8 Monitoring shadow banking

The case of China

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8.1 Introduction

Since the financial crisis hit the US in 2007, the term 'shadow banking' has been mentioned repeatedly in newspapers, TV and Internet media, as it is regarded as one of the major reasons for the crisis.[1] It is commonly believed that the collapse of major broker-dealers such as Bear Stearns and Lehman Brothers severely damaged the entire financial system and posed a systemic risk to it (Bernanke 2009, 2010, 2012). Although most countries now have established a rigid oversight on the traditional banking system, the monitoring and regulation of the shadow banking system is still rather weak. The behavior and risks in which Lehman Brothers were involved have been ignored or underestimated for a long time, but these risks existing in the so-called shadow banking system triggered the crisis and damaged the whole financial system.

The shadow banking system comprises a very important element of the worldwide financial system, and monitoring the shadow banking system became a pressing need on the international agenda after the crisis. The Financial Stability Board (FSB) has been extremely concerned about the shadow banking systems in different countries and issued annual reports on this issue starting from 2011.[2] Furthermore, some countries like the US and international organizations like the FSB put in place several important regulations and institutions in order to coordinate and protect the financial system – especially from the risks caused by shadow banking.[3]

One remarkable trend is that the shadow banking system expanded more rapidly in emerging countries, and it also played a very important role in the financial system of China. According to the FSB, the shadow banking system expanded many times over the last decades (FSB 2012). This holds particularly true in China, since the Chinese government adopted a package of stimulus policy measures in order to alleviate the impact of the worldwide financial crisis in 2009. A huge sum of liquidity was created and flowed into the Chinese financial market in 2009. A considerable proportion of this liquidity flowed into the shadow banking system. Now more and more scholars are concerned about the risks the shadow banking system in China poses;

some scholars even suspect that Chinese shadow banking may result in a next subprime crisis (Zhang 2013).

This chapter aims to analyze the Chinese shadow banking system and compare it with other countries. The chapter is divided into six sections: section 8.2, defines and illustrates the shadow banking system; section 8.3 analyzes the shadow banking system and considers whether it should be regulated; section 8.4 describes shadow banking in China; section 8.5 deals with how to monitor such a system; and section 8.6 concludes.

8.2 What is shadow banking?

8.2.1 Definition

"While the term 'shadow banking' is used widely in the news media and in policy discussions, there is as yet no clear commonly-agreed definition" (FSB 2012). In fact, it is commonly regarded that this term was introduced by Paul McCulley in 2007 and many scholars and organizations tried to define it later, especially after the financial crisis.[4] Below, several popular and influential definitions about this term are discussed.

As mentioned above, Paul McCulley first referred to it as: "non-banking investment conduits, vehicles, and structures."[5] According to his definition, shadow banking is distinct from the traditional banking system. However, there are various 'non-banking financial institutions', such as securities, trusts and insurers that provide different financial services as well. Thus, it is not so clear whether we should regard all such non-banking financial institutions as shadow banking.

The Federal Reserve economist Zoltan Pozsar regarded shadow banking as: "financial intermediaries that conduct maturity, credit and liquidity transformation without explicit access to central bank liquidity or public sector credit guarantees" (Pozsar *et al.* 2010, revised in 2012: 1). According to Pozsar, such intermediaries include "finance companies, asset-backed commercial paper (ABCP) conduits, structured investment vehicles (SIVs), credit hedge funds, money mutual funds, securities lenders, limited-purpose finance companies (LPFCs) and government-sponsored enterprises (GSEs)" (Pozsar *et al.* 2010, revised in 2012: 1). Moreover, the shadow banking system has three sub-systems namely the government-sponsored shadow banking sub-system, the 'internal' shadow banking sub-system and the 'external' shadow banking sub-system. The government-sponsored shadow banking sub-system refers to credit intermediation activities funded through the sale of agency debt and mortgage-backed securities (MBS), which mainly includes conforming residential, and commercial mortgages such as Fannie Mae and Freddie Mac in the US. The 'internal' shadow banking subsystem refers to the credit intermediation process of a global network of banks, finance companies, broker-dealers and asset managers and their on- and off-balance sheet activities – all under the umbrella of the financial holding companies. The 'internal' shadow banking sub-system is extremely active and important in China, which will be explored in the third section of this chapter. Finally, the 'external' shadow banking sub-system refers to the credit intermediation process of diversified broker-dealers (DBDs) and to a global network of independent, non-bank financial specialists that include captive and standalone finance companies, limited purpose finance companies and asset managers. The 'external' sub-system seems to be quite important in the US, as famous broker-dealers, such as Lehman Brothers and Bear Stearns triggered the financial crisis in 2007. In his report, Pozsar also pointed out that those intermediaries could be regarded as part of the market-based financial system, as on the one hand they can increase the efficiency of credit intermediation by providing credit transformation, maturity transformation and liquidity transformation; on the other hand, since they are under-regulated, less transparent and interconnected with the traditional banking system, they could be a vital factor in triggering the systemic risk to the whole financial system (Pozsar *et al.* 2010, revised in 2012).

Gorton *et al.* also devoted a very important paper to this topic. In their paper the authors pointed out that the shadow banking system "performs the same functions as traditional banking, but the names of the players are different and the regulatory structure is light or nonexistent" (Gorton *et al.* 2010: 261). Gorton *et al.* documented the rise of shadow banking and analyzed the advantages of such a system. Moreover, they found that, like the safe harbor rule in US bankruptcy law, some institutions provided incentives for the rise of the shadow banking system. Finally, they proposed some future regulatory regimes for the shadow banking system. Concretely, they proposed the use of insurance for money market mutual funds (MMMFs), combined with strict guidelines on collateral for both securitization and repurchase agreements (repos), with regulatory control established by chartering new forms of narrow banks for MMMFs and securitization, and using the bankruptcy safe harbor to incentivize the compliance on repos. However, Shleifer expressed his suspicion of whether the proposal of narrow banks for MMMFs and securitization could be practical or not (Gorton *et al.* 2010).[6]

As the governor of the Federal Reserve, Bernanke also held several important speeches regarding the issue of shadow banking. Bernanke argued that shadow banking, as usually defined, comprises a diverse set of institutions and markets that, collectively, carry out traditional banking functions – but do so outside, or in ways only loosely linked to, the traditional system of regulated depository institutions (Bernanke 2012: 3).

Schwarcz also observed the emergence of shadow banking, and pointed out that shadow banking means: "not only the provision of financial products and services by shadow banks, but also the financial markets used to provide those products and services" (Schwarcz 2012: 622). Furthermore, Schwarcz expressed his interests in the rapidly developing shadow banking in China.

The FSB is now extremely concerned about the monitoring of shadow banking. Since 2011, it regularly issues annual reports on shadow banking in different jurisdictions. The FSB described the shadow banking system as credit intermediation involving entities and activities outside the regular banking system (FSB 2011, 2012 and 2013).

Although the term has been defined differently by various scholars and organizations there appear to be some common facts in their definitions. From the above-mentioned definitions it can be concluded that shadow banking encompasses (i) providing credit intermediation (which was regarded as the function of traditional banks), (ii) via non-traditional banks. Such a system includes several intermediaries, e.g. MMFs, repos, asset-backed securities (ABSs), collateralized debt obligations (CDOs) and ABCPs. Moreover, it is commonly agreed that the regulation of such systems is still quite weak.[7]

However, the above-mentioned definitions still beg the question whether the term 'non-banking' needs to be interpreted in relation to non-banking *entities* or non-banking *activities*.

Pursuant to Schwarcz, the term "shadow banking" should be defined broadly. It should include not only the provision of financial products and services by shadow banking, but also the financial markets used to provide those products and services (Schwarcz 2012), since only a broader definition will be flexible enough to encompass the inevitable evolution of financial products and services over time. Therefore, he proposed to use the term 'shadow banks' to refer to the entities but to use the term 'shadow banking' in relation to both entities *and activities*. The term shadow banking should be understood in a broader way, because traditional banks can also provide wealth management and securitization services to their clients.[8] Accordingly, this is also classified as an 'internal' shadow banking sub-system by Pozsar (Pozsar *et al.* 2010, revised in 2012). In section 8.4 I will explain that the traditional banking system now plays a vital role in providing shadow banking services in China.

8.2.2 A snapshot of shadow banking

The shadow banking system emerged in the late 1960s in the US due to the interest-rate ceilings on demand deposits provided by Regulation Q and has expanded dramatically in the past decades.[9] It is commonly agreed upon that the development of the shadow banking system could be regarded as a market-based evolution of the financial system along with private innovation and regulatory changes (Gorton *et al.* 2010; Pozsar *et al.* 2010, revised in 2012). After the emergence and expansion of the shadow banking system, more and more pressure to its competitors, the commercial banks, was created. Thus, the traditional banks went into decline, when shadow banking emerged (Gorton *et al.* 2010).

The FSB has issued data and reports regarding shadow banking annually since 2011. According to its reports, the other financial intermediaries (OFIs[10]) grew rapidly before the crisis, rising from US$26 trillion in 2002 to

US$62 trillion in 2007, then declined slightly in 2008 but increased subsequently to reach US$67 trillion in 2011, equivalent to 111 per cent of the aggregated gross domestic product (GDP) of all jurisdictions (*FSB Report 2012*). In 2012, non-bank financial intermediation grew by US$5 trillion and reached US$71 trillion. It represents on average about 24 per cent of total financial assets, about half of the banking system assets, and 117 per cent of the GDP (*FSB Report 2013* 2013). The *FSB Reports 2012–13* also presented several interesting facts about the worldwide shadow banking system.

First, the advanced economies still own the largest non-bank financial systems: the US has the largest shadow banking system, with assets of US$23 trillion in 2011, followed by the Euro area (US$22 trillion) and the UK (US$9 trillion).

Second, the growth of OFI in the whole world (8.1 per cent) was considerably higher than GDP growth. Furthermore, the developments in emerging countries are quite remarkable (around 20 per cent), while OFI grew most in China in 2012 (42 per cent). However, even though the growth rate is quite remarkable, the scale of OFI is still smaller in the emerging economies. Furthermore, the shadow banking system must contribute to a financial deepening in these jurisdictions, especially when the financial repression in these jurisdictions is considered. Therefore, the FSB is quite cautious to monitor whether there is any increase in risk factors that may be caused by maturity transformation or leverage due to the rapid expansion of credits provided by shadow banking.

Third, the *FSB Report 2013* (2013) showed that the most rapid growth in 2012 was in real estate investment trusts (REITs) and funds (30 per cent). This trend also holds true in China. Because of the housing price boom, the Chinese government adopted harsh restrictions to limit loans from banks to developers. However, REITs became a vital channel for developers to collect funds from the market. Considering that the housing prices increased dramatically in China over last year, the Chinese government is seeking to provide more restrictions on REITs in order to alleviate the oversupply of liquidity into housing market and the price bubbles.

Summarizing the above, in a broad way, shadow banking could be regarded as credit intermediation provided by the non-banking system. It expanded in the last decades and increased the vulnerability of the financial system, especially during the crisis. Moreover, compared with the traditional banking system, the regulatory regime provided only weak regulation before the crisis.

8.3 Do we need to regulate shadow banking?

8.3.1 Shadow banking could increase efficiency

Just like a coin, there are two sides to shadow banking as well. First of all, shadow banking can potentially increase economic efficiency while also increasing risk to the financial system (Schwarcz 2012).

As Gorton *et al.* point out, shadow banking emerged in order to alleviate the distortion from the Regulation Q and eventually changed the regulatory regime (Gorton *et al.* 2010). Moreover, Pozsar and Schwarcz also regarded it as a market-based instrument, as shadow banks can demonstrate the market power and demand of the private parties, especially when the traditional financial market was over-regulated and distorted (Pozsar *et al.* 2010, revised in 2012; Schwarcz 2012). For example, financial repression could be quite common in emerging countries like China (Xu 2013) and the traditional banking system may be distorted there, yet the shadow banking system can partially alleviate such distortion via a more flexible arrangement, as is visible in the emergence of wealth management services after 2009 (Zhang 2013). Moreover, shadow banking systems can create more liquidity by a higher leverage (Wray 2010), which has become a booster for the real economy in the last decades.

8.3.2 Shadow banking could aggregate risks

The shortcomings of shadow banking systems were mentioned quite often by scholars of law and economics after the financial crisis, as shadow banking was also the source of some key vulnerabilities during the crisis (Bernanke 2010).

As pointed out by Bernanke, most shadow banking entities and activities were not subject to consistent and effective regulatory oversight. For example, there is no prudential regulation for special purpose vehicles (SPVs), ABCPs, hedge funds or financial companies. There is not a single restriction on the leverage of such entities, while the regulatory standards on the quality of their risk management or the prudence of their risk-taking are quite weak. Therefore, the lack of regulation may amplify the following vulnerabilities of the shadow banking system (Bernanke 2009).

The shadow banking system is more dependent on unstable short-term wholesale funding and, unlike traditional commercial banks, there is no deposit insurance system that can cover shadow banking. Thus investors may 'run away' if any rumour arises, which may cause difficulties for the whole system due to investors' lack of sufficient information needed to determine the financial conditions of firms. Therefore, the vulnerability related to short-term funding brings more uncertainty to the system, which is also regarded as a structural weakness of the system (Bernanke 2010). The maturity mismatch and the potential fear of a runaway can severely damage the shadow banking system when the market is down or rumours arise.

As the regulatory regime on the shadow banking system is weak, especially before the financial crisis, financial firms managed risks by themselves. However, self-management of risk inherent to the shadow banking system was deficient. For example, the underwriting standards were very low for mortgages to subprime borrowers. Furthermore, many risks could not be tracked in the balance sheets of traditional banks, so these risks were not exposed. These shortcomings caused risks that were not diversified by the different financial firms but heavily concentrated in the shadow banking system. Hence, the risks to the whole system could be triggered by some unforeseeable incidents, such as the collapse of Lehman Brothers.

The shadow banking intermediaries often utilize much higher leverages than traditional banks. The excessive leverages enable investors to obtain higher profits in good times, but in bad times, losses will be greater. Therefore the risk was enlarged and the quality of capital declined. Dudley (2009) argued that the crisis shows the failure of regulators and market participants alike to fully understand and appreciate the strength of the amplifying mechanisms, particularly those of the shadow banking system that exacerbated the business and financial cycles in the financial system at the time of the Crisis.

Gorton *et al.* stated that the risks which caused the financial crisis were gathered in several types of short-term debts (repos, ABCPs, MMMFs shares) that were initially perceived as safe and 'money-like' but later found to be imperfectly collateralized. They argued that the core problem in the financial crisis was "a run on repos … [i]n the crisis, withdrawals in the form of increased repo haircuts causing deleveraging and spreading the subprime crisis to other asset classes" (Gorton *et al.* 2010: 280). In this way the crisis amounted to a banking panic, structurally similar to many of the previous panics involving money-like instruments such as bank notes and demand deposits but with the 'banks' taking a new form.

The FSB (2011) also regarded that non-bank financial institutions (NBFIs) are the major source of systemic risks to the financial system via providing liquidity to the economy and the connection with the traditional bank system. Furthermore, the FSB pointed out that the interconnectedness between banks and shadow banking entities (FSB 2012) could cause a systemic risk. First, banks and shadow banking entities are highly connected, especially in China. Banks are often part of the shadow banking credit intermediation chain or provide (explicit or implicit) support (for example in the form of guarantees) to the shadow banking entities to enable cheap financing and maturity/liquidity transformation. Second, banks and shadow banking entities provide funds to each other through loans and investments in financial products. Third, banks may be owners or investors of shadow banking entities, e.g. finance companies or broker-dealers. Therefore, the interconnectedness between the two systems can create systemic risks as a distress in a shadow banking entity (or a bank) may easily spill over to a bank (or a shadow banking entity). Furthermore, this interconnectedness may aggregate the leverage and thus increase the risks of asset price bubbles, especially when entities of both systems invest in the same (or correlated) assets, for example infrastructure investments in China. Systemic risks can also build up when banks and shadow banking entities have common exposures to certain sectors or financial instruments. Moreover, interconnectedness can amplify market reactions when the market liquidity is scarce in financial markets – indeed such reactions can themselves intensify the loss of liquidity. The case of the credit crunch in China in 2013 could be a very important case.[11] Banks are thus likely to be significantly affected by developments in the shadow banking system and vice versa.

Although shadow banking can increase the efficiency by market-oriented intermediaries, the risks in the shadow banking system cannot be ignored, as its regulation is weak, the risk management is deficient, the leverage ratio is excessive and it is funded mainly by short-term debt. Therefore, many scholars cited the shadow banking system as the primary contributor to the financial crisis, because the vulnerabilities it caused could ripple throughout the entire financial system, and form a systemic risk due to the interconnectedness between banks and shadow banking entities (Schwarcz 2008). Therefore, considering the risks in the shadow banking system and the interconnectedness between shadow banking and traditional banking, the systemic risk caused by the shadow banking system could be a major risk to the traditional banking system; the risks in shadow banking shall be monitored.

8.4 An application to China

8.4.1 Shadow banking in China

As pointed out by the FSB, the booming of shadow banking can be regarded as the most remarkable event in the Chinese financial system. The size of shadow banking has expanded dramatically since 2009 due to the stimulus policy of the Chinese government (FSB 2012).

The development of shadow banking in China can be traced back to the beginning of this century, especially after 2004, the year when China started to liberalize its financial market and increase the discretion for banks to set the floating space of the interest rate (Yi 2009). The circulation of the banks' wealth management products increased from RMB0.04 trillion in 2004 to RMB16.99 trillion in 2011,[12] as they provided a very popular alternative for the banks to avoid the rigid requirements in the traditional credit services. At the same time, clients can obtain a higher return than traditional deposits, although the risks are also increased (Yin and Wang 2013).

The annual increase rate of the assets of NBFIs was over 20 per cent in the past five years due to the expansion of the liquidity and the cooperation from banks (PBOC 2014). The size of shadow banking in China was estimated as large as over RMB26 trillion in China, comprising of three sectors: (i) off-sheet financing of banks (RMB10.3 trillion), (ii) NBIs (RMB10.3 trillion), and (iii) informal finance (private loan) (RMB5.8 trillion) (Wei *et al.* 2013).[13]

The most remarkable character of the Chinese shadow banking system is the dominant role of the banks' off-sheet financing and the cooperation between banks and NBIs. Therefore, Chinese banks played a vital role in the shadow banking activities (Yin and Wang 2013; Wei *et al.* 2013).

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8.4.2 The rise of Chinese shadow banking

Similar to the US, the rise of the shadow banking system could also be regarded as a market-based response to the banking regulation in China, especially to interest and credit regulation. It is commonly agreed that there is a severe distortion of the Chinese financial market because of China's interest-rate regulation, which is also referred to by many scholars as a major form of financial repression (Che 2011; Lu and Yao 2004). The over-regulation has distorted the financial system in China and is regarded as an important reason contributing to the expansion of Chinese shadow banking (Lu and Yao 2004; Wei *et al.* 2013).

8.4.2.1 Interest-rate regulation

The regulation on the interest rate in China was adopted as early as the 1950s, since the government started the economic restoration in order to accumulate capital and utilize capital with lower costs. The Chinese government set the cap for the deposit and loans for Chinese banks. Such a cap is often much lower than the market level, which could be estimated by the level of the informal credit (private loan) market (Lu and Yao 2004). In the last decades, the underestimated interest rate subsidized investors and producers in China (Xu 2013). Particularly, the inflation rate became rather high in the last decade; more and more depositors realized that they would be suffering losses if they kept savings in the banks. Therefore, more and more Chinese depositors preferred to accept wealth management products from the banks as an alternative (Yin and Wang 2013).

Credit rationing, or credit discrimination, is also quite common in China. The State-owned banks (SOBs) prefer to provide loans for the State-owned enterprises (SOEs) or their related enterprises, so it is quite hard for the private sector in China to obtain a loan via the formal bank system (Lu and Yao 2004). However, the private sector is usually more efficient and more active in China, thus requiring the financial support from non-banking institutions such as the shadow banking system (Xu 2013).

Besides financial regulation, economic policy also affected the flow of credit, as the SOBs could reduce loans for the industries disliked by the government. As housing prices rose dramatically in 2009 (see Figure 8.1), causing housing to be more and more unaffordable for ordinary citizens, the Chinese government was under pressure to regulate housing prices. One instrument adopted to control the housing price was a restriction of the loans to the real estate industry in order to avoid over-investment. However, the demand for capital in the real estate industry reached RMB 8.6 trillion in 2013.[14] Therefore, on the one hand, many developers were offered a very high interest for funds, while on the other hand, many banks preferred to provide capital for the developers via the cooperation from trust and security companies (such as REITs).

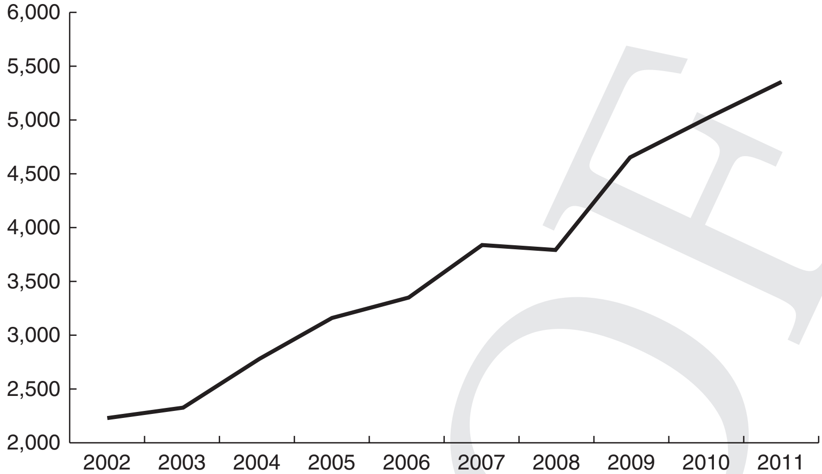

Figure 8.1 Average housing sales price (RMB/m^2)

(Source: NBS.)

Note: the National Bureau of Statistics (NBS) changed its statistical approach in 2011, thus data after 2011 cannot be equally compared to earlier data.

Therefore, the unbalanced economic structure and the harsh regulation on banks could be regarded as a very important factor for the development of Chinese shadow banking. Furthermore, the increased liquidity that flowed into the Chinese financial markets during the past five years must also be regarded as an important factor in the rapid expansion of shadow banking in China. The fast increase in liquidity in China is also connected to the boom of shadow banking. According to data from the People's Bank of China (PBOC), M2 supply increased from RMB49.6 trillion to RMB107 trillion since 2009, namely, the M2 increased more than 115 per cent in the last five years in China (see Figure 8.2).[15]

There are several factors to explain the increased liquidity. First, since 2009 the Chinese government adopted a huge package of economic stimulus to avoid the stagnation due to the financial crisis in the US. The central government claimed to invest RMB4 trillion to stimulate the economy, however the central government planned to invest RMB1.18 trillion while the local governments were also required to invest the remaining RMB2.82 trillion. In order to collect funds the local governments explored the urban development investment vehicle (UDIV) loans; the local government debt reached RMB 10.7 trillion, which increased around 60 per cent in 2009 due to the expenditure from the economic stimulus.[16]

The financial sector developed rapidly due to the stimulation policies, as demonstrated by the data of China Banking Regulation Commission

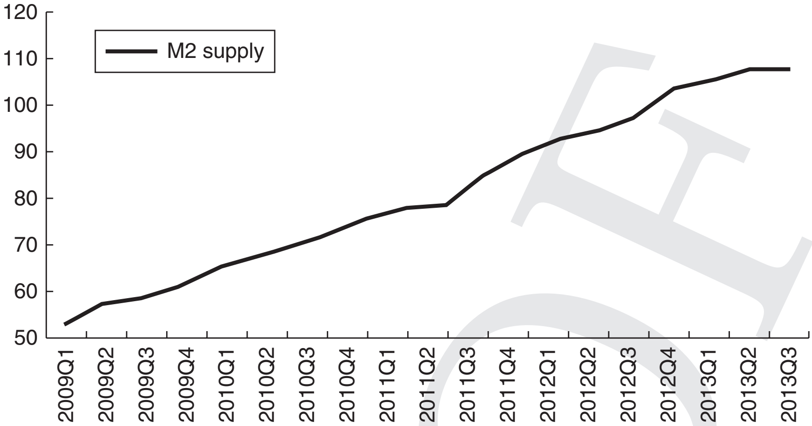

Figure 8.2 M2 supply in China (RMB trillion)

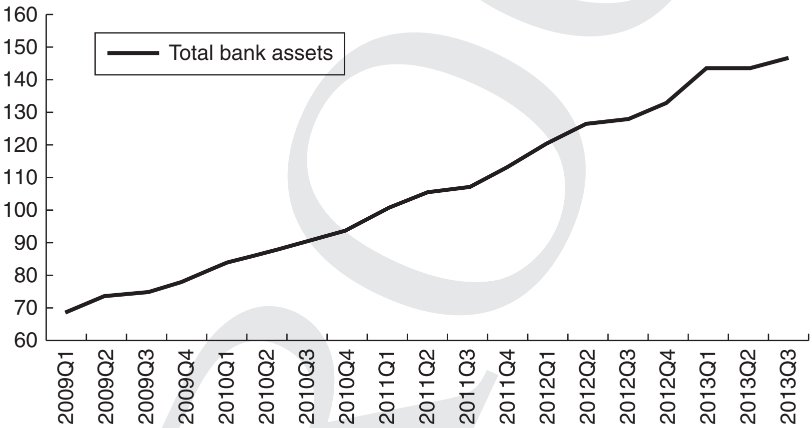

Figure 8.3 Total bank assets of China 2009–13 (RMB trillion)
(Source: CBRC.)

(CBRC). Since 2009 the bank assets have increased almost 111 per cent due to the stimulus (see Figure 8.3).

The liquidity in China could also be connected to the influx of capital from abroad. The exchange rate of the RMB became a debated issue, because some other countries accused China of manipulating the exchange rate in order to undervalue the RMB and maintaining the competitiveness of Chinese products and services. Foreign currency reserves increased from US$1.91 trillion to US$3.66 trillion since 2009 (see Figure 8.4); because the quantitative easing (QE) policy of the Federal Reserve created plenty of liquidity in the US,

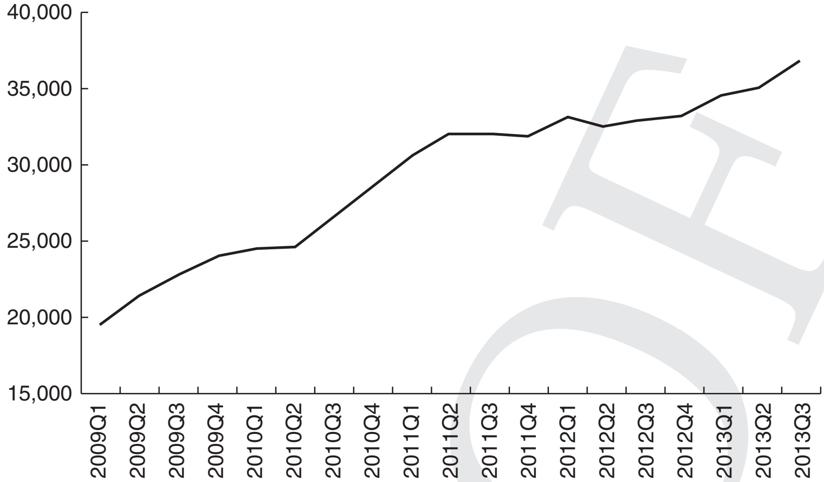

Figure 8.4 Foreign currency reserve 2009–13 (US$100 million)
(Source: PBOC.)

a huge sum of "hot money" from the US flowed into China "in order to earn a short-term profit on interest rate differences and/or anticipated exchange rate shifts" (Martin and Morrison 2008: 1) via the undervalued RMB, higher interest rate and booming property price in China.[17]

Although it is quite obvious that there is excessive liquidity in China due to the monetary policy and influx of capital, it is doubtful whether this money flowed into the real economy. Because of the distorted financial system, SOBs are closely connected to the local government and SOEs. Most loans have been provided to the local government and SOEs and a large proportion of the funds have been invested into infrastructure, which is a policy favored by the local governments.[18] Many of the actual new loans made available by the banks have been directed only at politically favoured projects, mostly infrastructure projects, as well as real estate companies.[19] Moreover, the traditional banking system preferred off-balance-sheet financing to move funds for a higher return and avoid the harsh regulation. In the meantime, many private enterprises are unable to satisfy their capital needs from the formal banking sector; many of these companies have been increasingly turning toward the informal market for private loans, which also increased the demand for shadow banking.[20]

Shadow banking caused more concerns in China due to the credit crunch in the middle of 2013, as it hit the Chinese financial market in June 2013. Because of the shortage of funds, banks increased the interbank rate and overnight the interbank loan rate reached 13.7 per cent on 17 June 2013 (see Figure 8.5), which shocked the PBOC and clearly showed us that although there may be an excess liquidity, a large proportion of this liquidity is coming from outside

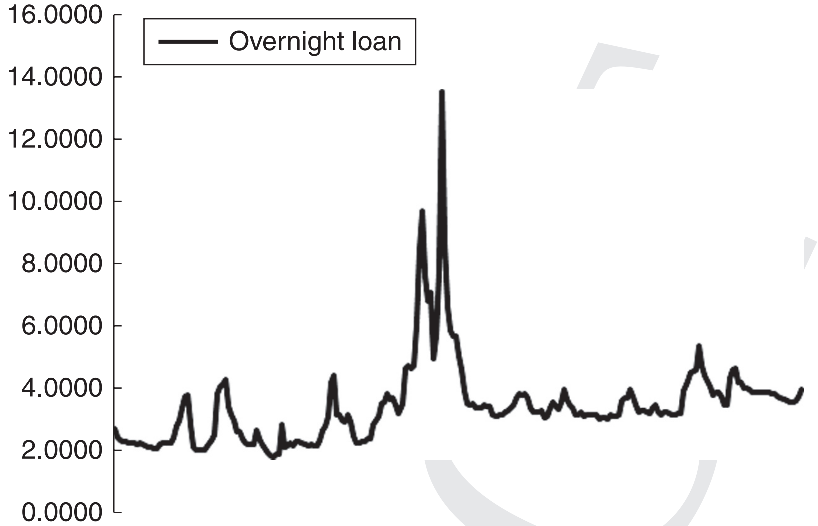

Figure 8.5 Interest rate of overnight interbank loan
(Source: Shibor.)

of the traditional banking system. Furthermore, the credit crunch also demonstrated that the mismatch of the Chinese credit market is quite severe, as Chinese banks and shadow banking are dependent on short-term funding, but the investments funded by them are often long term, such as infrastructure. As reminded by Bernanke, the mismatch was a factor that triggered the financial crisis, such as the insolvency of Bear Stearns (Bernanke 2009).

To sum up, I believe that the boom of shadow banking in China could be attributed to over-regulation and to the existence of excess liquidity. The existence of the shadow banking system in China must be viewed from two sides: on the one hand it satisfies the demand from many private enterprises and investors via the financial deepening process in China, but on the other hand it also aggregates risks outside the supervision of the regulators.

8.5 Monitoring the shadow banking system

8.5.1 The international experiences

It is commonly agreed that the shadow banking system was weakly regulated before the financial crisis, therefore efforts were made in order to monitor, and regulate such systems (Bernanke 2009, 2010, 2012; Gorton *et al.* 2010; Schwarcz 2012). Since the public regulators were under criticism for failing to oversee the risks in the shadow banking system after the crisis, they started to reform after the crisis in order to enable the regulatory regimes to be capable of monitoring shadow banking.

As a result of the crisis, the US drafted the Dodd-Frank Act in order to protect financial consumers, which entered into force in 2010.[21] Dodd-Frank is mentioned as the most important reform of the financial regulatory regime after the depression era. The core reforms adopted by the US after the Act can be summarized as follows: the consolidation of regulatory agencies, the elimination of the national thrift charter and a new oversight council to evaluate systemic risks, comprehensive regulation of financial markets including increased transparency of derivatives (bringing them onto exchanges), consumer protection reforms including a new consumer protection agency and uniform standards for 'plain vanilla' products (as well as a strengthened investor protection),[22] tools for financial crises (including a 'resolution regime' complementing the existing Federal Deposit Insurance Corporation (FDIC) authority to allow for orderly winding down of bankrupted firms and including a proposal that the Federal Reserve receive authorization from the Treasury for extensions of credit in "unusual and exigent circumstances"), various measures aimed at increasing international standards and cooperation (including proposals related to improved accounting and tightened regulation of credit rating agencies). Furthermore, a new regulator, the Financial Stability Oversight Council (FSOC), was also created by the Act in order to enforce it.[23]

As the impact of the crisis was felt worldwide and the risk caused by shadow banking is beyond the boundaries of countries, an international framework to monitor the risk was also required. The Basel III Accord was drafted and several rules on monitoring shadow banking were provided in that Accord. Therefore, the G20 required a new organ of the FSB to be created in order to monitor the (systemic) risk worldwide; a special Standing Committee on the Assessment of Vulnerabilities (SCAV) was also established in order to evaluate the risk.

8.5.2 The regulatory regime and practice in China

Shadow banking is also developing rapidly in China and therefore there is a need to oversee it. However, the regulatory regime in China consists of an institutional approach that was challenged by the problems arising from shadow banking.[24]

Under the present framework of the Chinese regulatory regime, the regulators carry out their tasks according to the functions they are assigned, although most jurisdictions have reformed in order to move toward an integrated approach or a twin peaks approach in the last decades (Group of Thirty 2008).[25]

Before the early 1990s, all financial supervision was carried out by the PBOC. Through several reforms in the last 20 years, China has moved to an institutional approach as the banking, securities and insurances sectors are supervised by different agencies. While most jurisdictions that have implemented reforms in the past 25 years have tended to move toward an integrated approach or a twin peaks approach, China did not. Under the previous regulatory structure, all financial supervision was consolidated within the PBOC, China's central bank. Through a series of reforms over the past 25 years, China has moved to an institutional approach, where the banking, securities and insurance sectors are supervised by separate agencies. In 1998, the China Securities Regulatory Commission (CSRC) has been formed as the agency to regulate the securities and futures sector. In the same year, the China Insurance Regulatory Commission (CIRC) was established to oversee the insurance industry. In 2003, the China Banking Regulatory Commission (CBRC) was founded and it has been conferred the power, most of which was transferred from the PBOC, to supervise the banking sector under the present framework. Banks, financial asset management companies, trusts, investment companies and other depositary financial institutions are regulated by the CBRC. In the meantime, the PBOC is concentrating on formulating and implementing monetary policies and ensuring current financial stability. Under the present regime, although the CBRC is responsible for regulating the banking sector, there are still some entities in the informal financial sector, such as pawn shops, financing guarantee institutions, micro-finance companies, etc, which need approval by local governments and these unregulated entities (informal banks) are occasionally surveyed or investigated by the PBOC (Group of Thirty 2008).

In the past five years, due to the rapidly developing financial market, the institutional approach has been facing a challenge as it is rigid and fragmentary when the financial services are more and more integrated and previous boundaries between traditional banking, securities and insurances have become blurred. Banks and other institutions are providing services outside their traditional area via certain forms. The independent regulators confronted more difficulties, because a complicated financial activity can involve many firms from different financial departments, and a firm may provide different types of financial services, such as credit, insurance, trust, securities, etc. Such conditions increased the pressure on supervisors to coordinate before acting.

The regulation of shadow banking is posing a typical challenge for the institutional approach. The regulatory policies applied to shadow banking and the responsibilities of the regulators need to be clarified. Interagency coordination – backed by memoranda of understanding for information sharing – needs to be strengthened to prevent episodes of building up systemic risks via cross-market financial products or activities.

Under the present regime, the CBRC is regarded as the major authority that must regulate shadow banking in China and since 2009 the CBRC has published several directives in order to strengthen the monitoring of shadow banking in China, concentrating on the off-sheet financing and the wealth management products of Chinese banks.[26] However, it is difficult to assess whether such regulations have achieved a positive outcome, because the shadow banking activities are quite flexible and the enforcement regime of the regulators has always been fairly weak in China. Moreover, the current regulation by the CBRC does not provide any special framework to protect the investors of the shadow banking activities; such an arrangement will leave the Chinese investors in an unfavorable position.

In summary, striving for an effective oversight of shadow banking is a global goal, but the regulatory regime in China is confronted with increasing difficulties in monitoring its shadow banking system. Although the CBRC issued several directives to enhance the supervision on shadow banking, details on the enforcement of these directives have not been disclosed. However, the enforcement of law (law in action) is more important than law on the books (Pistor 2000). Moreover, the investor protection rules are still weak under the present regime, as the judicial remedies for the Chinese investors are ranked among the worst in the world (Brockman and Chung 2003).

8.6 Conclusions

Shadow banking must be regarded as a coin with two sides: it can increase the efficiency of the financial system and boost economic development, but at the same time it also aggregates risks to the financial system, and these risks caused by shadow banking are often overlooked. The principle for regulating shadow banking shall be maximizing economic efficiency and minimizing systemic risks (Schwarcz 2012). Considering the repressed financial system and distorted economy in China (Xu 2013), I believe that the boom of shadow banking must be regarded as a market response to the financial repression and unbalanced economic structure and it can alleviate the financial repression by providing more market-oriented services. A recent example is that of an Alipay MMMF called Yu'E Bao, which is comparable to the PayPal MMMF in the US. It grew from 0 to more than US$40 billion in a period of only eight months (from June 2013 to February 2014), because the annualized return of the Alipay MMMF is around 6 per cent. This annualized return rate is much higher than the interest rate fixed by the Chinese government; therefore about 81 million people have invested their money into Yu'e Bao.[27] The emergence of Yu'E Bao illustrates how shadow banking (for example in the form of MMMFs) can provide an alternative for investors seeking high market returns from their investment. Gary Gorton (2010) also pointed out that MMMFs expanded quite rapidly when the Regulation Q was enforced in the US, and Gorton believes that MMMFs must be regarded as a market power that forced the US government to abolish interest regulation.

However, shadow banking also increased the risks in the presently distorted financial system by, for example giving the local government the ability to obtain excessive loans. Moreover, Gennaioli *et al.* (2013) found that the shadow banking system could be extremely fragile as the securitization facilitates risk-taking levels. Therefore, the shadow banking system must be supervised in order to oversee the risks, to increase transparency of the shadow banking system and to provide better investor protection, which are all vital for the regulation of shadow banking.

Notes

1 Bernanke (2009, 2010, 2012), Gorton (2010) and Schwarzc (2012) explain the connection between shadow banking and the crisis.
2 The FSB was founded in response to the global financial crisis 2008. In 2009 the Group of Twenty (G20) Finance Ministers and Central Bank Governors created the FSB as a successor to the Financial Stability Forum (FSF). More information on the FSB is available at: https://www.financialstabilityboard.org/ (accessed 18 May 2014).
3 President Obama signed the Dodd-Frank Act in 2010, and the FSB established the SCAV in order to assess financial risks, especially in the shadow banking system.
4 Paul McCulley "coined the term 'shadow banking system' in August 2007 at the Fed's Annual Symposium in Jackson Hole". See McCulley, *The Shadow Banking System and Hyman Minsky's Economic Journey*, available at: http://media.pimco.com/Documents/GCB%20Focus%20May%2009.pdf (accessed 18 May 2014).
5 Paul McCulley, 'Comments Before the Money Marketeers Club: Playing Solitaire with a Deck of 51, with Number 52 on Offer', available at: http://web.archive.org/web/20100206185224/http://www.pimco.com/LeftNav/Featured+Market+Commentary/FF/2009/Global+Central+Bank+Focus+April+2009+Money+Marketeers+Solitaire+McCulley.htm (accessed 18 May 2014).
6 See Shleifer's comments, in the section of his paper entitled 'Comment and discussion'.
7 Bernanke (2009, 2010, 2012), Gorton (2010) and Schwarzc (2012) all argue that the regulation of shadow banking is weak.
8 Wealth management services offered by Chinese commercial banks have expanded a lot over the last decade. These services are different from the traditional deposit and loan services provided by these banks.
9 Regulation Q was introduced in the 1960s, and imposed an interest-rate ceiling on commercial banks. It was attacked by many economic scholars as it distorted the loan market. See Friedman (1975).
10 The OFI data were used as a proxy to evaluate the size of shadow banking by the FSB, (although the size of shadow banking shall be narrower than OFI).
11 There were plenty of reports on this issue, see: 'What Caused China's Cash Crunch?', available at: http://www.economist.com/blogs/economist-explains/2013/07/economist-explains-2 (accessed 18 May 2014); 'The Chinese Cash Crunch Is No Surprise', available at: http://online.wsj.com/news/articles/SB10001424127887324637504578562892161598164 (accessed 18 May 2014); 'China Gambles That A Credit Crunch Can Rein In Shadow Banking', available at: http://www.forbes.com/sites/afontevecchia/2013/06/24/china-is-right-to-use-liquidity-crunch-to-target-shadow-banking-but-leverage-raises-risks/ (accessed 18 May 2014).
12 Data is available at: http://roll.sohu.com/20121121/n358243265.shtml (accessed 18 May 2014).
13 Estimated by CSC, see Wei *et al.* (2013).
14 Data source: National Bureau of Statistics of the PRC, available at: http://data.stats.gov.cn/normalpg?src=/lastestpub/quickSearch/m/mgd09.html&h=800 (accessed 18 May 2014).
15 According to the World Bank, "money and quasi money comprise the sum of currency outside banks, demand deposits other than those of the central government, and the time, savings, and foreign currency deposits of resident sectors other than the central government. This definition of money supply is frequently called M2", available at: http://data.worldbank.org/indicator/FM.LBL.MQMY.CN (accessed 18 May 2014).
16 Available at: http://www.audit.gov.cn/n1992130/n1992150/n1992500/2752208.html (accessed 18 May 2014).

17 According to GFI, since 2006 over US$400 billion has poured into China outside the official channels, with inflows in the first quarter of 2013 alone topping US$50 billion. See http://www.economist.com/news/finance-and-economics/21594345-despite-strict-currency-controls-money-finding-its-way-china-hot-and (accessed 18 May 2014).
18 Capital Group, *Shadow Banking in China 2013*, available at: https://server.capgroup.com/capgroup/action/getContent/file/GIG/North_America/Market_Insights/Capitals_Views/II_07_2013_Shadow_Banking_in_China.pdf (accessed 18 May 2014).
19 *The Rising Mismatch In Chinese Credit Markets*, available at: http://www.businessinsider.com/the-rising-mismatch-in-chinese-credit-markets-2011–8 (accessed 18 May 2014).
20 Ibid.
21 The text of the Dodd-Frank Act is available at: http://www.cftc.gov/ucm/groups/public/@swaps/documents/file/hr4173_enrolledbill.pdf (accessed 18 May 2014).
22 'Plain vanilla' refers to the basic standard form of a financial instrument, as the US Department of the Treasury appealed that they "propose that the regulator be authorized to define standards for 'plain vanilla' products that are simpler and have straightforward pricing."
23 *Financial Regulatory Reform*, available at: http://www.treasury.gov/initiatives/Documents/FinalReport_web.pdf (accessed 18 May 2014).
24 An 'institutional approach' to financial regulation implies that the rules and regulators are established separately according to the institutional type, for example the CSRC is the regulator for securities, the CBRC is the regulator for banks, the CIRC is the regulator for insurance.
25 An 'integrated approach' of financial regulation implies that all financial regulation is concentrated in a single agency. The 'twin peaks' approach was adopted in the UK in 2012, and means that deposit takers, insurers and major investment firms will have two groups of supervisors, one focusing on prudential regulation (the Prudential Regulatory Authority (PRA)) and one focusing on conduct regulation (the Financial Conduct Authority (FCA)). More details of the twin peaks approach can be found in: *Twin-Peaks Regulation: Key Changes and Challenges* (KPMG 2012), available at: http://www.kpmg.com/UK/en/IssuesAndInsights/ArticlesPublications/Documents/PDF/Advisory/twin-peaks-brochure.pdf (accessed 18 May 2014).
26 The most important directive by the CBRC on the regulation of shadow banking is the Notification of the China Banking Regulatory Commission on Relevant Issues concerning Regulating the Investment Operation of Wealth Management Business of Commercial Banks, which was issued in March 2013. It sets restrictions on the range of assets in which wealth management products can invest, and put limits on the cooperation between banks and securities companies as well. The text of the Notification (in Chinese only) is available at: http://www.cbrc.gov.cn/govView_2B22741AFBC446CF890636DACAB71166.html (accessed 18 May 2014).
27 Available at: http://www.nytimes.com/2014/03/03/business/international/web-banks-offering-high-interest-rates-rise-in-china.html?hpw&rref=business&_r=0 (accessed 18 May 2014).

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