pilot trials in Jiangsu and Sichuan provinces and Chongqing city from March 2013. PBoC, "The Roll Out of Online Personal Credit Database".
71. Field surveys, 12,15,17–18 November 2004, 11–12 December 2004, 15 July 2014.
72. Wong, "Co-founder of Hong Kong scrap metal firm gets seven years over scam that rocked stock exchange".
73. Field surveys 12,15,17–18 November 2004, 15 July 2014.
74. Mosk et al., "US officials: China refuses to help stop investment scams."
75. Yiu, "Chairman and director of Minsheng's SRE Group unit are detained by Shanghai police on embezzlement charges." See also Zhu and Gao, "Fraudulent Financial Reporting," 61–82.
76. Field survey, 15 July 2014. CBIRC has since issued a number of policy directives to encourage lending to SMEs.
77. Stiglitz and Weiss, "Credit Rationing in Markets with Imperfect Information," 393–410.
78. Berger and Udell, "Small Business Credit Availability and Relationship Lending," F32–F53.
79. See Dinç "Politicians and Banks" for a cross-country analysis of the political influences on public bank lending.
80. Lardy, *China's Unfinished Economic Revolution*; OECD, *OECD Economic Surveys*.
81. The "harmonious socialist society" was proposed by then President, Hu Jintao in 2006. It aimed to build a harmonious society in China by 2020, e.g., to reduce inter-personal and inter-regional inequalities in terms of wealth and maintain the balance between resource exploitation and the sustainability of the environment, etc.
82. Setterfield, "A Model of Institutional Hysteresis," 755–774.
83. Yeung, "Hybrid Property, Path Dependence, Market Segmentation and Financial Exclusion," 177–194.
84. Dunford and Yeung, "Towards Global Convergence," 22–46.

85. Field survey, 15 July 2014.
86. CBRC, *CBRC Annual Report 2012*, 46; *CBRC Annual Report 2013*, 27.
87. Ivashina and Scharfstein, "Bank Lending during the Financial Crisis of 2008," 319–338; Bertay et al., "Bank Ownership and Credit over the Business Cycle"; Marois and Güngen, "Credibility and Class in the Evolution of Public Banks," 1285–1309.
88. NBS various years of *Statistical Yearbook of China*. The PBoC lifted credit quotas and lowered SOCBs reserve ratios from 17.5 percent to 14–15 percent which, along with lowering the equity requirement of fixed asset investments by the central government in May 2009, contributed to a frantic rate of credit expansion. SOCBs lent 7.37 trillion *yuan* (US\$1.08 trillion) in the first half of 2009, nearly double the total loans for the whole of 2008. World Bank, China Quarterly Update; CBRC, *CBRC Annual Report 2009*.
89. Chang, *Institutional Change and Economic Development*, 6–7.
90. In these circumstances, it could even be argued that the granting of loans is *de facto* the outcome of the soft-budget constraints ideology embedded in senior bankers in China. Field survey, 18 November 2004.
91. Field survey, 15 July 2014.
92. See Aubert, "Some Social Functions of Legislation," 98–121; or what Ho, *Institutions in Transition*, 73 called an "empty institution".
93. Efficiency is positively related but not equal to profitability.. In economics, efficiency is a theoretical notion to compare the existing utilization of production factors (labour and capital) with the theoretical optimal point. Profitability is measured using costs and revenue.
94. Guarantee institutions proliferated all over China after the pilot programme in 1998. By June 2004, there were 2136 guarantee institutions of various forms and ownership structures, with 200 billion *yuan* of loans carrying guarantees (OECD, *OECD Economic Surveys*, 152).
95. Field surveys, 27 April–15 July 2014; see Yeung, "Hybrid Property, Path Dependence, Market Segmentation and Financial Exclusion," 177–194.
96. In fact, the solvency ratio of SOCBs in terms of NPLs to GNP did not deteriorate rapidly during the 1990s, for example NPLs of SOCBs accounted for 13.8 percent of GNP in 1993, with the ratio increasing to 18 percent in 1997. Laurenceson and Chai, "State Banks and Economic Development in China," 214, 220–221.
97. See Ivashina and Scharfstein, "Bank Lending during the Financial Crisis of 2008," 319–338; Bertay et al., "Bank Ownership and Credit over the Business Cycle".
98. Although it is still a non-convertible currency, the usage of *Renminbi* for global payments has increased significantly and it ranked fifth (accounting for 1.85 percent of global payments, higher than the Hong Kong dollar) in March 2020 due to bilateral trade settlements and the issue of offshore Chinese-currency bonds (the so-called 'dim sum bonds'). Chen, "Yuan's role in global payments increases".
99. World Bank, *China—Financial Sector Assessment*, 29. The fifth Asset Management Corporation, China Galaxy Investment Management, was established in March 2020.
100. ABC, *Annual Report of Agricultural Bank of China 2004*, 4.
101. ABC, *Annual Report of Agricultural Bank of China*, 2004, 2006 and 2010 issues. The agricultural sectors still have one of the highest NPL ratios (4.4 percent in 2017) in China. CBRC, *CBRC Annual Report 2017*, 179.
102. Redundancy does not contribute to the profitability of SOCBs. The number of employees at SOCBs was reduced by 327,000 from 1.7 million in 1995 to 1.4 million in 2003, before increasing back to 1.65 million in 2017 again. CBRC and CBIRC, *Annual Report*, various years.
103. The ROA for Bank of America and Citigroup were 1.15–1.64 between 2002 and 2007, before the global financial crisis. Financial irregularities have since been reported at Wells Fargo and its ROA has declined significantly during the last few years. FRED, *Return on Average Assets for all U.S. Banks*.
104. CBRC, "NPLs of Commercial Banks as of end-March 2007".
105. FRED, *Return on Average Assets for all U.S. Banks*; ECB, *Supervisory Banking Statistics*.

106. CBRC, *CBRC Annual Report 2013*, 133.
107. See Dunford and Yeung, "Towards Global Convergence," 22–46.
108. *China Daily* 18 January 2014; Reuters, 27 January 2014. As the average pay-out ratio for debts guaranteed by local governments is 23 percent in China, the expected costs of these guarantees are (much) lower than their full face value, e.g., Chongqing's debt burden has decreased from 59 to 38 percent (*Economists* 22 February 2014).
109. Lee, "China upgrading local government financial monitoring system to rein in 'hidden debt'".
110. Moody's, "Moody's—Crackdown on China shadow banking to moderate".
111. Anderlini, "China has 'wasted' \$6.8tn in Investment".
112. Coase, "The Problem of Social Costs," 1–44; Alchian and Demsetz, "Property Rights Paradigm," 16–27; North, *Institutions, Institutional Change, and Economic Performance*.
113. Chang, *Kicking Away the Ladder*; Chang, "Breaking the Mould," 539–559; Chang, *Institutional Change and Economic Development*; Grabel, "The Political Economy of 'Policy Credibility,'" 1–19; Ho, *Institutions in Transition*, Ho, "In Defense of Endogenous, Spontaneously Ordered Development," 1087–1118; Ho, "The 'Credibility Thesis' and its Application to Property Rights," 13–27.
114. Yeung, "Hybrid Property, Path Dependence, Market Segmentation and Financial Exclusion," 177–194; Yeung, et al. "Centralization and Marginalization," 854–867.
115. Andrianova, et al. "Government Ownership of Banks, Institutions and Economic Growth," 449–469; La Porta, et al. "Government Ownership of Banks," 265–301.
116. Wei and Wang, "The Siamese Twins," 19–29.
117. Wildau, "Regulator urges China banks to save ailing companies."
118. Yu, "Tianjin bankers threatened with sack if they don't back local government's stability measures".
119. Hurley, et al. "Examining the Debt Implications of the Belt and Road Initiative from a Policy Perspective".

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