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Chinese banks - risks and challenges

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Piet Buitelaar

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Author
Piet Buitelaar

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1. Introduction

The Chinese banking sector has been in a state of flux in recent years. This stems from China's economic reform process and the continued strong economic growth the country has witnessed over the past few decades. At the turn of the century, the Chinese banking sector was technically bankrupt. Vast capital transfers from the government to the banks were necessary to carry out extensive recapitalisation and restructuring. According to official figures, this exercise restored the banks, the majority of which are state-owned, to a strong capital position.

The Chinese banking sector is highly regulated. As a consequence, a shadow banking sector has developed and this is growing. These institutions are less regulated than official banks and thus constitute a risk, not least because of their interconnectedness with the regular banking system. The risks are further exacerbated by the fact that shadow banks extend loans to the real estate sector. Soaring house prices in recent years have raised concerns about a possible property bubble, with the attendant danger of sharp price falls. Any such bubble would pose a risk for the banks.

Infrastructure construction in China is largely carried out by the provinces and cities. Local authorities have set up special vehicles that take out loans with banks to finance infrastructure projects. Some of these projects have proved unprofitable, which resulted in banks keeping non-performing loans on their books. As provinces and cities still finance their investments through bank credit, the fact that some of these projects are unprofitable constitutes a risk for banks.

Overall, the principal risks faced by Chinese banks stem from the shadow banking sector, the housing market and the quality of bank loans to local authorities. These parts of the economy are closely connected with each other, which creates an extra risk. The above developments raise fears of the Chinese banking sector being less robust and more exposed to risks than their favourable key financial data suggest.

The study is organised as follows. Section 2 gives a brief overview of the Chinese banking industry and takes a closer look at the capital position of banks. Section 3 covers China's shadow banking sector and the related risks for banks and for financial stability. Next, Section 4 deals with the housing market and the risks for banks. Section 5 sets out how local authorities finance their investments and highlights the resulting risks for banks. Section 6 provides an overall assessment of the risks. Section 7 provides a summary and concluding remarks. This study deals with the economic and financial developments in mainland China. Therefore, the developments in Hong Kong are outside the scope of this study.

2. The Chinese banking sector

2.1 Characteristics

Virtually the entire banking sector in China is state-controlled, with the China Banking Regulatory Commission (CBRC) acting as supervisor. Table 1 provides a breakdown of China's banks and their share of total banking assets.

Within the group of commercial banks, the five large commercial state-owned banks (known as the 'big five') are the most important, jointly accounting for almost half of China's banking assets. These banks comprise the core of China's financial system:
- Industrial and Commercial Bank of China
- China Construction Bank
- Bank of China
- Agricultural Bank of China
- Bank of Communications

Table 1 Breakdown of China's banks and their share of total banking assets, 2012 year-end

	% assets	
Commercial banks	78.2	
Big five		*44.9*
Joint-stock commercial banks		*17.6*
City commercial banks		*9.2*
Rural commercial banks		*4.7*
Foreign banks		*1.8*
Policy banks and CDB [a]	8.4	
Rural credit cooperatives	6.0	
Other	7.4	
Total	**100.0**	

[a] CDB: China Development Bank
Source: China Banking Regulatory Commission (2013)

From a global perspective, they are large banks. On The Banker's list of the 1000 largest banks in the world measured by the volume of Tier-1 capital, *Industrial and Commercial Bank of China* (ICBC) is ranked first, *China Construction Bank* fifth and *Bank of China* ninth.[1] They operate predominantly in the domestic market and have only a small number of branches outside China: ICBC has 39 and Bank of China 36. The former has a Dutch branch in Amsterdam, the latter has a Rotterdam branch.

The group of joint-stock commercial banks consists of 12 medium-sized commercial banks, including *China CITIC Bank*, *China Merchants Bank* and *China Minsheng Banking Corporation*. These take 47th, 50th and 54th place on The Banker's list, respectively, with the last being the only private bank of any size in China. The 144 city commercial banks operate in urban agglomerations and maintain strong ties with city authorities. Examples are *Bank of Shanghai* and *Bank of Beijing*. The latter has a Dutch branch in Amsterdam. ING holds 13.6% of the shares in Bank of Beijing, which gives it a platform for selling insurance and investment products in China. The over 300 Rural commercial banks mainly focus on lending in rural areas.

The over 400 foreign banks active in China account for 1.8% of China's bank assets. Foreign financial institutions are allowed to have holdings in Chinese banks, provided the combined foreign stake remains below 25% of the Chinese bank's share capital, with individual foreign banks allowed to have holdings of less than 20%.

The three so-called policy banks are each dedicated to a specific sector or economic activity. The *Export-Import Bank of China* provides trade finance, *Agricultural Development Bank of China* engages in agricultural finance. One bank with a special position in China is *China Development Bank* (CDB). Its task is to finance a large part of China's infrastructure, including such mega-projects as the Three Gorges Dam and the facilities for the 2008 Olympic Games. In addition, CDB finances Chinese companies that invest in mining projects and infrastructure in Africa and Latin America.[2] CDB does not accept savings deposits, is not listed on a stock exchange and raises funding by issuing bonds.

2.2 Banking supervision[3]

The four main financial regulatory agencies in China and their scope of authority are as follows:

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1 For comparison: ING Bank rank 26th, Rabobank 27th.
2 For aspects concerning China's investments in Africa, see Van Dijk (2009), Allard (2012) and De Haan (2012).
3 This section draws on Wang (2013), Fiechter & Narain (2013), CBRC (2013) and Barth et al. (2007).

- People's Bank of China: the central bank which is charged with the task of developing and implementing monetary policy and maintaining financial stability
- China Banking Regulatory Commission (CBRC): supervises banks and is the prudential regulator of banks, as well as non-banking lending institutions
- China Securities Regulatory Commission, which supervises and regulates the securities and futures markets
- China Insurance Regulatory Commission: supervisor and regulator of the insurance industry.

These agencies, together with the Ministry of Finance and a range of other agencies, comprise the State Council, which is the key decision-making body with responsibility for overall financial and economic policy and related legal and institutional issues.

In 2003, the banking regulatory function was moved from the People's Bank of China and entrusted to a new agency, the CBRC. The Banking Supervisory Law of 2003 authorizes CBRC to establish, change and terminate banking institutions and enables CBRC to approve or revoke banking licenses and to dismiss directors. Under this law, the implementation of prudential practices in accordance with international standards are set as key tasks for the CBRC. Since then, CBRC has increasingly paid attention to the introduction of international standards and practices. As a member of the Financial Stability Board and the Basel Committee on Banking Supervision, CBRC has been a participant in the international consultations concerning financial regulatory reform and new standard-setting.

CBRC attaches great importance to improving the corporate governance, internal controls and compensation practices of large banks because this is considered as an important backstop to effective supervision. Banks are encouraged to improve their risk management systems. CBRC has introduced a range of prudential measures, including more stringent credit risk management of loans made to local governments and real estate. In relation to the strengthening of the supervision of real estate lenders, CBRC has specified the level of down payment which banks should require when extending mortgage loans to households. Banks are required to implement stress testing to assess the impact of price declines and macroeconomic changes on the quality of banks' real estate loan portfolios. CBRC is also authorized to regulate and supervise non-bank financial institutions such as trust companies and financial leasing companies. It pays close attention to these 'shadow banking' activities, including off-balance sheet activities of commercial banks, and requires these companies holding adequate buffers against the risks involved.

CBRC is also involved in China's government policy to regulate and support key areas of the economy. The agency provides explicit guidance to domestic banks on targets for lending to priority sectors. In 2012, the agency adjusted its supervisory policy to facilitate agricultural-related and environmentally friendly economic activities. In line with the government's policy to increase household consumption, CBRC guided lending in favour of the purchase of consumer durables. CBRC guided banks in channeling credit to medium and small enterprises and in setting up units specialized in lending and providing financial services to these enterprises (CBRC, 2013).

2.3 Capital position

Around the turn of the century, the Chinese banks were extremely weak. This was due to a large portfolio of bad loans, resulting from their obligation to extend credit to state-owned companies, many of which were unprofitable. A quarter of their credit portfolio consisted of non-performing loans.[4] Within a decade, the large banks were recapitalised and restructured through government capital transfers. They were also listed on the stock exchange. The recapitalisation of Agricultural Bank of China in 2010 marked the completion of this process.

Table 2 shows several indicators for the capital position of the big five. With a return on equity (ROE) of around 20%, they enjoy robust profitability. The Chinese

4 People's Bank of China (2013b); Borst (2013); Hope & Hu (2006).

Table 2 Financial indicators of the five large commercial Chinese banks, 2012 year-end

	ROE (%)	CAR (%)	COR (%)	NPL ratio (%)	NPL coverage ratio (%)	International ranking (Tier 1 capital volume)
Industrial and Commercial Bank of China	23.0	13.7	10.6	0.9	296	1
China Construction Bank	22.0	14.3	11.3	1.0	271	5
Bank of China	18.1	13.6	10.5	1.0	236	9
Agricultural Bank of China	20.7	12.6	9.7	1.3	326	10
Bank of Communications	17.9	14.1	11.2	0.9	251	23
All commercial banks	19.8	13.3	10.6	1.0	296	

Source: The Banker (2013), China Banking Regulatory Commission (2013) and annual reports of the banks.
Explanation: ROE: return on average equity, CAR: Basel-II capital adequacy ratio, COR: core capital adequacy ratio; NPL ratio: non-performing loans as % of the total loans, NPL coverage ratio: provision for NPL as % of NPL.

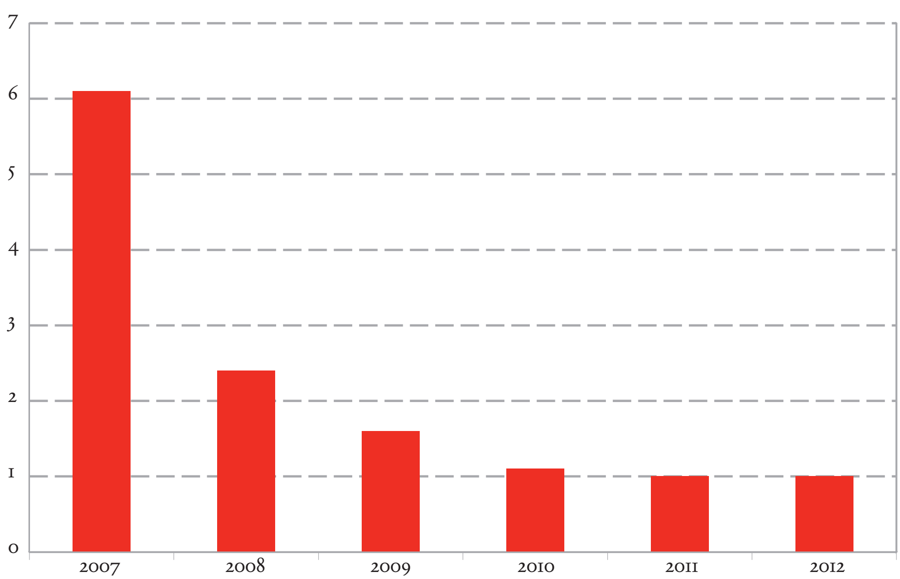
government sets the *maximum* interest rate banks may pay on savings deposits and – until mid-2013 – the *minimum* lending interest rate they must charge on loans (see below). This policy has enabled banks to generate high returns. According to Table 2, the Chinese banks comfortably meet the minimum BIS capital adequacy ratio (CAR) of 8%. The non-performing loans ratio (NPL ratio) of about 1% has improved strongly compared with several years ago (Chart 1).

The lower NPL ratio is partly attributable to bank restructurings, resulting in a decline in the amount of bad loans. Another factor is the strong growth in lending (denominator effect). The current NPL ratio of the Chinese banks is internationally low.[5] Whilst the overall bad loans ratio of Chinese banks is 1%, the percentages vary considerably from sector to sector, *viz*. 1.4% for manufacturing, 0.7% for real estate, 0.6% for construction and 0.3% for residential mortgages. The remarkably low figure for residential mortgages is due to stricter supervision in recent years. As home buyers are required to make a down payment of 30% on their mortgage, Chinese households are less heavily indebted than in many western countries.

5 The NPL ratio was 3.2% (year-end 2013) at Dutch banks, 2.9% in Germany (2012), 8.2% in Spain (2013) and 15.1% in Italy (2013), World Bank (2014).

Chart 1 Non-performing loans of Chinese commercial banks

Percentage of total loans



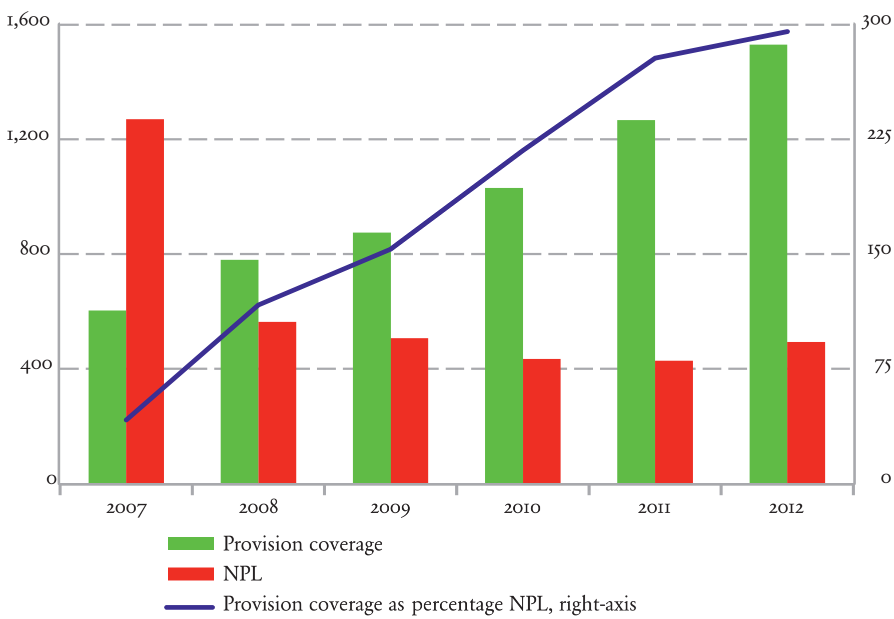
Source: China Banking Regulatory Commission (2013).

The banking supervisor requires banks to maintain high provisions for their non-performing loans. In 2007, provisions for non-performing loans were only 40% of the outstanding amount (Chart 2). Thanks to bank recapitalisations and restructurings, the amount of bad loans has declined significantly, while the provisions have been raised. As a result, provisions for non-performing loans are now almost three times greater than the outstanding amount of such loans.

Traditionally, China has regulated bank interest rates by setting a cap on the interest rate banks can offer on savings deposits and a floor for the lending rate they charge. By about mid-2012, the central bank gave banks more leeway in setting interest rates. On the lending side, the floor was lowered to 70% of the benchmark lending rate set by the central bank. On 20 July 2013, the central bank scrapped the lending rate floor, although the mortgage rate floor remained intact. However, the cap on deposit rates was maintained at the same level. The practical effect of the removal of the lending rate floor is limited because only a tenth of loans are issued below the benchmark rate. But this removal of the floor is as an important symbolic move,

Chart 2 Provision coverage of non-performing loans (NPL)

Billion renminbi, percentage NPL respectively



Source: China Banking Regulatory Commission (2013).

signalling the intention of the Chinese government to press ahead with interest rate liberalisation.

Abolishment of the deposit rate cap would be a key policy change. Chinese savers have few opportunities to invest their savings outside the banking system, resulting in high bank saving deposits. Owing to the deposit rate cap, banks have a low-cost source of funding, enabling them to lend to the big state-owned companies at a low interest rate, thus fuelling investment. Completing interest rate liberalisation by removing the deposit rate cap would raise interest rates on savings deposits, thus lowering banks' interest margins and putting banks at risk. At the same time, a higher interest rate would force state-owned companies to pay a higher interest rate on their loans, which would improve the allocation of investment and increase efficiency.

A smaller interest spread and more competition would lower banks' profits and encourage them to improve their risk management and develop new products and activities. What's more, some investment in shadow banking products would flow back to core banking (see Section 3 below). Once banks are strong enough, the deposit rate cap is likely to be removed. At the Third Plenum of the 18^{th} Central Committee of the Communist Party in November 2013, it was decided that a move towards interest rate liberalisation would be accelerated and that a deposit guarantee scheme would be introduced. Up to now, Chinese depositors rely on an implicit government guarantee. Interest rate liberalisation and a deposit guarantee scheme are key to the development of China's domestic financial sector.

2.3 Risks

Chinese banks are highly profitable and their capital position meets international standards, at least in numerical terms. But the risks stemming from real estate, shadow banking and the quality of bank loans to provinces and cities are rising. These risks originate partly from China's still underdeveloped and highly regulated financial sector. Banks report low NPL ratios, a strong capital position and high profitability. But future problems cannot be ruled out. This study identifies a number of risks Chinese banks currently face. More specifically, we see three macro prudential risks for the Chinese banking sector: shadow banking, the real estate market and local authorities' financing of infrastructure. By implication, the risks in the Chinese banking sector are greater than the sector's favourable financial key data suggest.

3. Shadow banking in China

3.1 Introduction

Shadow banking concerns credit intermediation *outside* the official banking sector.[6] In recent years, Chinese shadow banking has grown rapidly. The reason is that large state-owned banks mainly lend to large state-owned companies. They consider loans to small and medium-sized enterprises (SMEs) and companies that are active in the real estate sector as too risky. As long as the banks are able to finance low-risk, high-profit projects of local authorities and the central government, there is no reason for them to finance higher-risk SMEs. As a consequence, SMEs are forced to turn to shadow banks for their financing. The central bank's restrictive monetary policy in 2011 was a further reason for smaller enterprises to seek finance in the non-bank sector. The information about China's shadow banking sector is fragmented and numerical data are scarce. Some of the information is anecdotal and comes from press releases. There is information about some segments of the shadow banking system, *viz.* trust companies, small lending companies and the informal lending circuit. They are dealt with below. Other than these players, there are also finance companies owned or controlled by large state-owned enterprises, consumer finance companies and lease companies. However, due to a lack of information, they are outside the scope of this study. A distinctive feature of shadow banking is that it has grown more rapidly than the regular banking sector in recent years.

3.2 Trust companies

Trust companies extend loans to enterprises and institutions with a high risk profile that have difficulty obtaining loans from banks. These include real estate companies, property developers, local government authorities carrying out infrastructure projects and private SMEs. They pay a higher interest rate to trust companies than to state-owned banks. In addition, trust companies invest a limited amount in securities, among others. Wealthy individuals, institutional investors and state-owned companies provide funds to trust companies in return for a higher interest rate than is offered by state-owned banks. Part of this funding

6 For general aspects of the shadow banking sector, see Financial Stability Board (2013), European Central Bank (2012), Broos et al. (2012) and Adrian (2014).

is provided via Wealth Management Products that are issued by trust companies (see below). Some large state-owned companies take out loans at state-controlled banks at a low interest rate and then relend this money to trust companies at a higher interest rate. China has 67 registered trust companies (KPMG, 2012). They are under the supervision of banking supervisor CBRC. This supervision is less thorough than that of regular banks. In the third quarter of 2013, trust companies had assets under management totalling 10,900 billion renminbi, corresponding with € 1,300 billion and 19% of GDP: a 46% increase compared with a year earlier (China Trustee Association, 2014). Anecdotal information suggests that trust companies aggressively approach potential providers of funding and tend to conceal the risks. CBRC has tightened up its supervision over trust companies and has laid down regulations governing the mutual relations and interconnectedness of banks and trust companies.[7] To prevent financial problems at trust companies from damaging banks, banks are not allowed to extend loans to trust companies. Nevertheless, this still takes place through all sorts of vehicles and arrangements.[8] To prevent banks from being infected by trust companies and other shadow banks, the authorities are actively seeking to enforce strict separation between the two, partly through the implementation of 'firewalls'.[9] Policy is being developed for this purpose.

3.3 Small lending companies and the informal lending circuit

The so-called *Small Lending Companies* operate on a smaller scale and are funded by money from wealthy individuals. These companies lend money for periods ranging from a few days to a few months and at interest rates that can be as high as 20%. This concerns loans up to a maximum of several million euros. These companies are legal and come under the supervision of the city government. Their focus is on rapid growth rather than on risk management. At the end of 2012, over 6,000 Small Lending Companies were active. Their outstanding loans totalled 592 billion renminbi, which represents 1% of GDP (People's Bank of China, 2013b).

A third segment of the shadow banking system consists of the unregistered *informal lending circuit*. This concerns loans to smaller companies and individuals for investments or working capital. This type of lending is based on trust, personal contacts and relatives and is widespread in China. There is no collateral, no checking of track records and account-keeping is rudimentary. This is the least transparent part of the Chinese shadow banking system and supervision is non-existent. In view of the greater risks, the borrowers pay higher interest rates, often 20% or more. The size of this informal lending circuit is unknown, but is estimated

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7 CBRC (2012); KPMG (2012).
8 IMF (2013b); China Daily (2012b); Hong Kong Monetary Authority (2013); Federal Reserve Bank of San Francisco (2013); Peterson Institute for International Economics (2013).
9 CBRC (2013); People's Bank of China (2013b).

at 6% to 8% of GDP (IMF, 2012b). The Chinese central government has announced its intention to bring the unregistered informal lending circuit under control and has set up a pilot in the east coast city of Wenzhou, involving the transformation of informal lending companies into registered financial institutions. Recently, online companies began offering investment opportunities via their websites, which have seen a rapid growth in popularity. At the end of 2012, there were some 400 of these lending companies with an annual turnover of 20 billion renminbi (€ 2.5 billion, China Economic Net, 2013b).

3.4 Wealth Management Products

The issuance of Wealth Management Products (WMPs) has been growing rapidly in recent years. These concern financial investment products issued by banks, off-balance-sheet vehicles of banks and trust companies. WMPs have an average term of less than six months and interest rates are 1 to 2 percentage points higher than the interest rates on savings deposits at banks. At year-end 2012 these products amounted to a total of 6,700 billion renminbi, corresponding with € 830 billion or 13% of GDP (People's Bank of China, 2013b). One-third of the WMPs are recognised on bank balance sheets, where the principal is guaranteed by the bank, with the bank holding a capital provision against such exposures (RBS, 2013). The banks invest the funds obtained from selling this WMPs in low-risk projects.

However, two-thirds of the WMPs are issued by banks off-balance-sheet vehicles and by trust companies. They often provide incomplete information about the risks of the projects in which the funds obtained via the WMPs are invested. These funds are mainly invested in high-risk property projects and in smaller private enterprises. If they go bankrupt, the investors in the WMPs absorb the loss, because the principal of this type of WMP is not guaranteed. According to the central bank and the supervisor, there are large risks in this area.[10] Trust companies use the funding obtained via WMPs to finance their lending operations. The supervisor CBRC has instructed banks to put high-risk off-balance-sheet products such as WMPs back on their balance sheets and to maintain adequate provisions for these products. It has also imposed reserve requirements on trust companies.[11] In addition, banks must separate their off-balance-sheet products more rigorously from their other banking activities ('firewalls'). Commercial banks should limit WMPs invested in high-risk assets to 35% of total WMPs outstanding, or to 4% of its total assets, whichever is lower (KPMG, 2013). Banks must also improve the information they provide to investors about the risks of WMPs.

10 Financial Times (2012); China Daily (2012b; 2013); China Economic Net (2013a); People's Bank of China (2012a) and CBRC (2012; 2013).
11 CBRC (2012, 2013); KPMG (2012).

3.5 Size of shadow banking system in China

3.5.1 Demarcation

In general, the size of the shadow banking system is difficult to determine because there is no complete picture of these activities. Another reason is that it is not always clear what classifies as shadow banking. The Financial Stability Board (2013, p. 5) defines shadow banking as '… the system of credit intermediation that involves entities and activities fully or partly outside the regular banking system', where 'credit intermediation' not only comprises the actual lending activity, but also the transformation of maturity and liquidity within the credit chain, which can consist of several entities. The FSB makes this definition operational by taking the 'Other Financial Institutions' (OFIs) as its starting point in the statistics. OFIs are the financial institutions *excluding* banks, pension funds and insurers. However, China publishes only fragmentary figures about financial institutions, using a classification that differs from the OFI classification. That is why it is difficult to define or demarcate the term shadow banking for China in a manner that enables quantification. The size of Chinese trust companies and WMPs cannot be aggregated, because the latter partly serve as funding for the former, so that you end up with double-counted figures. To make an estimate of the size of China's shadow banking system, we have therefore resorted to the 'social financing' indicator, for which quantitative information is available.

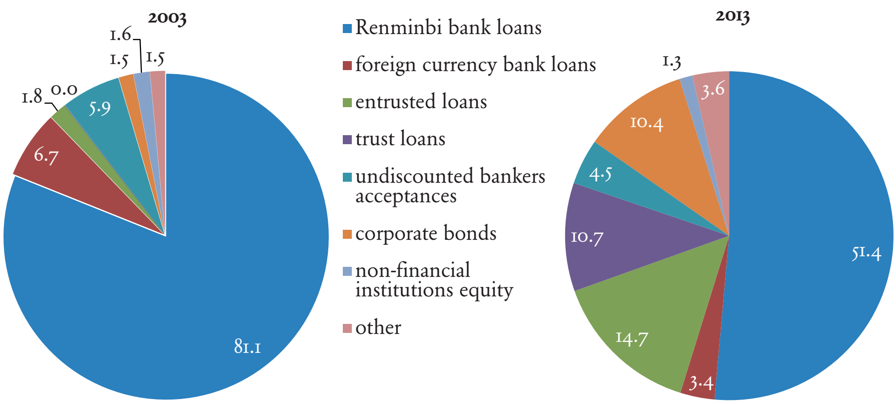
3.5.2 Social financing

A couple of years ago, the People's Bank of China developed an indicator which reflects the size of the financing of China's real economy by the financial system. This net flow indicator is called 'social financing' and the central bank publishes it each month. It captures the total amount of funding of the real economy provided by the financial sector during a given month and is made up of six parts. It covers financing sources such as bank credit, corporate bonds, equity and banks' off-balance-sheet financial activities. Although bank credit still represents the most important funding source, other financing has become increasingly important in the last decade. The social financing indicator was developed because referring to bank credit only would provide too limited a picture of the variety of financing flows in the economy.

Chart 3 shows the composition of social financing in 2003 and 2013. Social financing includes domestic and foreign currency loans, corporate bonds and equity. It also comprises trust loans, entrusted loans and banker's acceptances. These three fall under the definition of 'shadow banking'.

Chart 3 Social financing flows

Percentage of total



Source: Thomson Financial and National Bureau of Statistics of China (2013).

- *Trust loans* refer to interest-bearing loans which trust companies extend to enterprises, local government and individuals. To finance these loans, trust companies issue WMPs using the distribution network of banks.
- *Entrusted loans* are company-to-company loans with banks or other financial institutions acting as brokers; these include finance companies, trust companies and lease companies. Banks typically monitor the process, including contract signing, loan withdrawals, and repayment. However, such banks only receive fees, but do not assume credit risk on these entrusted loans. In this way, entrusted loans are treated as an off-balance-sheet business of banks.
- *Bankers' acceptances* are bills issued by a company and guaranteed by a bank. Companies can use bank acceptances as a means of payment. In essence, they are a form of credit guaranteed by banks.

A comparison of the composition of social financing between 2003 and 2013 shows that the share of new renminbi bank loans in social financing has declined. In 2003, new renminbi bank loans accounted for 81% of social financing flows. This share dropped to 51% in 2013. Non-bank financing has become a more important source of financing, among others trust loans and entrusted loans. These two, together with bankers' acceptances, are considered part of the so-called 'shadow banking' sector. The other parts of the social financing indicator (bank loans, corporate bonds and equity) do not belong to the realm of shadow bank lending.

3.5.3 Estimated size of shadow banking

The figures for trust loans, entrusted loans and bankers' acceptances concern flow data on a net basis, i.e. net of any repayments. The flow data have been aggregated to arrive at stock data, starting from 2002, the first year that the flow data were available. As the flow data were very low in that year, it can be assumed that the stock data were similarly low. The results are reflected in Table 3 and Chart 4.

Due to the fragmentary availability of numerical data, it is not possible to relate the figures from Table 3 to the figures in subsections 3.2-3.4 for the trust companies, informal lending circuit and WMPs. For instance, in the third quarter of 2013, the trust companies' funds under management amounted to 19% of GDP (subsection 3.2), while the trust loans amounted to about 8% of GDP (Table 3). However, trust companies have a broader range of activities and also invest part of their funds in bonds and equities, which are included in other social financing components.

Table 3 shows the explosive growth in shadow bank lending volumes, soaring from 10% of GDP in 2008 to almost 35% of GDP in 2013. Alongside the above, there is also the previously mentioned unregistered informal lending circuit (subsection 3.3). No reliable figures are available for this informal circuit, so it is not included in Table 3 and Chart 4. As noted, the IMF estimates this informal lending circuit at 6% to 8% of GDP. Including this, the stock figure for shadow bank lending in China would then work out at 40% to 45% of GDP. These outcomes are comparable with estimates from various investment banks that mention a range of 26% to 57% of GDP, depending on the definition used (Federal Reserve Bank of San Francisco, 2013).

Chart 5 shows 'total' lending as the sum of bank lending and shadow bank lending from Table 3. In 2013, this 'total' lending amounted to 161% of GDP. The chart illustrates that shadow bank lending has grown faster in the past years than bank lending. In 2013, 'total' lending had increased by 29.7 percentage points of GDP

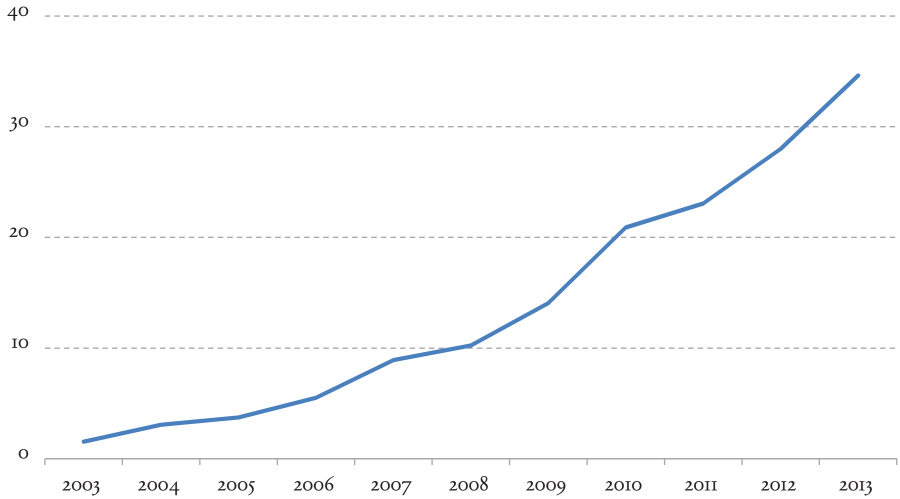
Table 3 Estimated size of shadow bank lending in China, stocks, % GDP

	2004	2006	2008	2010	2011	2012	2013
Trust loans	0	0.4	1.8	3.5	3.4	5.5	8.3
Entrusted loans	2.4	4.0	5.2	7.9	9.4	11.1	14.6
Bankers' acceptances	0.6	1.2	3.3	9.5	10.3	11.4	11.7
Total shadow lending	**3.1**	**5.5**	**10.2**	**20.9**	**23.1**	**28.0**	**34.6**

Calculated on the basis of cumulative flow data from the National Bureau of Statistics of China (2013), People's Bank of China (2012b;2013a) and Thomson Financial.

Chart 4 Shadow bank loans

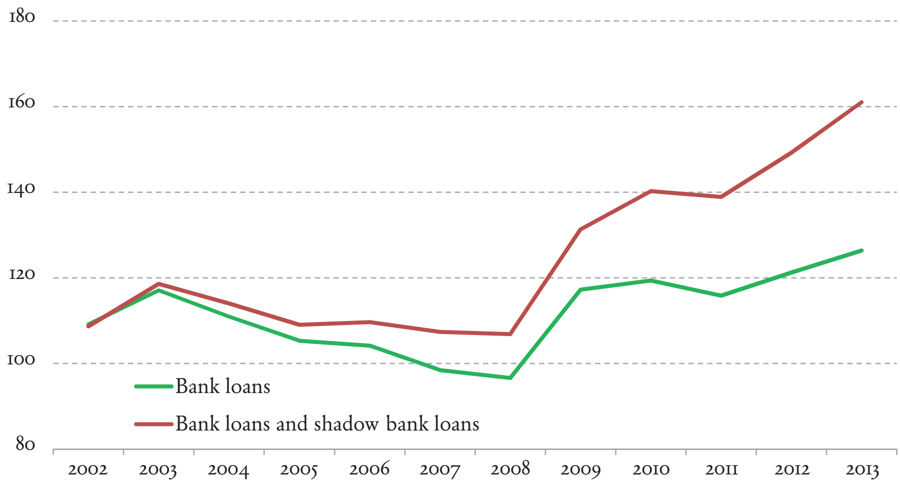
Percentage GDP



Source: Thomson Financial and People's Bank of China (2012b;2013a); own calculations.

Chart 5 Bank loans

Percentage GDP



Source: Thomson Financial and People's Bank of China (2012b;2013a); own calculations.

compared with year-end 2009. Of this increase, 20.5 percentage points (two-thirds) was attributable to shadow bank lending.

3.6 Risks and supervision

The rise of shadow banking is associated with a number of risks. A *first* risk is that the shadow banking system reinforces a credit boom, which has a procyclical effect and undermines financial stability. A *second* risk is the interconnectedness of regular banks and the shadow banking system. Banks run risks on their lending to and investments in shadow banks. Moreover, banks are exposed to risks on their loans to companies which are partly financed by shadow banks: bank credit is repaid with loans taken out with a shadow bank. That said, due to the lack of information, no exact picture can be given of the extent and degree to which the official and informal banking system are intertwined. The links between banks and shadow banks remain opaque. A *third* risk is that a substantial part of the financial transactions in shadow banking directly or indirectly concern the real estate sector. A crisis in this market also affects the banks. A *fourth* risk is that savers, lured by higher returns, transfer deposits from banks to the non-bank circuit, thus causing liquidity problems for the banks. A *fifth* risk is that the businesses in which the WMPs funding has been invested go bankrupt, causing investors to lose their money. *Finally*, there is the risk of a maturity mismatch. The majority of funds borrowed from shadow banks have a maturity of less than a year, but are used to finance long-term projects in e.g. the construction sector. Businesses can then run into liquidity problems if the economic tide turns and banks and trust companies are no longer able or willing to roll over loans.

Shadow banking, in itself, represents a broadening of the financial services. Many private companies in China would probably have been unable to flourish without this lending circuit. The informal lending circuit is basically a reaction to the regulated interest rate regime, a preference of state-owned banks to lend to state-owned companies and a lack of investment opportunities for the huge Chinese savings. At the same time, it constitutes a risk to financial stability, both because the regulation of the system is still in its infancy and because of the interconnections with the official banking sector. Further development of the financial sector and liberalisation of interest rates would dampen the use of shadow banking and reduce the risks. Abolition of the interest cap on savings deposits would bring deposits back to the banks and keep the growth of shadow banking in check. Such a policy would increase the competition between the banks and probably strengthen the incentive to extend credit to SMEs as well.

The banking supervisor is aware of the risks of shadow banking and is imposing stricter supervision. In mid-June 2013, interbank interest rates shot up due to an unforeseen reduction in liquidity provision by the central bank of China. This credit crunch came as a shock to Chinese banks and the financial markets. It was interpreted as a signal that the authorities wanted to rein in the rampant credit growth and that the banks would be required to reduce their interconnectedness with the shadow banking system. This means that the authorities are now committed to bringing the phenomenon of shadow banking under further control. In fact, authorities have sought to regulate shadow bank activities, not to eliminate them.

Recently, a large venture funded by a wealth management product ran into problems (Financial Times, 2013). In 2010, trust company China Credit Trust provided a $ 500 million loan to a coal mining company in Shanxi province, promising a yield of 10%. The funds were raised by issuing a wealth management product distributed by the branches of ICBC. The coal mining company defaulted and it was clear that it would not be able to pay back the principal and the yield in January 2014. Against the background of rising concerns in financial markets about Chinese shadow banking, ICBC and Shanxi provincial government covered the loan. The rapid growth in shadow banking has been driven by a perception that financial product issuers and distributors provide an implicit guarantee. The fact that the default of China Credit Trust was avoided has confirmed this perception. Although China Credit Trust managed to avoid a default this time, a high-profile default in the shadow banking sector – or even the possibility of such a default – can trigger a contagious effect across China's financial system. This may be a 'wake-up call' for investors regarding other potential credit risks.

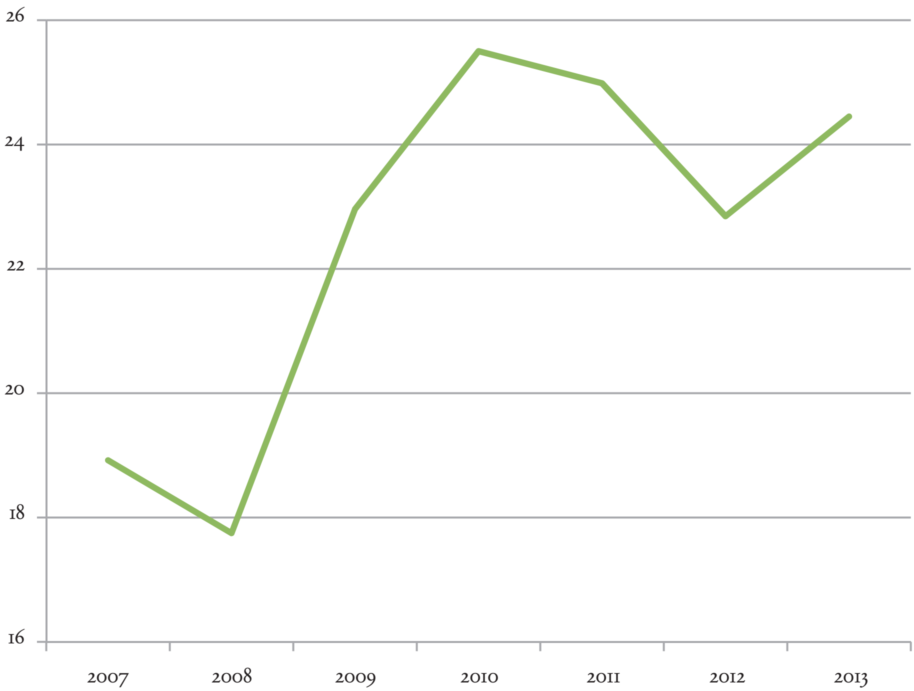
4. Banks and the housing market in China

4.1 Characteristics of the housing market

Certain specific characteristics distinguish the Chinese housing market from that in Western European countries. The *first* is that property is regarded as an investment (in a second or third home) because, apart from bank savings and equities, there are few investment alternatives. A *second* characteristic is the urbanisation process that is fuelling demand for residential properties. A *third* characteristic is households' relatively small mortgage debt: about a quarter of the disposable household

Chart 6 Mortgage loans

As percentage of household disposable income



Source: Thomson Financial and National Bureau of Statistics of China (2013).

income (Chart 6). Although this ratio has increased in the last couple of years, it still remains very low compared with other countries.[12] Loan-to-value ratios are estimated at 45-50% (Standard & Poor's, 2013). *Finally:* the central bank and the banking supervisor have a strong grip on the size and conditions of mortgage loans, so that they can intervene in the housing market when necessary.

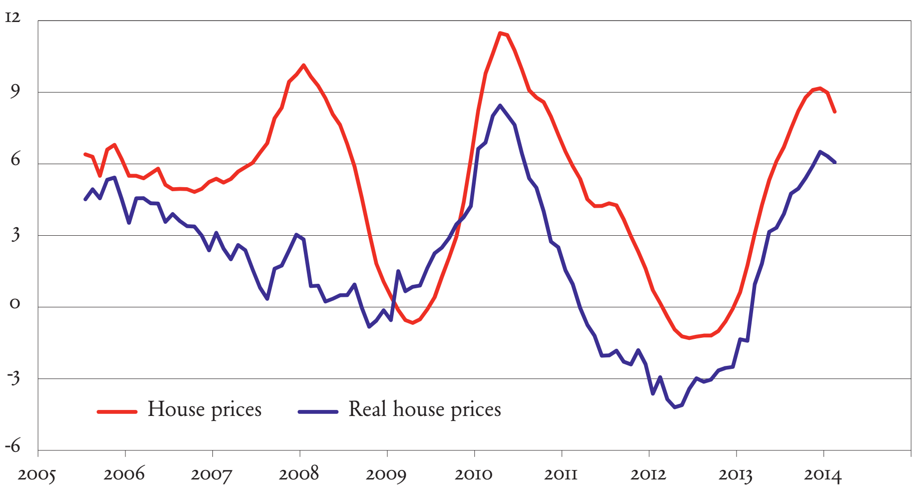
4.2 Developments in the housing market

In mid-2010, average house prices in China's 70 largest cities were showing double-digit growth (Chart 7). Fears of a residential property bubble prompted China to tighten its monetary policy from the start of 2010 and to introduce stricter mortgage loan conditions. Banking supervisor CBRC increased the mandatory down payment for mortgages from 20% to 30% for first homes and from 40% to 60% for second homes. Mortgage loans for third homes were stopped.[13] This led to a deceleration in mortgage lending growth in the course of 2010, a trend that continued into 2011 (Chart 8). Such a rapid tightening of the credit policy was made

12 IMF (2011b); People's Bank of China (2012a) and Thomson Financial. The 2012 ratio of outstanding household debt to disposable income was 87% in the US, 82% in EU-27, Germany 66%, France 63%, United Kingdom 119%, Ireland 141%, Netherlands 227% (European Mortgage Federation, 2013).
13 For an overview, see Deutsche Bank (2011), BBVA (2011) and Allen et al. (2012).

Chart 7 House prices[1]

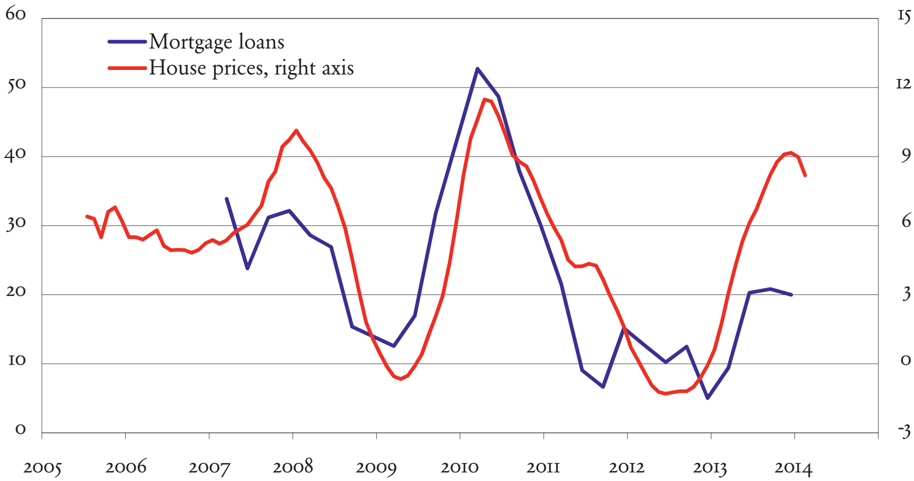
Percentage changes y-o-y



1 Unweighted average of house prices based on 70 cities. Period July 2005 - May 2006 weighted.
Explanation: Real house prices are defined as nominal house prices deflated by CPI.
Source: Thomson Financial.

Chart 8 House prices[1] and mortgage loans

Percentage changes y-o-y



1 Unweighted average of house prices based on 70 cities. Period July 2005 - May 2006 weighted.
Source: Thomson Financial.

possible because the central bank and the banking supervisor have the authority to impose administrative conditions on the size and conditions of bank loans.

Chart 8 shows that the effects of this policy rapidly fed through to house prices. In 2012, the growth of mortgage lending was moderate, with house prices dropping by 0.7%. However, in spring 2013, house prices started to pick up, leading to a rise of 9% in December 2013 (Chart 7). This is hardly surprising, because mortgage credit growth had accelerated to 20% since the second quarter of 2013.

Viewed from the demand side, the development of such fundamentals as urbanisation and income growth may justify rising property prices. China is undergoing an ongoing process of urbanisation, which is driving up demand for homes. In 2000, 36% of the population lived in cities; by 2013, the figure had risen to more than half, representing an increase of 210 million urban residents (National Bureau of Statistics of China, 2013). Since 2005, the nominal and real-term disposable incomes of urban households as a whole have increased much more sharply than house prices[14] (Chart 9). As the IMF (2013a) also concludes, the house price-income

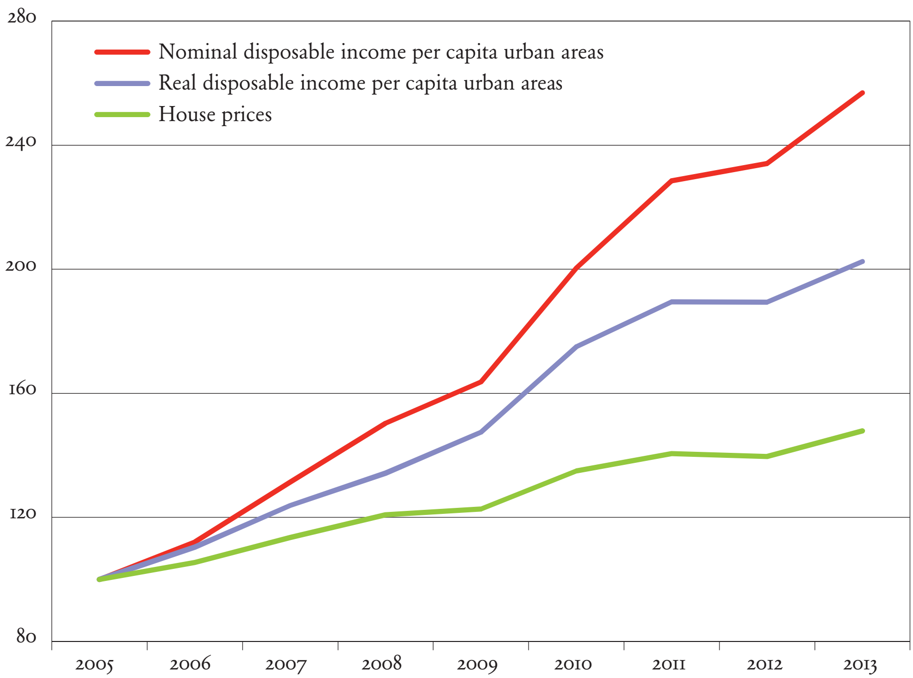
14 In the 2005-2013 period, the nominal and real disposable income per capita rose by an average of, respectively, 12.5% and 9.2% per year and house prices by 5%.

ratio at aggregated level has decreased, indicating that the average affordability has improved.

It is conceivable, however, that this macro picture conceals a divergent development at regional level. It might well be possible that, in some large cities, house prices are rising faster than is justified by urbanisation and real income growth. Looking at the development in the five largest Chinese cities, we see that it fact it was only in Beijing that house prices outpaced disposable real incomes in some years (Chart 10). In the other four cities, the picture corresponds with the national level in Chart 9. Only for Beijing, this could point to the formation of a property bubble. The foregoing is consistent with the IMF's observation that '….sales and prices now seem to be broadly in line or even below fundamentals nationwide and in major cities.' (IMF, 2013a, p. 14).

Chart 9 Income and house prices[1]

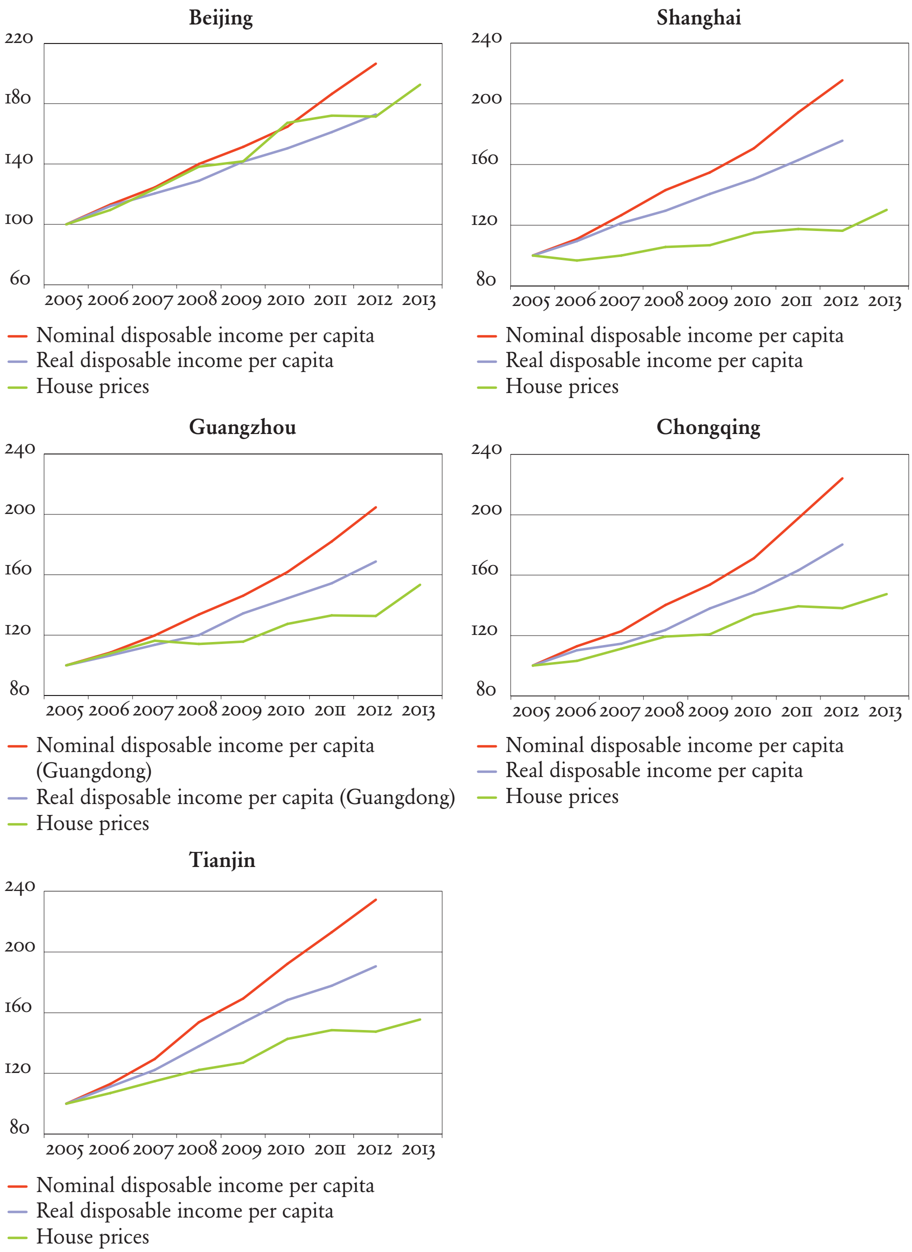
Index 2005 = 100



1 Unweighted average of house prices based on 70 cities. Period July 2005 - May 2006 weighted.
Source: Thomson Financial and National Bureau of Statistics of China (2013).

Chart 10 Income and house prices, cities of China

Index 2005 = 100



Source: Thomson Financial and National Bureau of Statistics of China (2013).

However, it should be noted here that Chinese housing market statistics are not of the same quality as the statistics compiled by advanced western countries, so we should be cautious in drawing definite conclusions.

One characteristic of the Chinese housing market is that the housing supply shows a relatively strong and fast response to demand and price. When property prices rise, there are more housing starts; housing supply falls back when prices decrease (Chart 11 and 12). This supply reaction prevents excessive increases and decreases in price levels. This also corresponds with the outcomes of the study of Ahuja et al. (2010), finding that a combination of market forces and government policy in most large cities reversed any initial divergence of house prices from a benchmark within a year.

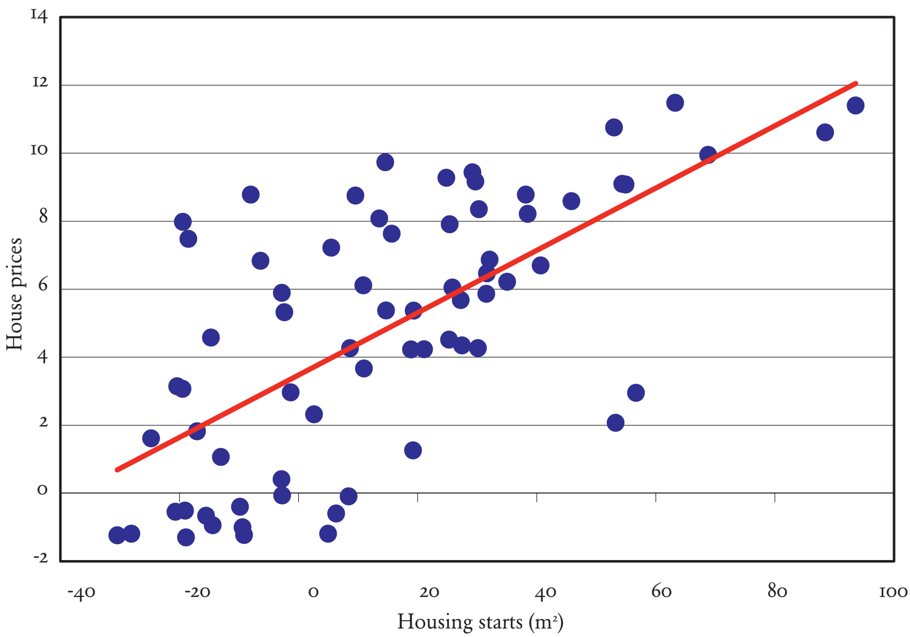
Press releases sometimes report vacancies in large cities. If migration to the cities continues, vacant cheaper housing will be occupied in due course. However, vacancies in the high end of the market may point to a protracted absence of buyers,

Chart 11 Housing starts[1] (m^2) and house prices[2]

Percentage changes y-o-y

1 Data housing starts in January and February are extrapolated.
2 Unweighted average of house prices based on 70 cities. Remark: outlier in November 2009 has been skipped (stimulation program).
Source: Thomson Financial.

Chart 12 Housing starts[1] (m²) and house prices[2]
Percentage changes y-o-y



1 Data housing starts in January and February are extrapolated.
2 Unweighted average of house prices based on 70 cities. Remark: outlier in November 2009 has been skipped (stimulation program).
Source: Thomson Financial.

which could depress prices and lead to losses at builders and project developers. However, the significance of this anecdotal information is difficult to judge as no recent vacancy figures per segment are available at national or regional level.

4.3 Risks

Is a decline in house prices forthcoming? The aforementioned characteristics of China's housing market dampen the consequences of a price fall, if any. Ongoing urbanisation and growing prosperity will continue to fuel demand for housing in the longer term. At present, over half of the Chinese population lives in cities (712 million people), but this is expected to increase to 70% in 2030 (one billion people)[15]. These fundamentals underpin the market. Judging by the official figures on house prices and incomes, there are no clear signs of the formation of a property

15 World Bank et al. (2014) and National Bureau of Statistics of China (2013).

bubble in the Chinese housing market as a whole. At worst, this may be occurring in a few cities and segments. About 13% of bank lending comprises mortgage loans to households and 7% represent loans to project developers (IMF, 2011b). This 20% lending exposure to the real estate market is not very high by international standards. In addition, home buyers are required to make a 30% down payment on their property and the outstanding mortgage debt of households is only a quarter of their disposable income. The non-performing loans ratio is 1% for the total lending of commercial banks and 0.3% for mortgage loans to households, both of which are low percentages.[16]

Clearly, any weakening of China's economy, for whatever reason, would not leave the real estate market unaffected. Any slackening of economic activity in Europe and the United States would affect Chinese exports and result in job losses in the export industry. Lower incomes would make it more difficult for households to meet their mortgage obligations, causing the ratio of bad loans to increase at the banks. Fewer housing starts lead to a contraction of the activities of construction companies, project developers and the construction sector as a whole, with knock-on effects for the cement and steel industry, among others. The resulting fall in property prices might constitute a risk for banks. One key factor is the close connection in the Chinese economy between banks, shadow banks and real estate. At China's five largest banks, 30% to 45% of the loans are secured by collateral consisting largely of real estate (IMF, 2011b). Falling prices erode the value of collateral and thus the loan quality. Given the weight of the investments of the real estate sector, representing 15% of GDP in 2013, this sector plays an important role in the Chinese economy.

Chinese authorities keep a tight grip on the financial sector and the housing market. Any strong price decline would probably prompt the central bank to ease its monetary policy and the banking supervisor to relax mortgage conditions. And, as already mentioned, the reaction of the housing supply to price movements also mitigates the risk of a strong fall or rise in prices. The 2011-2015 Twelfth Five-Year Plan announced the construction of 35 million houses for lower income groups in this period. Parts of this programme can be moved forward, which would support house construction activity. These factors may reduce the risk of a real estate crisis and a sharp fall in prices.

16 China Banking Regulatory Commission (2013); People's Bank of China (2013).

5. Banks and local government investment

5.1 Local government investment

A substantial part of infrastructure construction in China is carried out by provinces and municipalities. Officially, they are not permitted to issue capital market loans to raise funding for this purpose. Their solution is to set up 'special vehicles' to fund their projects: Local Government Financing Platforms (LGFPs). Examples are the construction of a metro system or a ring road around a city (see Box 1). LGFPs take out credit at the banks to finance projects, using purchased land as collateral. To support LGFPs, local authorities usually transfer land as collateral to help the LGFPs secure loans. These infrastructure projects (such as toll roads) generate income which the LGFPs use to pay the interest and repay the principal. However, this income is not always sufficient to service the debt. In recent years, local authorities have been allowed to issue bonds, but this remains limited.

The 2009-2010 national stimulus package of $ 589 billion (14% of GDP!) was largely implemented by the provincial and urban authorities and mainly concerned infrastructure. Thirty per cent of the funding came from the central government's budget, whilst LGFPs financed the remainder by taking out enormous loans with the banks. LGFP bank loans were implicitly, if not explicitly, guaranteed by local governments. This guarantee encouraged banks to lend to LGFPs. In addition, LGFPs could collateralise their borrowing with land or other assets, either owned by the LGFP itself or pledged by the local government. This provided banks with some comfort when granting loans to LGFPs. Such guarantees or collateral are important for infrastructure LGFPs which, especially in the short term, may not generate sufficient cash flow to service their debt (Zhang & Barnett, 2014).

5.2 Local government debt development

The numerical information on the debt of local authorities and LGFPs is scarce and fragmented. A 2010 CBRC survey showed that in June 2010, the LGFPs' total outstanding debt to banks ran to 7,700 billion renminbi, corresponding with $ 1,100 billion or 19% of China's GDP. One-fifth of the LGFPs' debt to banks posed a non-performance risk: 1,540 billion renminbi, corresponding with $ 220 billion or

Box 1 Examples of LGFPs

Fushun Development Investment Corporation (FSDIC)

The government of Fushun city in eastern China established FSDIC in 2002 by injecting 150 million renminbi into the company as initial capital. Four years later, the city government approved the transfer of a land usage right as additional paid-in capital. Three state-owned companies involved in infrastructure and development transferred their equity to FSDIC in the form of additional paid-in capital, amounting to 720 million renminbi, as a result of which they became FSDIC's subsidiaries. FSDIC is responsible for a vast majority of Fushun's city infrastructure investment, including the funding, operation and construction of infrastructure. FSDIC projects include a sewage collection pipe network project, a flood protection project, a road network construction project and social housing projects.

FSDIC's income consists mainly of subsidies from the city government and revenue generated through its subsidiaries. The rapid growth in construction and real estate helped push up land prices. Land sales have been an important source of funds for the investment corporation in more recent years. FSDIC also issues corporate bonds using land usage rights as collateral to support its credit ratings and to reduce borrowing costs. Much of the land is pledged as collateral and other assets, such as buildings and roads, have weak potential to generate profit.

Haicheng Urban Development Investment Corporation (HUDIC)

The city of Haicheng in northern China established HUDIC in 2001 with initial capital of 105 million renminbi injected by the city government. In 2009, the government transferred land usage rights, buildings, and other fixed assets to the company, amounting to 2.8 billion renminbi. HUDIC owns three subsidiaries, which are all state-owned subsidiaries operating in water supply and heating. HUDIC is responsible for investing, constructing, and managing various urban infrastructure projects. It also develops land, usually by cleaning up and then selling land it received from the city government. HUDIC has also led projects such as road and bridge construction. HUDIC's main income sources are revenue generated from subsidiaries, agency fees from infrastructure projects and city government subsidies. Its operating income has been weak, which makes HUDIC highly reliant on city government subsidies.

Source: Zhang & Barnett (2014)

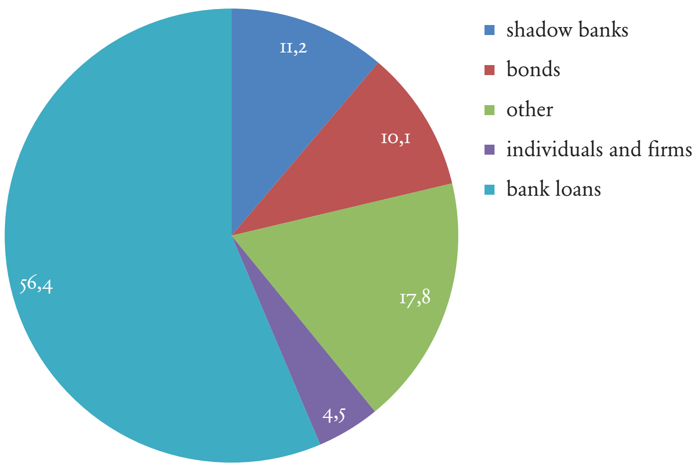
4% of GDP.[17] This substantial build-up of debt, which partly stemmed from the national stimulus programme, presented – and still presents – a risk for banks. As time progressed, the reported debt amounts continued to climb,[18] giving the central bank and the banking supervisor cause for considerable concern. If the projects fail to produce sufficient income, the LGFPs will not be able to meet their obligations to banks, which are then saddled with more bad loans.

At the instigation of CBRC, banks now assess and monitor the risks of loans to LGFPs more closely, and if the quality of the loans deteriorates, they are required to request extra collateral and to maintain more capital (CBRC, 2012). CBRC has repeatedly stated that the risks are manageable, but that supervision of these vehicles remains vital. The banks have been instructed to exercise great restraint when extending new loans. Unfortunately, this has prompted cities and provinces to increasingly borrow through the shadow banking system, such as trust companies, thus spreading the risks throughout the economy. In March 2013, President Zhou of the People's Bank of China stated that a fifth of the LGFP debt was unprofitable and posed a risk (China Economic Net, 2013a). The high costs and risks of the national stimulus plan, which was largely implemented by the LGFPs and funded by the banks, are thus belatedly coming to the fore.

The Chinese National Audit Office recently published the outcomes of a broad-based audit of local government debt.[19] These show that in mid-2013, local government had a debt of about 18,000 billion renminbi, corresponding with $2,950 billion or 33% of GDP.[20] LGFPs account for 40% of this local government debt. These new figures on local government debt are considerably higher than the outcomes of the previous audit of the National Audit Office.[21] No data are available on the quality of the current debt. Broken down by type of debt, bank loans remained the biggest component in 2013. Due to restrictions imposed by the banking supervisor, the share of bank loans in local government debt decreased from 79% at the end of 2010 to 57% in mid-2013 (Chart 13). The share of bond financing in 2013 amounted to 10%. Financing from shadow banks was 11% and this financing accounted for over a quarter of new debt between the two audits. This type of financing was not mentioned in the 2010 audit.

17 World Bank Office Beijing (2010); China Daily (2010).
18 In November 2012, CBRC reported that in September 2012 the outstanding loans of Chinese banks to LGFPs amounted to 9,250 billion renminbi ($1,500 billion), corresponding with 15% of the banking industry's total outstanding loans and 18% of GDP (China Daily, 2012a). The size of the non-performance risk related to this debt was not made known.
19 Wall Street Journal (2013, 2014).
20 The total government debt is estimated at 55% of GDP.
21 The audit of the National Audit Office (2011) showed that at year-end 2010, local government had a debt of 10,700 billion renminbi, corresponding with $1,650 billion or 27% of GDP. Of this, 8,500 billion renminbi, or 79%, consisted of bank loans.

Chart 13 China's local government liabilities
Percentage share end of June, 2013



Source: Wall Street Journal December 30, 2013.

5.3 Risks

In 2012, about 15% of the Chinese banking sector's outstanding loans consisted of loans to LGFPs (China Daily, 2012a; Lu & Sun, 2013). Although Chinese banks are well-capitalised (Section 2), a deterioration in the quality of LGFP loans may substantially raise the NPL ratios of banks. Table 4 shows, for each Chinese bank, the NPL ratio (in column 1), the loans to LGFPs as a percentage of total lending (column 2), and the increase in the NPL ratio if non-performing bank loans to LGFPs would rise to 35% (column 3). Column 4 shows the NPL ratio after this 35% increase, which would more than double. The ratio for China Development Bank would be more than 20%, which is understandable given that loans to LGFPs account for two-thirds of this bank's total lending. These outcomes illustrate that financial problems at local government level can lead to a substantial increase in banks' bad loans.

All in all, we raise the following concerns regarding the development of the local government finances and debt. *First*, as mentioned above, LGFPs have continued to pile up debt to finance investment projects. If these projects fail to generate income, banks will see a rise in bad loans. This adds to the already existing problem of the bad loans of LGFPs and local governments with banks. *Second*, land is important to LGFPs, both as a source of financing and as collateral. On average, land sales revenues represent a third of local government income. A fall in land prices weakens

Table 4 Chinese banks' exposures to LGFPs and potential increase in NPL ratios (2011)

	1	2	3	4
	NPL ratio end 2011 (%)	Share of LGFP loans in total loans (%)	Rise in NPL ratio if 35% of LGFP loans become NPL	NPL ratio if LGFP loans become NPL (1) + (3)
Industrial and Commercial Bank of China	1.3	6.4	2.2	3.5
China Construction Bank	1.4	4.4	1.5	2.9
Bank of China	1.3	6.0	2.1	3.4
Agricultural Bank of China	2.2	6.9	2.4	4.6
China Development Bank	0.4	66.7	23.3	23.7

Source: Lu & Sun (2013).

LGFPs' financial condition while also reducing the value of the collateral, and hence the creditworthiness, of the LGFP and local government. This means local governments and banks are put at the mercy of the real estate market. *Third*, the share of bank financing has come down, but the share of shadow bank financing has surged. Shadow bank loans are, in general, more risky than bank loans, so that shadow banks have less of a cushion when local governments are unable to repay their debt. This is a risk to the financial system. Moreover, shadow banks charge a higher rate of interest than banks, raising local government expenditure and debt levels. *Fourth*, the National Audit 2013 notes that 60% of the debt will mature before the end of 2015. This implies that local governments face large amounts of refinancing and debt rollover in the short run, entailing high sovereign risks. The central government has given permission to local governments to issue bonds as a way of rolling over their debt. *Finally*: a proportion of the over 6,000 LGFPs have a weak management and poor accounting procedures, which exacerbates the risks (National Audit Office, 2011). The above risks highlight that banks and local governments are increasingly vulnerable to real estate market volatility.

Provinces and cities have a limited tax base and are not permitted to raise loans in the capital market. At the same time, they are required to carry out a wide array of government tasks. Local governments are responsible for 80% of national government expenditure but receive only 40% of national tax revenues in the form of transfers from the central government (World Bank et al., 2012). As a consequence, their only alternative sources of investment funding are loans from banks and trust companies and the sale of real estate. This latter factor means that they have a vested interest in high house and land prices and lack any incentive to cooperate with central government policy to put a brake on the increase in real estate prices. A developed capital market would enable provinces and municipalities to raise capital in the markets, so that they would no longer be dependent on bank credit. China's new leadership intends towards achieving this. At the Third Plenum of the 18th Central Committee of the Communist Party in November 2013, it was decided that local governments will be allowed to issue bonds to finance their deficit and refinance maturing debt. In addition, the tax base of local governments will be expanded through the introduction of a property tax and a value-added tax. As regards bonds issues and the introduction of a property tax, several big Chinese cities have started pilots. Recently, Premier Li Keqiang announced that local governments will be allowed to issue bonds in the near future (China Daily, 2014).

6. High-risk interactions and policy options

6.1 High-risk interactions

The developments concerning the real estate market, shadow banks and the quality of the local government bank debt have created substantial macroprudential risks affecting banks. Given that these sectors are closely interconnected, financial risks, or problems may rapidly spread throughout the economy. This heightens the risks and can trigger a chain reaction. Banks and shadow banks are vulnerable to developments in the real estate sector via their lending and investments. Banks would incur losses if LGFPs are unable to repay part of their bank debts. As real estate sales constitute a major source of income for local authorities, falling real estate prices would put local authorities in financial difficulty. This will have an adverse effect on banks' lending to such local authorities.

The capital position of Chinese banks is numerically compliant with international standards. Their NPL ratio of 1% is low and the returns and capital ratios are high. Due to the above risks and the interdependence of sectors, the Chinese banking sector entails greater risks than the financial key data suggest. It should be noted in this connection that the figures used in this study are based on information provided by the CBRC and Chinese banks in their annual reports. According to these reports, the banks' financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS).

At the core, the identified macroprudential risks are related to China's under-developed financial sector and institutions, with China's regulation of interest rates playing an important role. *First*, a lack of available investment instruments and low interest rates on savings deposits due to regulation encourage households and businesses to invest in property and in financial assets outside the regular banking sector. The middle and upper classes in China tend to have two or more homes, in addition to their own residence, for investment purposes. *Second*, the large state-owned banks mainly extend credit to large state-owned companies and not to private SMEs which they perceive to be a greater risk. As a consequence, SMEs seek funding outside the regular banking sector. *Third*, provinces and cities have a limited tax base and are not permitted to raise loans in the capital market. As a result, their only alternative sources of funding are bank credit and the sale of real estate.

6.2 Policy

In the short term, it will be necessary to strengthen the supervision of the shadow banking sector and the finances of local authorities as well as to curb real estate speculation. But more fundamental changes are necessary. To mitigate the macroprudential risks, it is essential that interest rates are liberalised and the financial sector is further developed. Removal of the cap on savings deposit interest rates will result in a return of deposits to the banks and may contribute to keeping the growth of the shadow banking sector in check. Higher and more market-oriented interest rates and a broader range of investment instruments would provide an alternative to investments in the real estate market and shadow bank loans. Higher interest rates would force state-owned companies to pay more for their loans, improving investment allocation and increasing efficiency. A smaller interest spread and more competition would reduce bank profits, stimulating them to improve risk management and to develop new products and activities. Such a policy will boost competition between banks and probably also strengthen their incentive to extend loans to SMEs as well. A developed capital market enables provinces and municipalities to raise funds without depending on bank credit.

The Chinese leadership is aware of the importance of economic and financial reforms. At the Third Plenum of the 18th Central Committee of the Communist Party in November 2013, it was decided that the market will have a decisive role in the allocation of resources and that prices, interest rates and the exchange rate will more and more be determined by the market. The move towards liberalisation of interest rates will be accelerated and a deposit guarantee scheme will be introduced. Furthermore, it was decided that local governments will be allowed to issue bonds to finance their deficit and maturing debt and that their tax base will be broadened. At the National People's Congress in March 2014, Premier Li Keqiang announced significant financial sector reforms for implementation this year, including the roll-out of a deposit guarantee scheme. He added that China's government will accelerate financing deregulation, implying that future defaults on bonds and other financial products will be unavoidable (Financial Times, 2014). In the past, the government always stepped in to bail out companies. But now the government will allow some big companies to default on their debt to serve as a warning to China's lenders in both the regular and shadow banking sector.

Mr. Li Keqiang spoke out in the wake of the first bond default in China's recent history when privately owned solar panel maker Chaori Solar failed to pay the interest on bonds and steel mill Haixin was not able to repay loans that had matured. Currently, the large real estate company Zhejiang Xingrun is on the brink of default, struggling to repay a debt exceeding $500 million. This shows that China's government wants the economy to adapt to market challenges, and that the era of government-protected borrowing is ending. At the March 2014 National People's Congress, central bank governor Zhou announced plans to abolish the deposit rate cap within two years. The outflow of capital to shadow banks and the resulting growth of these banks may force the government to speed up plans for interest rate liberalisation. Recently, the CBRC reported that China intends to establish five new privately-owned banks. Currently, China has only one domestic privately-owned bank of some size, namely Mingsheng Bank. Allowing privately held banks could help increase lending to privately-held SMEs, which would then no longer have to resort to shadow banks. The implementation of these measures will significantly change and shake up China's financial system.

7. Summary and conclusion

The Chinese banking sector is strongly regulated by the government. One example is the government-imposed interest rate cap for savings deposits limiting the return that banks are allowed to pay to their depositors. One consequence of this cap is that wealthy individuals, institutional investors and sometimes even state-owned companies deposit their funds with shadow banks, which offer higher interest rates. In recent years, shadow banking – credit intermediation *outside* the official banking system – has experienced strong growth in China. Total shadow bank lending represents 40% to 45% of GDP and is growing faster than regular bank lending. The expansion of the shadow banking sector in recent years is fuelling lending in the Chinese economy. Shadow banks predominantly extend credit to small companies that have difficulties obtaining loans from regular state-owned banks. This form of lending is less regulated and thus poses a risk, not least due to its interconnectedness with the regular banking sector. The shadow banking sector reinforces a credit boom and poses a risk to financial stability, partly because it is closely related to the real estate sector. Banks are exposed to risks on their loans to and investments in shadow banks. Another risk is that savers transfer their deposits from regular banks to shadow banks in order to generate higher returns, thus putting bank liquidity under pressure. The strong growth in shadow banking reflects the underdeveloped and highly regulated character of China's financial system. The authorities are taking measures to strengthen their supervision.

The banks' risks related to the housing market mainly concern a possible decline in the prices of residential properties and other real estate. Falling prices reduce the value of the collateral and thus impair the quality of the loans. Recent years, incidentally, have seen substantial price increases, particularly in the large cities. However, it should be taken into account that high income growth and ongoing urbanisation stimulate long-term demand for housing and put a bottom under the market. Real-term incomes are rising faster than house prices. Looking at China as a whole, therefore, there are no clear indications of a bubble in the housing market. Nevertheless, a price fall cannot be ruled out, for instance if the Chinese economy loses momentum for whatever reason. A drop in income would make it harder for households to meet their mortgage commitments, causing an increase in bad loans at the banks. This risk is mitigated by the fact that Chinese households do not have high mortgage debts and that the government has instruments for making adjustments to the housing market, if necessary. This can cushion any negative consequences for general economic activity.

Provinces and cities are not allowed to raise loans in the capital market in order to finance their infrastructure projects. Local government therefore sets up 'special vehicles' to take out bank loans for this purpose. The projects of the very extensive 2009-2010 national stimulus plan were largely funded in this manner. As some of these projects are unprofitable, this has led to non-performing loans at banks. Provinces and cities still finance their investments with bank credit via special vehicles, even though supervision and return requirements have been tightened up. One-fifth of the special vehicles' current bank debt is problematic. This poses great risks to the banks. It was recently decided that in future, local authorities will be permitted to raise loans in the capital markets in order to finance their investments.

The above sketches the main macro prudential risks currently faced by Chinese banks and China: shadow banking, the housing market and the quality of bank loans to provinces and cities. These factors are closely interconnected, so that financial problems in one sector can quickly infect the entire economy. This interconnectedness poses an additional risk. These risks partly originate from China's still underdeveloped and highly regulated financial sector. Chinese banks report robust profitability, strong capital positions and low non-performing loan ratios. However, the aforementioned developments raise fears that the Chinese banking sector is less strong and more exposed to risks than the favourable key financial data suggest.

Liberalisation of interest rates and further development of the financial sector are essential to reduce these risks. The Chinese leadership is aware of the importance of economic and financial reforms and has announced that interest rate liberalisation will be accelerated and the financial system will be developed further.

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