

Making Sense of the Rise of China's Shadow-Banking

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Abstract

This paper aims to make sense of the rise of shadow banking in the context of the Chinese economic transformation to see if the regulator could avoid the hard-crash. Reportedly the estimated size of China's shadow banking system has reached to the level of equivalent to 36 percent of GDP as of the end of March 2013. But the emergence of systemic risk in accordance with the expansion of shadow banking in China does not seem to be a strong possibility, partly because even if the turmoil in the shadow banking occurs, commercial banks typically are not responsible for compensating customer losses so far as an effective firewall between commercial banking and shadow banking is constructed. Meanwhile, the information on who provides risk funds to the shadow banking system and on how the funds are used by ultimate users is still under the shadow of the system. This paper aims to make sense of the limited disclosure of information on shadow banking for the regulator to ease the so-called "audience effects", making time for the transformation to a new phase of post-industrialization.

Keywords: Audience effect, China, Shadow banking

1. Introduction

More researchers and scholars start shedding doubt on the sustainability of China's economic development. "The country's whole way of doing business, the economic system that has driven three decades of incredible growth, has reached its limits. You could say that the Chinese model is about to hit its Great Wall, and the only question now is just how bad the crash will be" (Krugman 2013). The concept of *kaifagu* (converting village land for industrial zones projects) lost momentum by the end of the 1990s and was unable to fulfill the task of effective accumulation for local governments. The small and scattered industrial establishments neither contributed to sustainable rural industrialization nor to local government finance (Hsing 2010). After that, new strategies were epitomized by *xincheng* (New City) projects at the urban fringe. Xincheng projects were carried out as mixed-use real estate projects to build new urban space for commercial, residential, cultural, and administrative activities. Their success was measured by property value increases (Hsing 2010). However, it is reported that the rate of vacancy in the newly built commercial and residential condominiums has been increasing in some inland *xincheng* projects.

As is argued later, intense regional competition under the decentralized political structure in the marginal areas is the key to understanding the extraordinary speed of market transformation in China during the 1990s and beyond. But the existing debate seems to understate how the non-state and hybrid sectors have been raising the necessary fund for their investment. Many researchers point out that *informal* finance sources in China, including "internal financing and trade credits, and coalitions of various forms among firms, investors, and local governments" (Allen et al. 2008) are far more important than formal sources¹; especially for financing private enterprises, which have been the life-blood of rapid GDP growth (Allen et al. 2008, He 2005, Suzuki et al. 2008). In spite of it, the official data about the size of the overall informal or so-called "shadow banking" system in China have not been published. RIETI (2013) introduces the estimation of the size of China's shadow banking system by the Chinese Academy of Social Sciences to be 16.9 trillion yuan (equivalent to 36 percent of GDP) as of the end of March 2013, and by the Standard & Poor's (S&P) at 22.9 trillion yuan as of the end of 2012 based on a wider definition of shadow banking.

This paper aims to make sense of the rise of shadow banking in the context of the Chinese economic transformation in order to see if the economic slowdown and the potential non-performing loans (NPL) in the shadow banking in China could cause a financial disaster, as well as to see if the regulator could avoid the hard-crash. Section 2 aims to review the nature of financial products related to shadow banking system and to make sense of the rise of shadow banking in China. Section 3 aims to propose a fairly new hypothesis of explaining the limited disclosure of information on China's shadow banking, using the concept of "audience effects" from the regulator's perspective. Section 4 puts concluding comments.

2. China's shadow banking

What is China's shadow banking? To begin with, we define "indirect finance" and "direct finance". Indirect finance is defined as a system in which financial institutions basically absorb the borrowers' default risk by

playing the role of intermediaries between households and firms where they lend to firms using the funds collected from households as deposits. On the other hand, direct finance is defined as a system in which the ultimate investors including households directly absorb the risk of default by purchasing primary securities (notes, stocks, corporate bonds, commercial papers etc.) issued by firms through the capital and securities market. Roughly speaking, the financial transactions in the "shadow banking" market in China are categorized into the activities of direct finance.

At the fifth G20 Summit on Financial Markets and the World Economy held in November 2010, the participating countries agreed to ask the Financial Stability Board (FSB) for formulate proposals to strengthen the regulations and supervision for "shadow banking". In response to this request, the FSB published a background paper called "Shadow Banking: Scoping the issues" in April 2011. According to the FSB, shadow banking is defined as "the system of credit intermediation that involves entities and activities (fully or partly) outside of the regular banking system" in a broad sense and as "credit intermediation by non-banks" in a more narrow sense. In Europe and the US, shadow banking generally means an investment management scheme, such as asset-backed commercial paper, conduits or structured investment vehicles, that employs excessive leverage to maintain margins by raising short-term funds and investing them in long-term assets (RIETI 2013).

In the China Financial Stability Report 2013 published in May 2013, the People's Bank of China described the scope of shadow banking, referring to credit intermediation involving entities and activities outside of the regular banking system with the functions of liquidity and credit transformation, which could potentially cause systemic risks or regulatory arbitrage. The specific scope of shadow banking in China is not necessarily clear. However, a near-consensus has been reached such that the wealth management products² and the trust products³ sold by banks and trust companies (purchases are mostly made by individual investors), respectively, comprise the core of shadow banking (RIETI 2013). These are the products in "direct finance" in a sense that banks do not assume the risk on their own, in general, given that the contract documents do not guarantee the principal or interest rates (however, bypass loans through trust companies to avoid regulations on real estate-related loans are considered to be a particular problem).

In general, the funding source for borrowers, i.e. the flow of funds from savings (S) held by households as individual investors to investment (I) of the industrial sector, has two routes; First, the direct finance route in which the stocks or corporate bonds issued by firms or entities are purchased directly by investors through the capital and securities market (in case of China, some wealth management products are sold through commercial banks). Second, the indirect finance route in which banks as financial intermediaries play the role of collecting funds from households in the form of deposits and they then provide funds to the industrial sector in the form of loans. The most distinctive difference between direct finance and indirect finance lies in who undertakes the credit risk of the firms that borrow and use funds. In the indirect finance route, banks absorb the credit risk. Even if a borrower becomes bankrupt, the default does not directly affect any deposit contract between the bank and households as depositors. In contrast, in the direct finance route, the credit risk of the firms which issue their stocks and bonds is absorbed directly by the households as purchasers and holders of these securities, even if these securities are sold through securities brokers and investment banks (typically in the US) which play the role of intermediaries in the capital and securities market. For example, when an issuer becomes bankrupt, the households holding these securities suffer the loss.

How are the separate direct finance and indirect finance routes balanced (or not balanced) across the whole system in China? We consider the financial decisions of Chinese economic agents, using a simple general equilibrium model of Arrow-Debreu which are represented in figure 1 (the general equilibrium model *per se* faces a serious limitation that is largely of its own making. The standard general equilibrium model assumes zero transaction costs of monitoring, but this makes it difficult to explain why banks as financial intermediaries exist at all. Here we use the model to help our understanding on the nature of China's shadow banking). Each type of agent is denoted by a particular subscript: f for firms or entities, h for households as individual investors, and b for banks (typically state-owned commercial banks or SOCB in China). The superscript "+" represents supply, and the superscript "-" represents demand. Besides, D represents deposits, L represents loans and B represents bonds (securities or the other form of direct finance) here.

- 1) Savings (S) held by the households as individual investors are invested either in securities B_h (particularly wealth management / trust products) or deposits D^+ .
- 2) Investments (I) made by the firms or entities are financed either by the funds raised in the capital or shadow banking market B_f or loans from banks L .
- 3) Banks provide loans L^+ to meet the demand of firms. Banks in turn collect the necessary funds either from the securities and capital market B_b (each bank as a firm can issue its stocks or corporate bonds) or deposits collected from households D^- .
- 4) In the capital and shadow banking market, the demand of firms B_f as well as that of banks B_b is balanced with the supply from the households B_h .

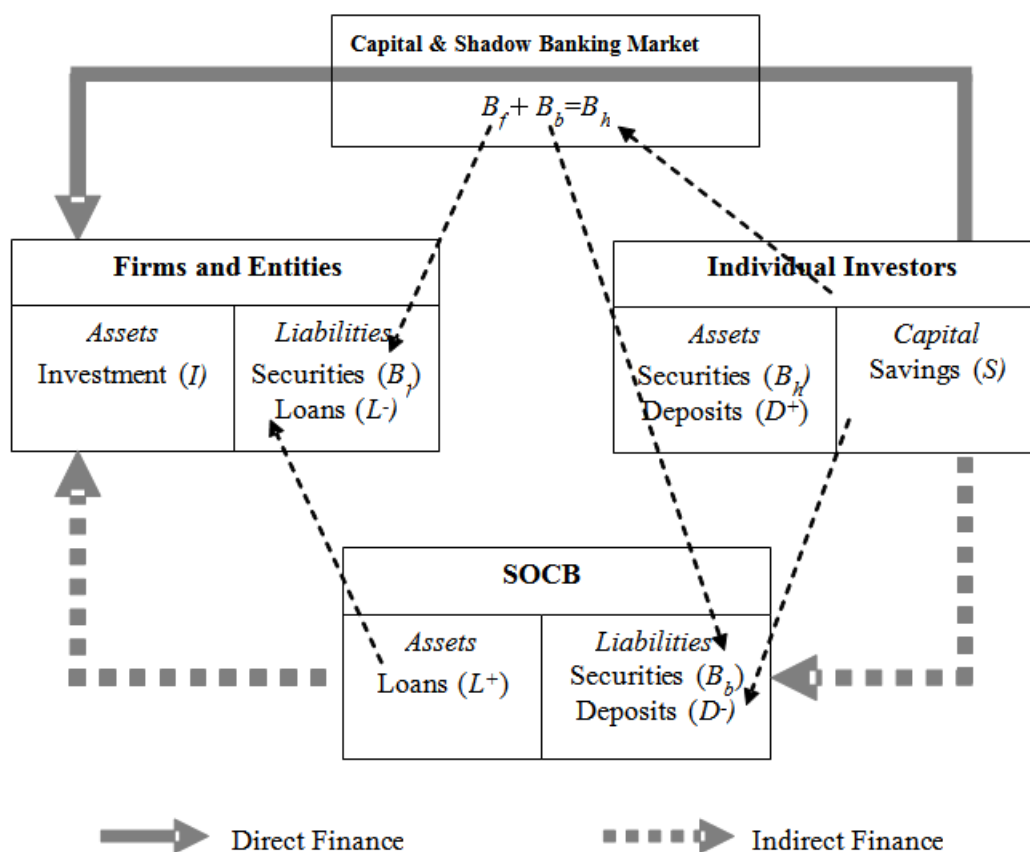


Figure 1: A general equilibrium model in direct and indirect financing in China (The author has based this upon Suzuki 2011, p. 20)

In this model in which all agents are considered to behave competitively, each market clears;

$$I = S \text{ (goods market)}$$

$$D^+ = D^- \text{ (deposit market)}$$

$$L^+ = L^- \text{ (credit market)}$$

$$B_h = B_f + B_b \text{ (capital and shadow banking market)}$$

It is clear that if there were zero monitoring costs the only possible general equilibrium would be one where all risk-adjusted interest rates are equal. Risk in such an economy would be due to nature, rather than due to the moral hazard problems that emerge as a result of costly monitoring. Household investors would therefore face the same risk regardless of whether they invested directly and carried out the costless monitoring themselves or indirectly through banks, leaving the bank to do the costless monitoring. However, in reality, each borrower has distinctive credit risks related to their type and the type of activity they engage in. Thus, investors face significant and borrower-specific information and monitoring costs for screening and monitoring this credit risk.

It is said that delegating monitoring activities to banks can help to accumulate knowledge and skills for monitoring in banks as financial intermediaries, which further improves the financial intermediation of resources. Banks can perform a function as financial intermediaries because the monitoring costs faced by banks are very likely to be lower than the potential cost of monitoring by individuals. However, in case of China, SOCBs are expected to continuously support the state-owned enterprises (SOEs). Their skewed loan portfolio may have lost them the opportunity to accumulate knowledge and skills for monitoring the firms in the *hybrid* sector.

The most important regulatory objectives for any regulatory authority are (1) to maintain financial stability, in particular, to preserve the stability of the banking system by preventing contagious bank runs, and (2) to improve financial intermediation (mobilizing savings from surplus units and intermediation to investors in such a way that the friction of transaction costs and the inefficiencies of asymmetry of information are minimized), including in particular the acquisition and accumulation of skills and knowledge for credit risk management in the monitoring process.

The Anglo-American financial system is characterized by a “division of work” and “specialization”. Both the credit (bank loans) market and the securities (bonds) market play important but clearly distinguished roles in the

US framework of corporate finance. For example, the credit market caters the short-term working capital requirements while the securities market mediates long-term funds for medium to long term investment. Financial and banking stability, on the one hand, is preserved by imposing tight regulations on the credit market, i.e. US commercial banks, and by constraining excess competition among the banks under a protective framework. On the other hand, the existence of a large and diversified base of investors who can absorb various risks and uncertainty in the securities market, that is, the market for bonds, stocks, securities and venture capital funds, results in stability in that market while regulators ensure sufficient information disclosure and prevent insider trading that could undermine confidence in these markets amongst small to medium scale investors. Regulators also aim to maintain competition among financial and informational intermediaries. The fairly free and competitive securities market intermediates a significant part of financial resources and maintains the dynamism of the economy by channeling these resources into corporations and through venture capital funds into new investments.

In China, the rise of shadow banking has been complementing the function of commercial banks as financial intermediaries, which has been weakened due mainly to tightening monetary policy and banking regulations (RIETI 2013). Many researchers point out that *formal* financial intermediation does not play a significant role in the present-day Chinese economy. China's banking system as formal indirect financing route which is still mainly controlled by the four largest state-owned banks, and two domestic stock exchanges, the Shanghai Stock Exchange (SHSE) and Shenzhen Stock Exchange (SZSE) as formal direct financing route, have not been effective in allocating resources to innovative potentials in the economy (Allen et al. 2008).

China's quantitative easing policy (QEP) implemented since 2008 has pumped up the state sector. Most of the bank credits created by the 4-trillion yuan (about 576 billion USD) stimulus package were channeled into state-owned enterprises and local governments. The state sector has grown on cheap credit at the expense of the private sector⁴. However, it is reported that the real economy started to face a shortage of funds in mid-2010 as monetary authorities shifted their policy to tightening (RIETI 2013). The imbalance between I (particularly in the real estate industry) and L^+ has encouraged the financial platforms of local governments and SMEs to tap the shadow banking system. Also, RIETI (2013) points out that due to a severe banking regulation such as relatively high reserve requirement and severe loan-to-deposit ratio, commercial banks have come to use shadow banking as a tool for expanding lending in lieu of traditional channels in order to avoid regulations.

As is referred in the introduction, the estimated size of China's shadow banking system has reached to the level of equivalent to 36 percent of GDP as of the end of March 2013. However, the information on who provides risk funds to the shadow banking system and on how the funds are used by ultimate users is still under the shadow of the system.

3. Economic Slowdown and Control of Audience Effects

Ronald Coase (Nobel laureate) and Ning Wang point out that China became capitalist, at least in a sense that China is no stranger to capitalism, while it was trying to modernize socialism. "This is the most unexpected aspect of the Chinese economic transformation. ... The story of China is the quintessence of what Adam Ferguson called 'the products of human action but not human design'. A Chinese proverb puts it more poetically: 'flowers planted on purpose do not blossom; the willows no one cared for have grown into big trees offering ample shade'" (Coase and Wang, 2012). They shed an analytical light on their account of "marginal revolutions" showing that China's market transformation in the 1980s was primarily carried out by the non-state (and hybrid) sectors while the state-led reform failed to revitalize the state sector. They raise four marginal forces - private farming, township and village enterprises (TVE), individual entrepreneurship, and the Special Economic Zones - which pioneered in transforming the Chinese economy during the 1980s.

These economic experiments enjoyed some political freedom as long as their presence was no longer perceived as a threat to socialism. "Once peasants and unemployed city dwellers were allowed the freedom to pursue private entrepreneurship, it did not take long for their endeavors to outshine the state sector and convince the pragmatic Chinese leaders to recognize these experiments as beneficial rather than inimical to socialism" (Coase and Wang 2012). They emphasize that China's decentralized political structure and intense regional competition in the 1990s and beyond arose as the most powerful driving force behind China's economic transformation. Since local government officials are ultimately appointed by Beijing based on the performance of the local economy, Chinese local governments run their jurisdiction - the province, city, county, town, and village - much like a business corporation (Coase and Wang 2012). In particular, the *kaifaqu* fever (*kaifaqu* were mainly industrial estates) of the 1990s reflected a highly decentralized pattern of industrialization in China's countryside (Hsing 2010). In addition to the incentive structure to governmental officials, the Chinese government still controls many important economic resources particularly bank loans. "Repetitive and duplicative investment is inevitable, and indeed, an essential part of the process. This has resulted in an erosion of economies of scale to capital due to its under-utilization, but has greatly accelerated and diffused industrialization, turning China into a

formidable workshop of the world in less than thirty years" (Coase and Wang 2012).

Krugman (2013) points out the existence of huge amounts of "surplus labor" keeping wages low even as the economy growth richer, as an engine for China's economic growth. "Now, however, China has hit the 'Lewis point' — to put it crudely, it's running out of surplus peasants" (Krugman 2013). Krugman points out that investment is now running into sharply diminishing returns and is going to drop drastically. On the contrary, RIETI (2013) insists that the emergence of systemic risk in accordance with the expansion of shadow banking in China does not seem to be a strong possibility, partly because (1) even if the turmoil in the shadow banking occurs, commercial banks typically are not responsible for compensating customer losses, and (2) as the financial condition of commercial banks is strong, if a loss is generated from shadow banking-related businesses, it can be covered with shareholder equity and asset impairment provisions.

Unless an effective firewall between commercial banking and shadow banking (investment banking) is constructed, the former reason would be undermined. Unless the transferred NPLs into the asset management companies (AMC) are resolved, even though the NPL ratio in commercial banks has reduced to the level of below 1 percent, the latter reason would be undermined. However, the disclosure of the information related to these issues has been limited in China.

The financial policy best suited to achieve financial stability has been controversial. As a key prescription for preventing crises, Eichengreen (1999) focuses on the "disclosure of information" that was expected to attenuate asymmetries of information among regulators, banks and borrowers, which would in turn strengthen "market discipline" and help policymakers to identify the need for corrective action (Eichengreen 1999). Many analysts would agree with his emphasis on promoting the disclosure of information. However, does the disclosure of information always help?

Banking is an information intensive industry, which looks at the financial transactions, cash-flow history and ongoing credit relationships of a borrower. The intangible and tacit nature of much of the information relevant for assessing a borrower's promise to repay makes it almost impossible to transmit all of this information in any simple way to markets or other lenders through codified signals. Thus, bank defaults and the systemic risk of potential contagious *runs* cannot be prevented and resolved by the ordinary auction market mechanism. Therefore, financial regulations and government intervention are critical in maintaining financial stability. Taking the specific nature of information in financial markets into consideration, how should the information pertinent for assessing the potential solvency or insolvency of banks be dealt with?

In an interesting argument, in the context of the 1997 Asian banking crisis, Satyanath (1999) draws attention to the complexity and constraints in the unfettered disclosure of information and argues that if banks are to disclose information through unreliable channels which expose the information to the public, particularly when they are *on the verge of bankruptcy*, they risks costly bank runs, whereas if they communicate such information to the government through private channels, the government can accommodate such information in devising the monetary policy without causing costly bank runs.

Elster (2000), referring to Satyanath (1999), highlights the importance of reliability of private channels enabling the banks to inform the regulator without simultaneously informing the public. Such reliable and closed channels are very important for financial systems to make it possible to detect problems and trying to resolve problems of bank solvency before the bank actually becomes insolvent. The disclosure of information between regulators and banks would not always be efficacious as it is conditional on what Elster calls "audience effects" by which "one can impose costs on oneself by announcing publicly that one is going to quit, thus raising the stakes by adding shame and loss of prestige to the other costs of relapse" (Elster 2000). For example as Nishimura (1999) points out, in 1995, the Ministry of Finance of Japan announced that the amount of non-performing loans held by the Japanese banks had reached around 40 trillion yen, while it had been previously announced to be only around 13 trillion yen. This was because of a change in the definition and scope of NPL to include not only loans where repayments had been suspended but also loans where interest rates has been reduced or exempted. In addition, the scope of the definition was extended to include not only the 21 major banks but also all the depository institutions. This disclosure *per se* was reasonable. However, as Nishimura (1999) points out, this sudden announcement triggered deeper public uncertainties over the disclosure process of the Ministry of Finance of Japan, consequently fuelling general public distrust in financial system.

Needless to say, a protective structure between banks and banking regulators can also result in potential moral hazard problems. The regulatory structure has to keep banks as well as the regulators from abusing their power to their own advantage. How do financial systems deal with the above delicate relations? In the case of the US, although the role played by US banks is largely limited to short-term lending for working capital requirements, the regulators held to the traditional conservative strategy of enforcing tight capital adequacy requirements and disclosure rules on banks to prevent *bank runs*. This structure has limited the negative audience effect of disclosure of information related to the insolvency of banks, even when they occasionally occur. Although an affected bank may be insolvent, the macroeconomic impact would be limited, because the financial role played

by the US banks was quite limited in the structure, where the US banks were encouraged not to have large commitments and exposures to particular companies or groups.

In the case of China, the regulator may still need to manage the increasing pressure on disclosure of information on the Chinese financial system to ease possibly higher economic and political risks due to audience effects, until the transformation to a new phase of the post-industrialization will be realized. As Coase and Wang (2012) point out, while Chinese manufacturing firms are globally competitive, most of them can only compete on price in the global market due to the advantage gained by low production costs; they are still struggling to provide new and better products. "Short on innovation and lacking their own distinctive products, many Chinese firms depend on ordered manufacturing - taking orders from overseas markets and selling them under foreign brand names" (Coase and Wang 2012). The central government of China has assigned a high priority within its industrial policy planning on developing a culture of innovation. The intent is to replace low-wage, resource-intensive manufacturing with high value-added production (US-CESRC 2012). Apparently, China still need time to prepare for the transformation to the post-industrialization stage.

4. Concluding comments

We take it as uncontroversial that the core objectives of banking regulation are to ensure financial stability and to promote sound financial intermediation. Banking regulation has to balance the task of maintaining and enhancing the roles of banks (lenders) as financial intermediaries and monitors for allocating financial resources, and that of preventing them from underwriting non-performing credits under conditions of uncertainty in credit risk assessments. At the same time, regulators have to prevent contagious *runs* through the policy for protection, without creating adverse incentives for banks that may lead to a failure of effective monitoring and moral hazard. Here, we should note that banking regulators, virtually in any type of financial structure, are very closely involved in the operation of banks, in order to retain the effective power to monitor and discipline them for regulatory purposes. As the *Regulation* economic school emphasizes, banking regulation is of capital importance because of its effect both on the behavior of bank managers and on the specific characteristics of the banking industry (Freixas and Rochet 1997). Indeed, more or less extensive banking regulation exists in virtually every country with a well-developed banking system.

It is quite interesting that Coase and Wang point out the Chinese people with full of optimism, energy, creativity, and determination as the root cause of the miraculous rise of the Chinese economy. Private entrepreneurship was illegal before the economic reform, but now it has been recognized as a primary driver of the economy. Nonetheless, as they point out, private entrepreneurs still face many prejudices and adversities (Coase and Wang, 2012). While keeping the people's optimism, energy and creativity, the Chinese regulator has to monitor and supervise both of commercial banking and shadow banking activities to ensure financial stability as well as to improve sound financial intermediation. This is a great and important challenge for China to transform its economy to a new phase of post-industrialization.

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Notes

Note 1. Throughout the period 1979-2004, while the share of budgetary funds was shrinking and that of domestic credit was rising, the most notable change was that the share of "all others" increased steadily and reached a high of more than 70 per cent of total fixed asset investment. He (2005) places the following components in this category: (1) funds raised from equity markets, domestic and abroad, by issuing debentures or stocks; (2) funds raised internally, either from undistributed profits or retained funds, for some special purposes; (3) funds raised from authorised surcharges such as "coal for oil" fees and airport construction duty; (4) funds raised from borrowing from non-financial firms and individuals; (5) funds raised from issuing debt/share certificates to employees; and (6) in collectively owned or private enterprises, funds raised from personal savings.

Note 2. Wealth management products are asset management products sold by commercial banks. The minimum investment amount is generally 50,000 yuan, and the maturity period ranges from one month to one year. Wealth management products are mostly fixed income-type products that invest in the call market, government bonds, bank debentures, enterprise bonds, and the bills of the central bank etc. (RIETI 2013).

Note 3. Trust products are asset management products sold by trust companies. The minimum investment amount is normally one million yuan. The maturity period is one year or more. The investment destination mainly includes government-led basic industry, the real estate industry (RIETI 2013).

Note 4. In 2009, an unprecedented total of thirty-four Chinese firms (not including three from Hong Kong) were listed in the Fortune Global 500. Only one, however, was a private enterprise. In 2010, forty-two Chinese firms (not including four based in Hong Kong) made it to the Fortune Global 500, two of them being private (Coase and Wang, 2012).