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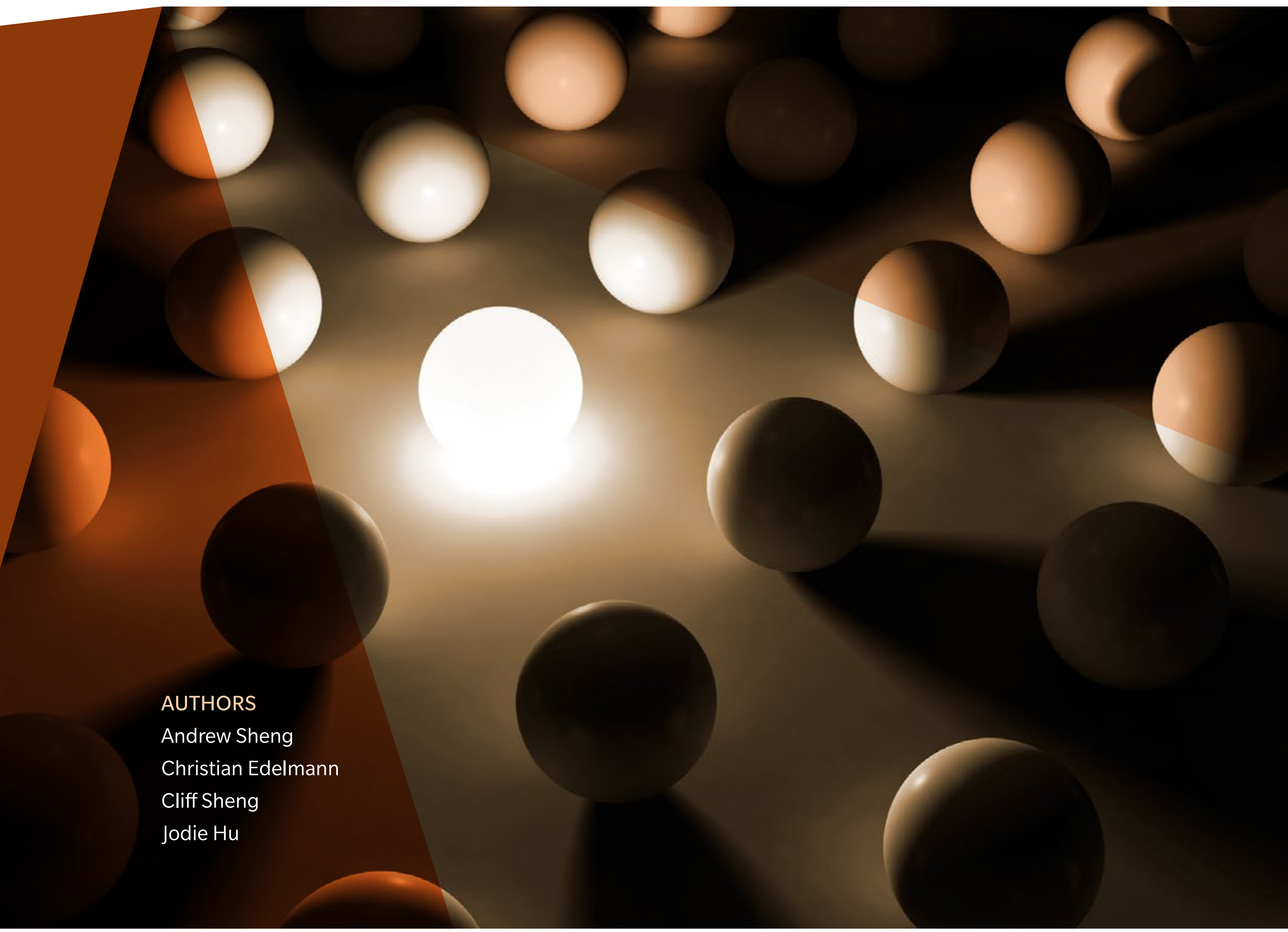
BRINGING LIGHT UPON THE SHADOW

A REVIEW OF THE CHINESE SHADOW BANKING SECTOR



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INTRODUCTION

China has emerged from the global financial crisis, a relative winner. Fuelled by strong credit expansion, China's GDP has been growing at faster levels than most countries. The RMB is fast becoming an internationally accepted transaction currency, supported by ample liquidity and a general anticipation of further appreciation. Moreover, despite a rather sluggish equity market since 2007, we have not seen any fundamental re-valuation of financial or real assets in China. Importantly, real estate prices have held up well, especially when compared to the US or Southern European markets.

However, with its economy beginning to slow, the Chinese model once again is being called into question. In particular, there are concerns about its sustainability and its dependence on continuing credit "fuelling". Recently, commentators have posited that China's "Lehman moment" is imminent and that the Chinese shadow banking sector may become the catalyst for the next systemic global financial crisis.

We take a somewhat different view. Undoubtedly, there is a significant need for reform in the Chinese financial system, something that we discussed in our earlier paper, "Asia Finance 2020"[1]. However, we believe that the Chinese financial system in general and the shadow banking sector in particular remain misunderstood. The purpose of this paper therefore is to shed light upon the shadow.

Section 1 puts the shadow banking sector into perspective. We believe that for now, the risks of shadow banking are still manageable. However, urgent attention is needed to avoid wider contagion as the economy slows. We argue that China's sovereign balance sheet shows a positive net asset position of RMB 87 TN (184% of GDP), even after accounting for all gross liabilities. We also show that widely published corporate debt/GDP ratios are inflated, as they do not take into account the vast amount of deposits held by Chinese corporates. Finally, we argue that China is a net lender to the rest of the world and that any emerging debt problem will be a domestic one without direct global systemic implications.

Section 2 looks at the underlying drivers of the emergence of the shadow banking sector. Given China's unique banking regulations, especially the banking credit quota system and the unique practice of Chinese banks to grow their credit book through short maturity "revolving" loans, shadow banking is largely an alternative form of off-balance-sheet credit provision for banks. It serves the credit needs of SMEs and retail investors, which historically have been starved of credit by the large state-owned lenders, and provides deposit-substitutes in the form of wealth management products.

1 Oliver Wyman, "Asia Finance 2020" (2013), at
http://www.oliverwyman.com/insights/publications/2013/dec/asia-finance-2020.html#.VMv--0go7Dc and
http://www.fungglobalinstitute.org/en/asia-finance-2020-framing-a-new-asian-financial-architecture/

Section 3 aims to define shadow banking in its Chinese context and examine the underlying risks. First, we observe that traditional sizing does not account for significant levels of double or even treble counting. We take a "source" and "use" of funds approach to address these overlaps and size the market at RMB 31 TN, significantly lower than the outcome of a "plain vanilla" product aggregation approach, which leads to about RMB 57 TN. We then review non-performing loans (NPLs) and run various scenarios. In our optimistic and pessimistic scenarios, we estimate shadow banking NPLs to range from 4% to 16%. In our "disastrous" case beyond the pessimistic scenario, we expect shadow banking NPLs to go up to 24%, which however will "only" be an estimated 600% of the total NPL of the Chinese banking sector. Also, by categorising shadow banking into three different segments based on the connection with the banking system, we find that only 22% to 44% of such NPLs will be "transferrable" to the formal banking system and will create incremental banking NPLs of about 4.3% even under our "disastrous" scenario.

Section 4 then proposes a reform agenda. We discuss the shadow banking reform agenda and then outline a broader short-term agenda for the Chinese financial sector, including the need to further increase transparency, the need for expedited implementation of deposit insurance (which is expected for early 2015), the need for a market-based credit bureau and the implementation of a Legal Entity Identifier (LEI). The longer-term agenda includes the need for restructuring/simplifying the regulatory supervision model and reducing the reliance on a bank-dominated financing sector. Finally, we argue that the problem China needs to focus on ultimately is not debt, but equity: China basically lacks equity financing for corporates outside the state-owned enterprise (SOE) sector, thus resulting in an over-reliance on debt.

In Section 5, we show the flip side of the "credit" and "risk" perspective of the Chinese shadow banking sector: the emergence of digitally enabled business models which have the potential to disrupt the traditional banking sector. We see China as a market with one of the fastest technology adoption rates and a vast and fast-growing community of young customers inclined to use new technologies. We derive strategic implications for incumbent Chinese players and international financial services institutions seeking growth opportunities in China; for the latter group, this includes an opportunity to export capabilities into their home markets, much in contrast to the historical approach of bringing global capabilities into China.

We understand that this is only the beginning of the debate, but we hope to shed light on an important sector of the Chinese financial system and to provide an initial agenda for both policymakers and senior decision makers in financial services institutions.

1. PUTTING THINGS INTO PERSPECTIVE

To review the shadow banking sector, we first need to put it into perspective within the overall Chinese economy and financial system.

In December 2013, the Chinese Academy of Social Sciences (CASS) published for the first time a comprehensive China National Balance Sheet Report 2013[1]. In the past, most economic analyses have focused on flows, such as gross national product accounts, annual trade, investments or savings. Balance sheet data, in contrast, reveals stocks outstanding at a point of time. By comparing leverage and where it is located within the national balance sheet, it is possible to detect an economy's state of robustness or its fragility, particularly at the sector level.

It should be noted that there are inherent difficulties in compiling national balance sheets because there are serious valuation problems regarding the use of book, historical or market values, as well as methodological, reporting and coverage issues. Much of the sector data are based on sample surveys, except where the regulatory data are reasonably reliable and cross-checked against other data (such as financial institutions' balance sheets and profit and loss accounts). However, it is the broad trends and comparative ratios that are revealing with regard to the relationships, patterns and context of changes.

In taking this approach, we draw four conclusions:

- China's national balance sheet shows a positive net asset position even after accounting for all gross liabilities, both at the central and local government level
- Chinese household debt is low at this stage, and China is not prone to a massive mortgage crisis
- Concerns over fast-rising corporate debt/GDP ratios in China are inflated, as "deposit collateral" as a unique practice in China is ignored
- China is a net lender to the rest of the world, and any potential debt problem is therefore a domestic one without direct global systemic implications

Firstly, the sovereign government balance sheet is still healthy, with net assets of RMB 87 TN, of which RMB 33 TN represents net equity in state-owned enterprises (CASS 2013)[2]. Much of this could be used to help restructure local government finances and state-owned enterprise debt. With China's total central government debt-to-GDP ratio amounting to only 16% in 2011 (Exhibit 1) – much less than America's 80% and Japan's 226% – there is sufficient policy leeway to undertake debt-equity swaps to tackle the internal debt problem (Sheng and Xiao, 2014)[3].

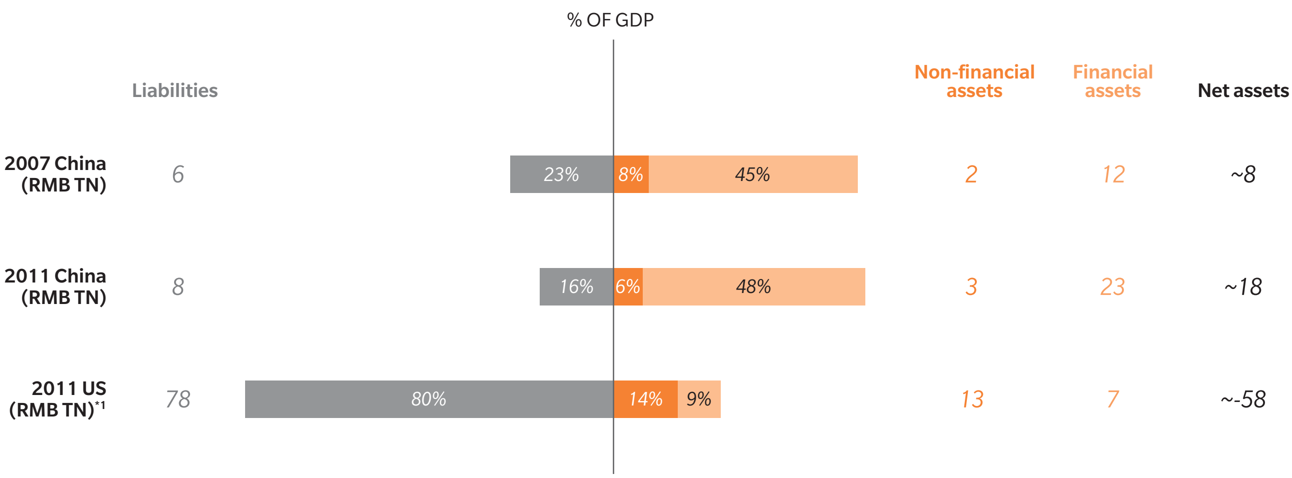
1 Chinese title: 李扬等著，《中国国家资产负债表2013——理论、方法与风险评估》，中国社会科学出版社。The English version of the section on sovereign balance sheet was published by the IMF. (See footnote 2).

2 See Li Yang and Zhang Xiaojing, "China's Sovereign Balance Sheet and Implications for Financial Stability", in *China's Road to Greater Financial Stability*: Some Policy Perspectives (IMF Press, 2013).

3 "China's Subprime Risks", Project-Syndicate, July 28, 2014. Found at: http://www.project-syndicate.org/commentary/andrew-sheng-and-geng-xiao-are-less-worried-about-the-volume-of-chinese-debt-than-they-are-about-the-allocation-of-credit

Furthermore, the local government sector, which has significantly increased its debt exposure over the last few years, also has net assets equivalent to 129% of GDP. Against liabilities of 61% of GDP, there are sufficient gross assets in the local government sector to pay for the rapid increase in debt (Exhibit 2). In addition, the central government recently passed a law to increase revenue sharing between the central and local governments and to enable local governments to issue municipal debt. Individual local governments may still have liquidity problems, but the overall solvency picture suggests that the situation is stable and manageable.

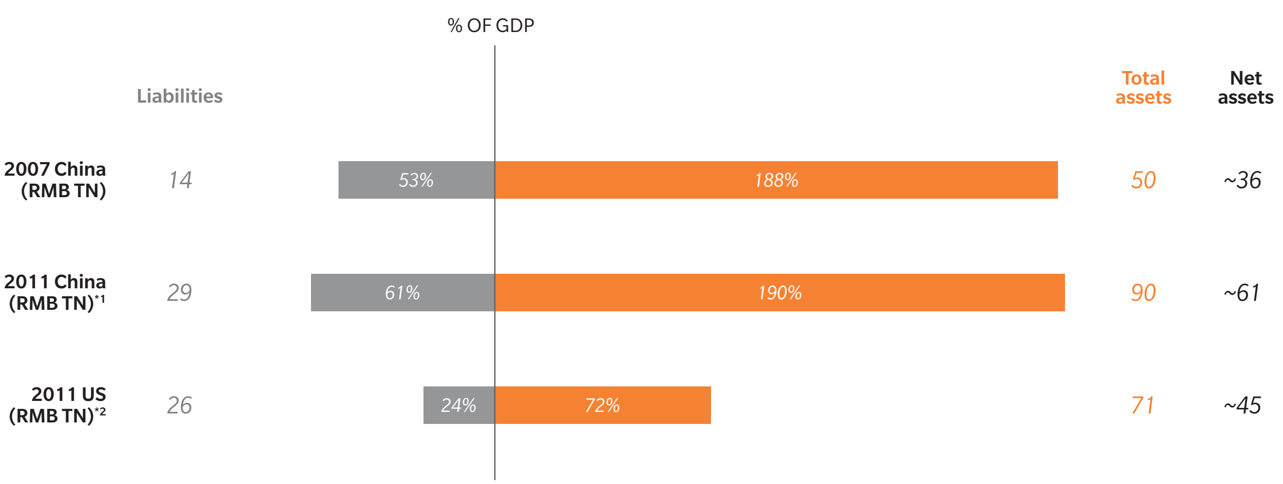
Exhibit 1: China – Balance sheet of the central government



*1 2011 US$-RMB exchange rate from Economist Intelligence Unit.

Source CASS 2013, Federal Reserve 2014, FGI analysis.

Exhibit 2: China – Balance sheet of the local government



*1 Including contingent implicit liabilities, which account for 21% of GDP.

*2 2011 US$-RMB exchange rate from Economist Intelligence Unit.

Source CASS 2013, Federal Reserve 2014, FGI analysis.

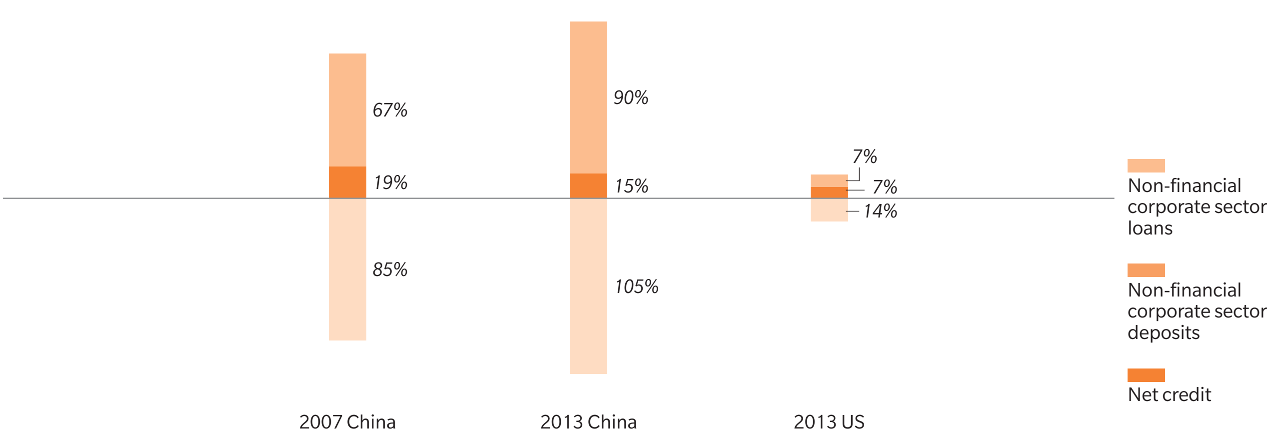
Secondly, we observe a low level of Chinese household debt. Total liabilities of the Chinese household sector were RMB 14 TN, or 29% of GDP, compared with US$13 TN, or 87% of GDP for US households. Chinese household financial liabilities represent 9% of total net wealth of RMB 149 TN and less than half of total bank deposits. Consequently, unlike many middle-income countries, the Chinese household sector does not have a debt overhang.

In particular, the mortgage indebtedness of RMB 8 TN is less than 10% of the estimated value of household ownership of real estate of RMB 96 TN. This is because over 80% of urban and rural households own their residential property outright, and many of these were bought earlier, at levels below the recent property price increase (Rothman 2014[1]). Thus, even though individual households may be vulnerable to a sharp drop in housing prices, the risk of widespread residential mortgage default is very small. Residential subprime mortgages are not a major risk in China.

Thirdly, we observe high corporate deposit holdings. These amounted to RMB 51 TN, or 90% of GDP in 2013, compared with US$1 TN, or 7% of GDP for the US corporate sector (Exhibit 3). This is partly the result of a lack of sophistication in corporate asset-liability management (in terms of insufficient financial products for investment). But it is also due to a particular banking practice in China, whereby banks do not lend on a commitment basis, but debit the total loan immediately, while crediting the borrower with an equivalent amount of bank deposit. This enables the bank to earn a higher level of interest on the loan, since the loan is not charged on a disbursement basis and deposit rates are significantly lower than lending rates. This practice increases the deposit base at the same time as bank lending activity, resulting in a faster increase in money supply as credit expands. It is worth noting, however, that the regulators are beginning to change this practice of credit on a drawdown or disbursement basis.

Exhibit 3: China – Non-financial corporate loan/deposit as % of GDP

2007-2013



Source PBOC, Federal Reserve 2014, FGI analysis.

1 Andy Rothman, "Understanding China's Property Market," Matthews Asia, September 9, 2014. Found at: http://matthewsasia.com/perspectives-on-asia/sinology/article-790/default.ts

These high deposit ratios, in combination with stringent controls on bank credit, have forced corporates to rely heavily on trade credit or inter-enterprise credit. The size of Chinese inter-enterprise liabilities was RMB 51 TN, or 109% of GDP in 2011 (Yang 2013[1]), compared with RMB 39 TN, or 84% of GDP in short- and long-term bank debt. In contrast, US corporations borrowed from the banking system US$8 TN, or 52% of GDP, while borrowing more from the capital market in the form of bonds and market instruments. US corporations had US$3 TN in trade payables (inter-enterprise debt), equivalent to 19% of GDP (Federal Reserve 2014), or one-sixth the level in China.

There are two major reasons why Chinese enterprises borrow significantly from inter-enterprise credit markets. Firstly, most Chinese corporations came of age as manufacturing groups, relying on trade credit that is normally provided interest-free for short-term credit. Secondly, cash-rich SOEs are frequently willing to lend to customers, because they believe that they understand customers' credit risks better, as a result of their business or supply-chain relationships.

Fourthly, and finally, we argue that China is a net lender to the rest of the world, and therefore the debt problem is a domestic issue without direct global systemic implications since foreigners have little exposure to Chinese (shadow) bank liabilities. At the end of 2013, China's net international investment position totalled US$2 TN – 21% of GDP – with gross foreign exchange reserves totalling just under US$4 TN (State Administration of Foreign Exchange 2013). In contrast, the US owed the rest of the world 32% of its GDP. Having said that, recent corporate failures such as Kaisa show indeed that the Chinese financial system overall is no longer insulated and it is an example of how a domestic problem can spill over to foreign banks and investors.

In summary, we believe that the Chinese economy in total is not over-indebted, despite the rapid growth in credit volumes, that the government retains capacity to absorb losses, and that any emerging debt problem is of a domestic nature only. There are sufficient domestic savings to enable the corporate sector to increase its equity base (and lower its leverage levels) through debt/equity swaps, corporate restructuring and improvements in equity fund-raising in the capital markets without systemic implications.

1 李扬等著，《中国国家资产负债表2013——理论、方法与风险评估》，中国社会科学出版社。Li Yang and Zhang Xiaojing, "China's Sovereign Balance Sheet and Implications for Financial Stability", in China's Road to Greater Financial Stability: Some Policy Perspectives (IMF Press, 2013).

2. THE UNDERLYING DRIVERS OF THE EMERGENCE OF THE CHINESE SHADOW BANKING SECTOR

The Chinese financial system currently suffers from a number of imbalances, with the following three being the most critical ones:

- Over-reliance on bank credit, compared to other funding solutions
- SME/retail sectors are starved of traditional banking sector credit provision
- Investor asset allocation are heavily skewed towards deposits, and lacking in equity market participation

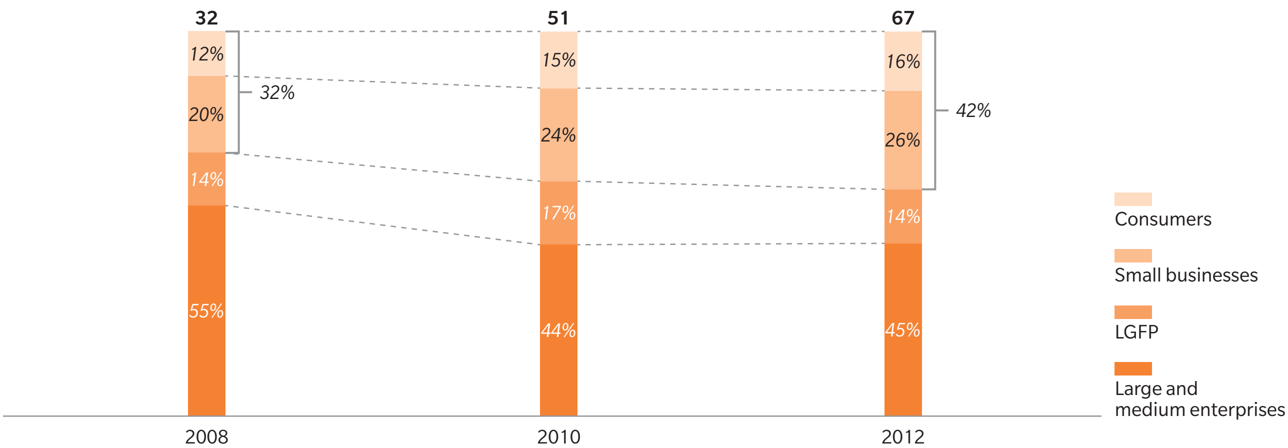
For the first point, we refer to our "Asia Finance 2020" paper, where we discussed at length a Chinese financial sector that is over-reliant on bank credit and lacking in developed capital markets. Since the majority of the funding is circulated within the banking system itself, thus resulting in a structural imbalance of equity versus debt in the financial system, the regulatory authority has put in place stringent controls on bank credit, including an annual credit quota system and regulations around capital ratio, as well as 75% loan-to-deposit ratio to slow down the credit booming and control the inherent risk. On top of these regulations, the unique practice of Chinese banks issuing "revolving" loans with shorter maturity to grow their credit books under comparatively low capital cost has pushed borrowers to the non-banking credit market.

Secondly, bank lending is significantly skewed towards state-owned enterprises (SOE) and large corporates, whereas small-and-medium enterprises (SME) and retail clients find it challenging to access bank credit. In "Asia Finance 2020", we discussed the fact that 99% of Chinese firms are SMEs, constituting 70% of employment, 60% of GDP, 50% of tax revenue and holding 65% of patents. Yet, they represent less than 20% of bank lending.

More recent data reveals that on average, 60% of the credit has gone to large enterprises and local government financing platforms (LGFPs), as of 2012. And while the amount of bank loans provided to small businesses has more than tripled from 2007 to 2012, it still only accounted for about a quarter of total bank loans.

Exhibit 4: China – Outstanding loans breakdown

RMB TN, 2008–2012



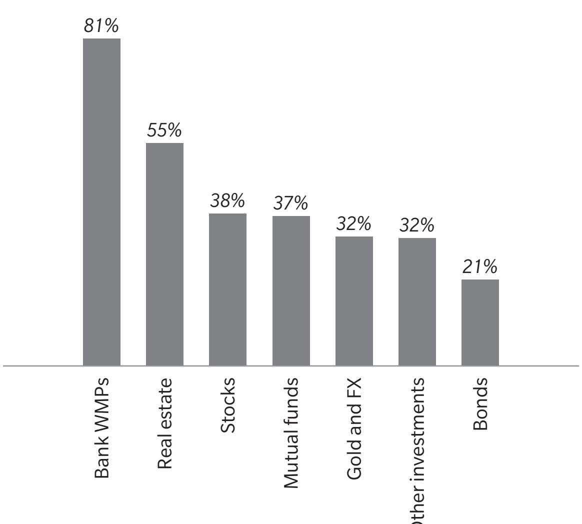
Source An analyst report from Morgan Stanley published on 9 August 2013, "China Deleveraging – Can Banks Ride Out a Financial Storm?", FGI analysis, Oliver Wyman analysis.

Finally, investors in China are severely restricted in their asset allocation and heavily exposed to bank deposits regarding fixed income investment. Deposit returns are capped (with initial steps of liberalisation only happening most recently), increasingly driving investors to seek out opportunities to achieve positive real returns.

Exhibit 5: Category and duration preference of mass affluent investors

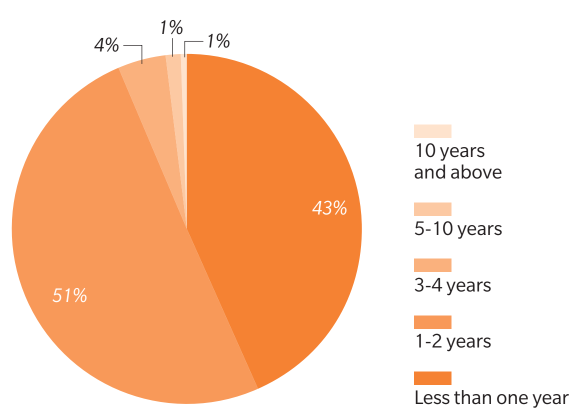
FAVOURITE INVESTMENT CATEGORIES OF THE MASS AFFLUENT

2013 SURVEY (MULTIPLE CHOICE), %



PREFERRED DURATION OF INVESTMENT

2013 SURVEY, %



Source Forbes, CreditEase, Oliver Wyman analysis.

In combination, these factors have effectively driven the emergence of the shadow banking sector, a form of alternative finance and investment.

Moreover, with the economy at risk of slowing, China's government and regulators face the challenge of maintaining sufficient liquidity in the financial system, while at the same time ensuring sufficient credit provision to sustain economic growth. Reducing the imbalances outlined above by improving the efficiency of the system is the most effective route towards addressing this conundrum. Hence, regulators across the financial services industry have been accommodating any private sector initiatives in this direction, including various forms of shadow banking.

3. A VIEW ON THE NATURE AND THE EXTENT OF RISK IN THE CHINESE SHADOW BANKING SECTOR

To understand the risks in the Chinese shadow banking sector, we first have to define what exactly shadow banking means in its Chinese context and form a view on the size of the market.

In its 2013 report on Shadow Banking, the Financial Stability Board (FSB) defines the sector as: "Credit intermediation involving entities and activities (fully or partially) outside the regular banking system." Yet, we observe different interpretations of the FSB's definition among Asian regulatory bodies.

Exhibit 6: Different definition adopted by selected Asian jurisdictions

REGION	VIEW ON SHADOW BANKING DEFINITION
Australia	Where the OFIs are not prudentially regulated and carry out credit intermediation
Hong Kong	Where the OFIs create significant systemic risks (i.e. where they predominantly undertake maturity/liquidity transformation and are susceptible to runs) and where those risks are not effectively mitigated by regulation or supervision
China	Where entities and activities outside the regular banking system are involved in credit intermediation with the functions of liquidity and credit transformation, which would create systemic risks or regulatory arbitrage
Indonesia	Where the OFIs are involved in maturity transformation, leverage and credit risk transfer, are not subject to prudential supervision and regulation, and failure or distress would create systemic risk
Philippines	Where the OFIs providing credit facility and financing are outside the regular banking system and, therefore, not subject to the same level of regulatory and supervisory requirements as banks
Malaysia	Where the OFIs transform maturity and liquidity, facilitate excessive leverage, raise risks of regulatory arbitrage; the nature, scope, and scale of activities and their connections to regulated financial entities

Note OFIs stands for Other Financial Institutions, NBFI stands for Non-bank Financial Institutions.
Source FSB "Shadow Banking in Asia" (Aug. 2014), Oliver Wyman analysis.

These interpretations can be grouped into three main views.

Exhibit 7: Three views on shadow banking

VIEWS		DESCRIPTION	JURISDICTION EXAMPLES
1	**Regulatory coverage**[*1]	• Shadow banking's key criteria rests on whether a financial institution or product is already included in the traditional regulatory system and is well-regulated • **An ex-post view** on shadow banking	  
2	**Credit intermediation product**	• Shadow banking defined as all credit intermediation activities • **Broadest scope** for shadow banking	
3	**Systemic risk**	• Shadow banking is defined as credit intermediation activities that expose the banking sector to systemic risk • **A fundamental "systemic risk" view** on shadow banking • "Systemic risk" of shadow banking refers to: – Leverage risk: Excess leverage can amplify pro-cyclicality – Maturity and liquidity mismatch: Maturity and liquidity mismatch can expose entities to liquidity and funding risks – Regulatory arbitrage: Banks interconnectedness with non-bank sectors results in credit risk spillover	 

*1 While CSRC's definition on shadow banking mentions both "credit intermediation" and "systemic risk", the official Document #107 actually adopts a "regulatory coverage" view by defining shadow banking in different degrees of regulatory coverage.

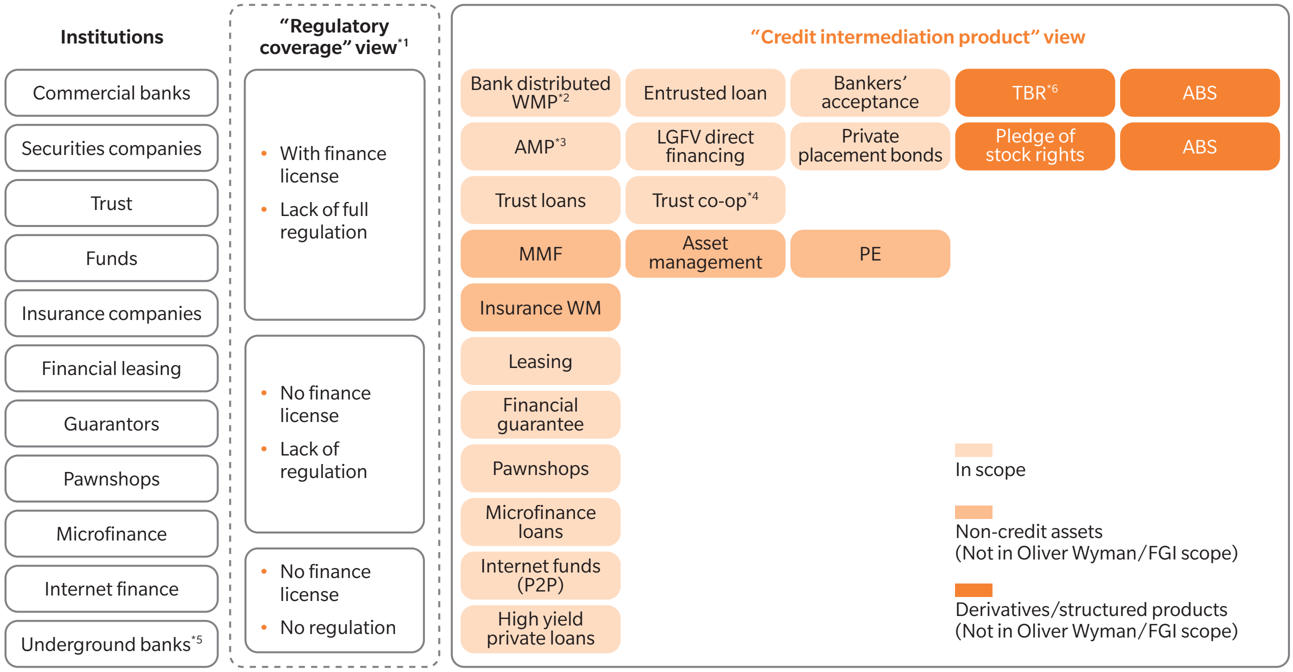
Source FSB "Shadow Banking in Asia" (Aug. 2014), "中国影子银行监管研究", Document #107 by State Council, Oliver Wyman analysis.

We take a three-step approach for categorising and sizing the market:

- Step 1: Product mapping
- Step 2: Segmenting by risk along the value chain
- Step 3: Overlap elimination

In our view, what matters most is whether a shadow banking product entails credit intermediation or not and whether it comes with a spillover risk to the formal banking sector. As a first step, our definition of shadow banking therefore only includes products entailing credit intermediation as outlined in Exhibit 8.

Exhibit 8: Shadow banking product mapping



*1 "Regulatory coverage" view proposed in latest State Council Document #107.

*2 WMP manufactured by non-bank FIs (such as trust companies) and distributed by banks. Purely-bank originated WMPs are not in scope of shadow banking.

*3 Asset management products.

*4 Trust cooperation products mainly consist of non-discretionary trust assets.

*5 Underground banks and third-party WMPs.

*6 TBRs (Trust Beneficiary Rights) are not in the scope of shadow banking as the underlying asset of this product overlaps with trust products.

Source Broker reports, Doc #107 by State Council, Oliver Wyman analysis.

Subsequently, we look for three layers of shadow banking, as defined by different connections with the formal banking sector.

Exhibit 9: Definition of three layers of shadow banking

Connection to banks		Layers	Mismatch[*1]	Explanation
Highest	1	**Bank OBSF layer**		• Banks serve underserved credit demand **via off-balance sheet "channeling"** as banks are constrained by regulatory requirements (e.g. loan quota limits, LDR ratios, capital requirements for Capital Adequacy Requirements, loan restriction on certain sectors) • **The major risk** stems from mismatch in investor risk appetite vs. asset risk, as well as banks being subject to "guaranteed return" (刚性兑付)[*2]
	2	**Credit enhancement layer**		• Credit enhancement institutions **help enlarge lending size** by providing guarantees (indirect participation) for lower credit customers to banks or lending (direct participation) to lower credit customers • The underlying risk in credit enhancement layer **could spill over to** banks, as banks are subject to "guaranteed return" (刚性兑付) when credit enhancement institutions default
Lowest	3	**Non-bank lending layer**		• Non-banks serve credit demands **not served by banks** (either directly or indirectly) • Non-bank shadow banking institutions include financial leasing companies, pawnshops, microfinance companies, P2Ps, etc. • Risks of these shadow banking activities is high, yet the risk usually **would not spill over to banking sector** and poses little systemic risk to the country

○ Low-risk mismatch

● High-risk mismatch

*1 Mismatch between asset/liability duration and/or expected vs. real credit risk.

*2 Banks forced to pay principle and interest to the investors, even if the underlying borrowers default.

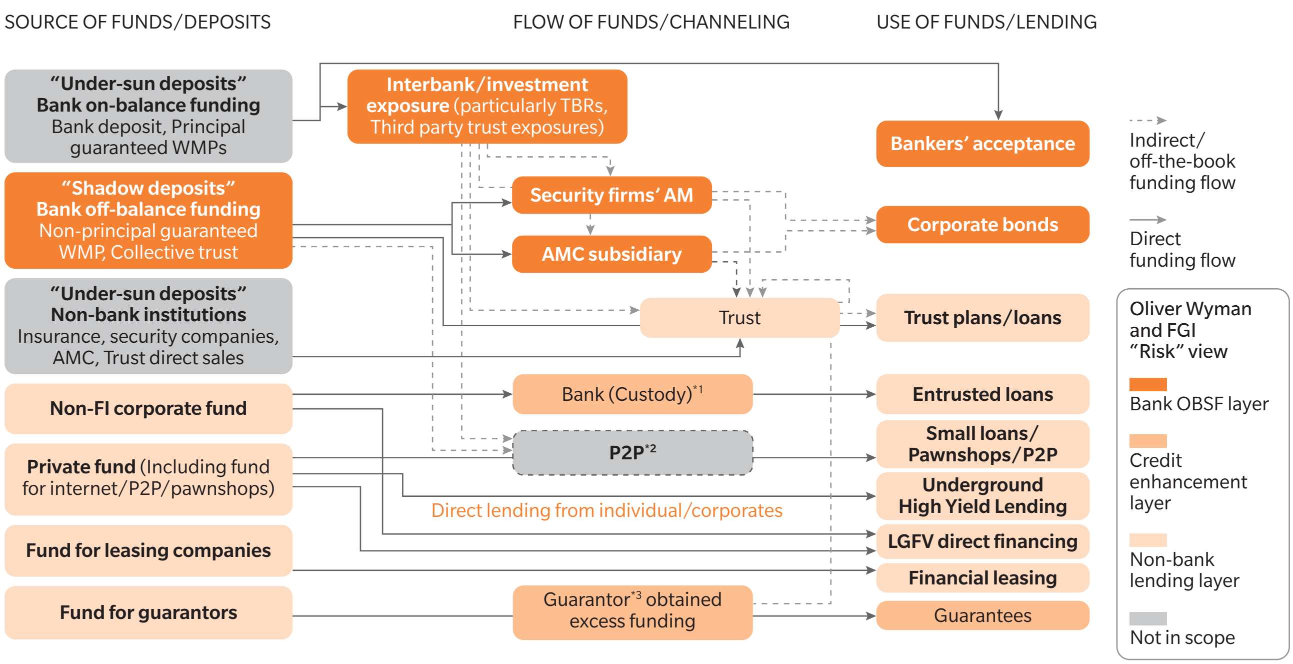
Source Expert interviews, Literature search, FGI analysis, Oliver Wyman analysis.

As a next step, we need to address the overlaps, which are typically ignored when the shadow banking market is sized. It is critical to keep in mind that there is both a "source" and a "use" of funds perspective, which in the Chinese context is often complicated by an interim channelling or "flow-of-funds" perspective.

Exhibit 10, therefore, shows the three dimensions for source, flow and use, combined with a categorisation along the three risk layers defined above.

In summary, taking a systemic risk view, we estimate the 2013 China shadow banking market amounted to approximately RMB 31 TN[1], after eliminating an overlap of RMB 7.9 TN (Exhibit 11).

Exhibit 10: Schematics of flow of funds in China shadow banking system



*1 Banks' entrusted loan products de-facto belong to the non-bank lending layer as banks are less likely to be responsible for "guaranteed return". Entrusted loans could only be seen as similar to the bank OBSF layer when they are repackaged and sold as WMPs. However, in 2014 entrusted loans were sometimes used by banks to generate fresh bank credit, which can generate risk similar to that of the bank OBSF layer.

*2 Emerging trend of P2P players acting as a platform for banks to "channel" funds to underserved P2P customers. As the business is still at a nascent stage of development, Oliver Wyman and FGI have not taken the potential overlap issue of P2P into account (i.e. assumption of non-overlap is 100% for P2P).

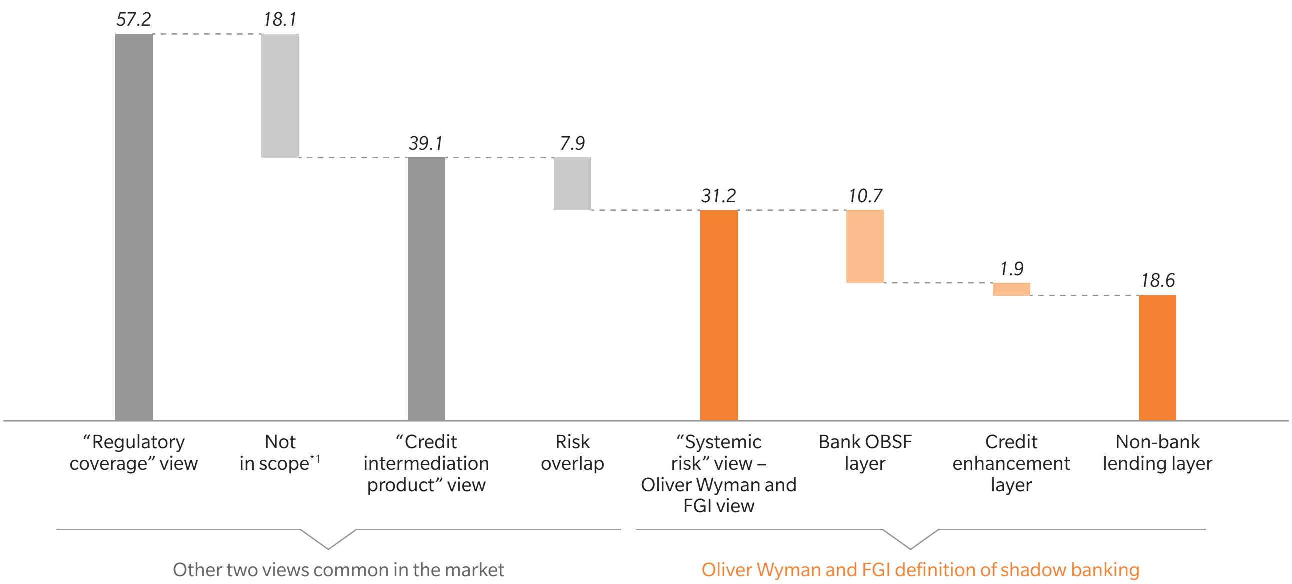
*3 According to a *Daily Business News* article (15 Feb 2012), among the 100+ licensed guarantors in Beijing, only some 20 have been focusing on their guarantee service. Others act more like a lender by lending excess funding to other shadow banking entities such as small loans/pawnshops/P2P/trust plans.

Source Expert interviews, Bernstein Research, Press research, Oliver Wyman analysis.

1 Detailed calculation and methodology is included in the Appendix and in a full report on shadow banking to be published by FGI.

Exhibit 11: Shadow banking assets size in 2013

RMB TN, ROUNDED TO NEAREST RMB 0.1 TN



*1 Non-credit products, derivatives and grey market. "Regulatory coverage" view not including PE investors' outstanding balance.

Source CEIC, PBOC, CBRC, Ministry of Commerce, China Trustee Association, China Leasing Association, WIND, National Audit Office, Oliver Wyman analysis.

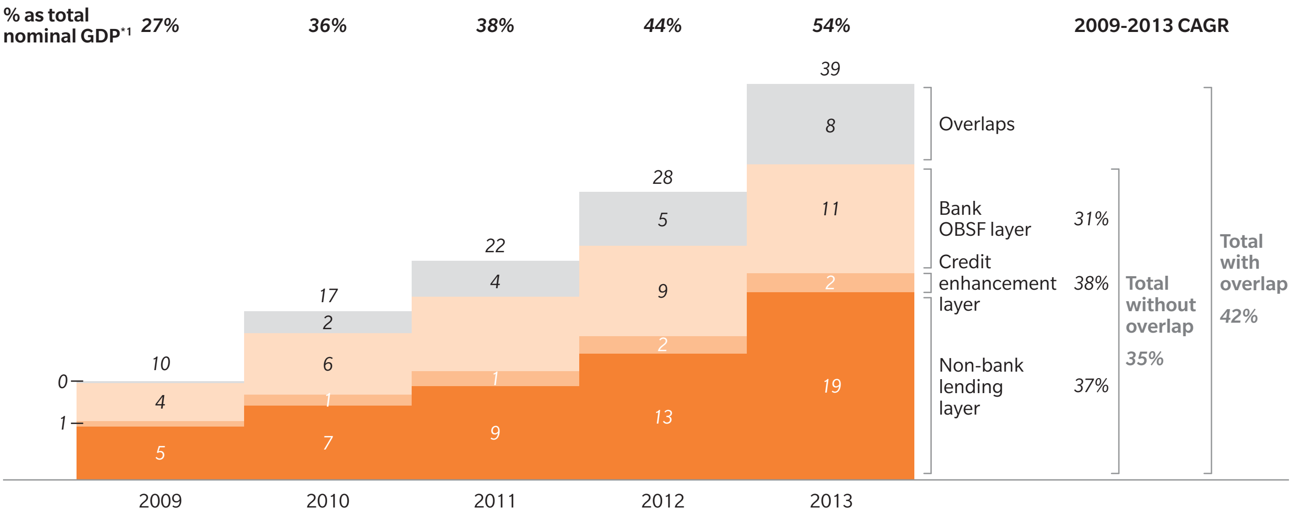
In summary, we therefore conclude that the overall shadow banking market is smaller than typically assumed. Beyond this, we draw three further conclusions from our analysis:

1. Despite the rapid growth of shadow banking in China in recent years, its overall asset size is in fact still moderate, when compared to the overall size of the financial sector and GDP
2. Chinese banks' risk/NPL exposures to the shadow banking sector are largely contained, as banks' direct and indirect exposures to shadow banking are still comparatively small
3. While more remains more to be done, the Chinese shadow banking sector is most recently in the process of being closely monitored by various regulatory bodies

In covering these points one by one, we first show in Exhibit 12 that despite the rapid growth of shadow banking in China in recent years, its overall asset size is in fact still moderate.

Exhibit 12: China shadow banking by FGI/Oliver Wyman-defined segments

RMB TN, ROUNDED TO NEAREST RMB 1 TN



*1 Numbers for years prior to 2013 may be underestimated due to absence of reliable data.

Source CEIC, PBOC, CBRC, Ministry of Commerce, China Trustee Association, China Leasing Association, WIND, Analyst reports, Oliver Wyman analysis.

While the fast growth rates might raise alarm bells, the overall exposure over GDP remains at manageable levels, in particular when compared to other countries such as the US or UK, where FSB has estimated the shadow banking sector to account for 84% and 177% of GDP.

Second, Chinese banks' direct and indirect exposures to shadow banking are relatively restrained, with the highest risk to be found in the bank OBSF layer.

Exhibit 13: Risk profile for three segments of shadow banking

	BANK OBSF LAYER	CREDIT ENHANCEMENT LAYER	NON-BANK LENDING LAYER
Description	• **Banks' off-balance-sheet lending** (WMP, Bankers' acceptance, Security firms' AMP, Trust cooperations)	• Non-bank credit enhancement to facilitate lending (Guarantee)	• Non-banking lending
2013 est. size	~RMB 10.7 TN	~ RMB 1.9 TN	~ RMB 18.6 TN
Exposure profile	• **WMP & Security firms' AMP** with non-standard credit assets (e.g. trust loans) as investment targets • **Banker's acceptance** as payment and short-term financing means for corporates	• Typically high-risk corporates/ SME, which cannot obtain loans through traditional bank lending directly	• Typically high-risk SME/Micro financing (including trust products), which cannot obtain loans through traditional bank lending directly • Entrusted loans: corporates with abundant cash lend to other corporates
Bank linkage and loss contingency to banks	• **WMP exposure** – not consolidated to banks' balance sheet • **Banker's acceptance** – contingent liability off bank balance sheet until the bills are discounted • **"Implicit guarantees"** for investors persist in the market, which put banks at risk of being force to share some of the losses	• **Banks subject to risk** when credit enhancers (e.g. guarantors) failed to repay for defaulted corporates	• **Usually no risk of spillover to banks** • **"Implicit guarantees"** for banks **only if banks are indirectly involved** via setting up a subsidiary or channelling lending through those products (e.g. setting up a P2P subsidiary, structuring products to invest in pawnshops, buying bonds of microfinance companies)
Potential bank risk (mislabelling, mismatching, lack of risk management)	HIGH • High risk loan to LGFV and real estate developers disguised as low risk WMP, AMP • Banks lack risk management for bank OBSF layer, as the exposures are off-balance sheet	MEDIUM • The segment is mostly regulated by the local government • The guarantors may go bankrupt and pose spillover risk to banks	LOW • Despite the high risk nature of the industry, the industry is regulated by CSRC*1, and in some cases MOC*2

*1 China Securities Regulatory Commission.

*2 Ministry of Commerce.

Source PBoC, Expert interviews, Oliver Wyman analysis, Bernstein Research.

Beyond this basic view on risks, we have then taken an approach to estimate the NPL ratio in the shadow banking sector under various scenarios. In a nutshell, our approach works as follows:

- We compare banking/shadow banking interest rate levels and have picked Korea as the most comparable market to China (see Exhibit 14)
- Based on this interest rate level delta between Korea and China, we "bump down" the Chinese sector credit ratings. This allows us to calculate expected NPL ratios
- We then run a few scenarios

Estimating NPLs is a notoriously difficult task, and the approach taken is somewhat "linear" in nature, potentially underestimating "contagion" in a financial system but we believe it serves as a good starting point for the discussing of risks in the shadow banking sector.

Key China shadow banking product glossary

PRODUCT	DEFINITION	DESCRIPTION
Bank wealth management products (WMP)	Bank-generated investment products that are sold to banks' retail and institutional customers	• Funds are pooled with relatively short investment horizon and invested in longer duration assets • In theory, banks act as managers of these products and investors bear the risks • Major losses may become banks' liabilities due to reputation risks
Entrusted loan	A loan organised by an agent bank (trustee) between borrowers and lenders (trustor), which are government departments, enterprises/ public institutions or individuals	• One of the major models of inter-enterprise credit in China as a result direct borrowing and lending between commercial enterprises is prohibited • No loan risk is assumed by the trustee – only responsible for the collection of principal and interests for which a handling fee is charged • Not included in banks' balance sheets
Bankers' acceptance (BANs)	A short-term debt instrument issued by a firm that is guaranteed by a commercial bank and drawn on deposit at the bank	• A type of short-term credit drawn on a bank deposit by a bank's customer for payment at a future date • An unconditional liability of the bank after acceptance • "Manipulated" as a type of shadow currency in China to allow under-reserved banks to purchase deposits and fuel investment in more high yield, high-risk industries • Major risks for banks since they would become liable to the holders of the acceptance in cases of default
Directional asset management products	"Directional asset management" products provided by securities companies to banks as a form of "funds channelling" from banks via security firms to borrowers	• Banks' funds are entrusted to securities companies and subsequently repackaged into an investment product • The funds can then be used to purchase a trust product, which banks are prohibited in doing so directly by default • Banks are thus making off-balance-sheet loans
Trust loans	Trust companies raise money via different trust products from investors, which are then invested in loans or securities	• Act as the primary trust credit, which are typically two years in duration, contributing the largest share to China's vast shadow banking sector • Investors are usually high net worth individuals or corporations that can meet required minimum wealth standards (several RMB MM in assets) and the minimum investment size (typically RMB 1 MM) • Trust loans are vital to the Chinese economy and are often used to fund infrastructure projects or property development, and for banks to move assets off balance sheet
Trust cooperations	Trust companies may raise money from banks and security firms, thus forming a funds "channelling" business known as a "trust cooperation"	• As part of bank-trust cooperation, a bank might sell a bundle of loans to another bank, which would pass them on to a trust company that would then package them for the first bank to sell the packaged loans

Source CBRC, Literature search, Oliver Wyman analysis.

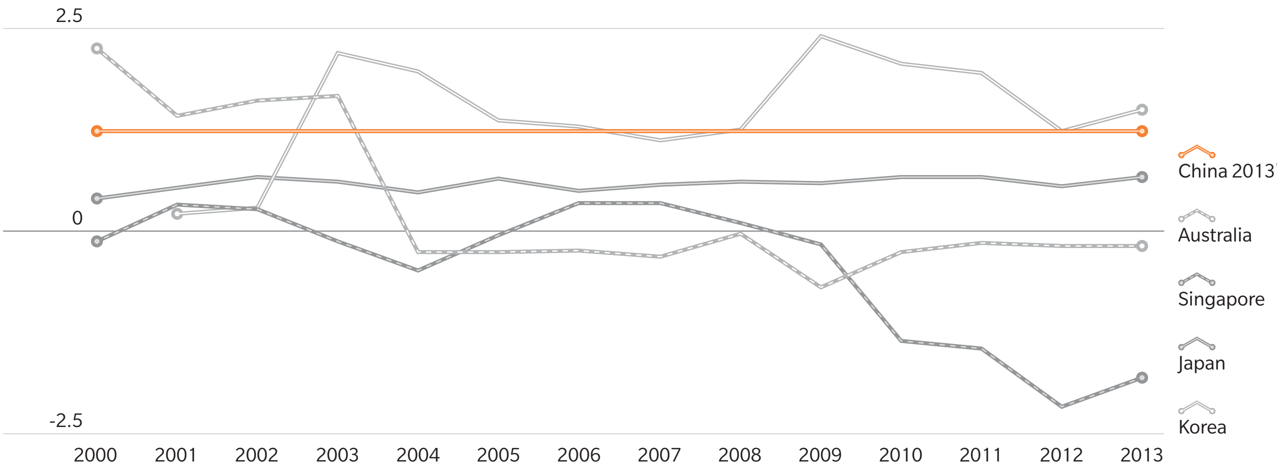
DETAILED NPL SIZING METHODOLOGY

Our sizing has four distinct features:

- It uses credit rating as the indicator. We use credit ratings as an indicator of credit asset quality to estimate NPLs. In order to estimate credit ratings of shadow banking assets/creditors, we benchmark shadow banking exposures in China against those of other Asian countries. In particular, we find that Korea has the most similarities with China since interest rates differences between bank and non-bank (i.e. shadow bank) financing are largely the same. The credit ratings for shadow banking exposures in Korea are on average at least three notches lower than banking-related exposures. We therefore assume for our optimistic case scenario that shadow banking exposures should be "downgraded" by three notches compared to the related banking exposures
- It is industry specific as credit asset quality varies significantly across different industries. We break down shadow banking assets by industry, and estimate a shadow banking credit rating for each industry based on the corresponding NPL ratio and credit ratings of banking exposures for the same industry
- It is scenario based by notching down different levers and considering the possibility of fast deterioration of credit asset quality of selected industries. We create four scenarios representing different outlooks of risk in China's credit market. For each scenario, we calculate average NPLs based on deteriorated credit ratings accordingly. For example, in our base and disastrous scenario, we assume the credit rating of all industries will drop four and five notches, respectively
- It considers selective "transferability" into the formal banking sector. Each of our three risk layers (see Exhibit 16) comes with a different transferability into banking system. Hence, we calculate which share of NPLs is likely to be transferred from the shadow banking to the formal banking system

Exhibit 14: Interest rate differences between banking and shadow banking

CREDIT QUALITY GAP
INTEREST RATE DIFFERENCE BETWEEN BANK AND NON-BANK LENDING*1



*1 Non-bank lending average interest rate calculated as average of all available data on non-bank financial institution lending interest rate. Due to fundamental financial structure and data differences across countries, non-bank lending does not imply similar financial coverage.

*2 Shadow banking is relatively nascent in China and thus only 2013 data are available from press searches.

Source CEIC, country's central bank and country's statistical associations, press, Oliver Wyman analysis.

Depending on the extent of credit rating bumps, we believe the China shadow banking NPL ratio to be in the range of 4% to 24%.

Exhibit 15: Estimated shadow banking NPL ratios under different scenarios

LOAN BY INDUSTRY[*1]	BANKING NPL (RMB BN)	BANKING NPL RATIO %	BANKING LOAN CREDIT RATING	SHADOW BK ASSET WEIGHT%[*1]	SHADOW BK SENSITIVITY (CREDIT RATING/PD%) Optimistic 3 notches	Base 4 notches	Pessimistic 4-5 notches	Disastrous 5 notches
Manufacturing	215.0	1.79%	BB	20%	B/8.0%	B-/19.6%	CCC-C/48.4%	CCC-C/48.4%
Wholesale and retail	170.0	2.16%	BB	25%	B/8.0%	B-/19.6%	B-/19.6%	CCC-C/48.4%
LGFV	0.79[*2]	0.32%	BBB+	12%	BB+/1.1%	BB/1.5%	BB-/2.3%	BB-/2.3%
Real estate	21.4	0.48%	BBB+	18%	BB+/1.1%	BB/1.5%	BB-/2.3%	BB-/2.3%
Mining	4.9	0.31%	BBB+	7%	BB+/1.1%	BB/1.5%	BB-/2.3%	BB-/2.3%
Transport/storage/post	32.4	0.68%	BBB	2%	BB/1.5%	BB-/2.3%	BB-/2.3%	B+/3.9%
Electricity/gas/water	13.7	0.51%	BBB	2%	BB/1.5%	BB-/2.3%	BB-/2.3%	B+/3.9%
Construction	12.9	0.50%	BBB	3%	BB/1.5%	BB-/2.3%	BB-/2.3%	B+/3.9%
Leasing and commercial	7.8	0.29%	A-	0%	BBB-/0.8%	BB+/1.1%	BB+/1.1%	BB/1.5%
Public utility	2.2	0.11%	A	0%	BBB/0.5%	BBB-/0.8%	BBB-/0.8%	BB+/1.1%
Farming, forestry, animal and fishery	26.4	2.27%	BB	0.34%	B/8.0%	B-/19.6%	B-/19.6%	CCC-C/48.4%
Others	2.3	0.89%	BBB-	10%	BB-/2.3%	B+/3.9%	B+/3.9%	B/8.0%
Total				100%	4.4%	10.0%	16.1%	23.9%

Selective scale-down by 1 notch[*3]

*1 Size of industry specific shadow banking assets as percentage of total size of shadow banking assets.

*2 LGFV banking NPL size is a sum of NPL categories from PBoC including Resident & other service, Education, Health care, Social security & welfare, Culture, Sport & recreation, Public management & social organisation; LGFV banking loan credit rating is backward calculated based on overall Chinese banking NPL% level of ~1% in 2013.

*3 Credit quality of sectors that have overcapacity or are policy-restricted may deteriorate faster than other industries.

Source An analyst report from Morgan Stanley published on 3 September 2013, "China Deleveraging: Shallow U, Deep U or W?", PBOC, FGI analysis, Oliver Wyman analysis.

As the last step in our NPL calculation, we estimate that 22% to 44% of shadow banking NPLs will be "transferred" to the banking system, as an average of the three risk layers, as shown in Exhibit 16. We work with the following assumptions which are based on industry discussions and a review of the likely loss distributions across the various constituencies:

- For the bank OBSF layer, we assume banks will suffer "guaranteed return" claims and absorb a loss of up to 100%; in most cases, a portion of the loss can be recovered, resulting in a hit of anywhere from 60% to 100%
- For the credit enhancement layer, only if both the borrower and the financial guarantee company default, does the bank suffer a loss. We estimate that 20% to 60% of all losses will be channelled into banking system
- For the non-bank lending layer, a bank's involvement is indirect, coming via an equity investment in non-banking lending companies/platforms or else by providing financing to them. In such cases, the bank will be partially impacted once the borrower defaults. We assume that less than 10% of the total losses will be channelled into the banking system

Exhibit 16: "Transferability" analysis for shadow banking NPLs on formal banking

	ASSET SIZE	PERCENTAGE RANGE OF DAMAGE TRANSFERABLE TO FORMAL BANKING		RANGE OF DAMAGE TRANSFERABLE TO FORMAL BANKING	
	RMB TN	Lowest %	Highest %	RMB TN	RMB TN
Bank OBSF layer	10.7	60%	100%	6.4	10.7
Credit enhancement layer	1.9	20%	60%	0.4	1.1
Non-bank lending layer	18.6	0%	10%	-	1.9
Total	**31.2**			**6.8**	**13.7**
			Weighted average	**~22%**	**~44%**

Source Expert interviews, FGI analysis, Oliver Wyman analysis.

Translating that impact into banking NPL numbers, we estimate the increase to be about 4.3% under the worst-case disaster scenario, assuming that 44% of the NPLs of shadow banking will be channelled to the formal banking system. Exhibit 17 shows that under different scenarios, the incremental NPL ratio on the formal banking caused by shadow banking will range from 0.4% to 4.3%.

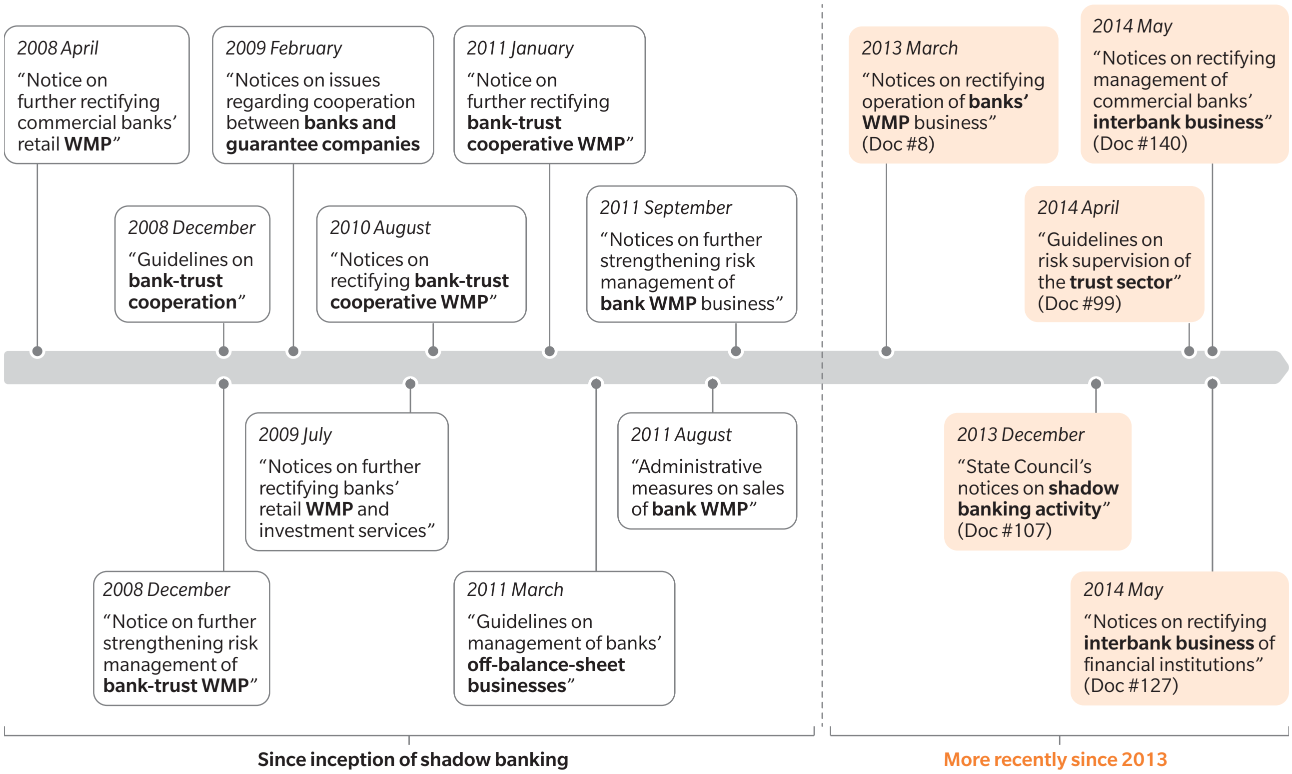
Exhibit 17: Scenario analysis of shadow banking NPLs' impact on formal bank NPL ratio (incremental NPL % of banking caused by shadow banking)

NPL % OF SHADOW BANKING		TRANSFERABILITY FOR SHADOW BANKING NPL'S ON FORMAL BANKING*1		
		22.0%	**33.0%**	**44.0%**
Optimistic scenario	4%	0.4%	0.6%	0.8%
Base scenario	10%	0.9%	1.4%	1.8%
Disastrous scenario	24%	2.2%	3.2%	4.3%

*1 (Shadow banking NPL size x banking sector's overall EAD)/total amount of loans outstanding in the banking sector.
Source WIND, CEIC, Press, Oliver Wyman analysis.

Beyond a calculation of NPLs, we argue that the Chinese regulators are in the process of closely monitoring the developments of the domestic shadow banking industry. An overview of the regulatory initiatives is provided on the following page.

Exhibit 18: Summary of some key shadow banking regulations in recent years



Source China Financial Policy Report 2014, PBOC, CBRC, Oliver Wyman analysis.

There remain clear issues to resolve and risks to mitigate across the three layers of shadow banking in China. They include significant risk mismatches between investor risk appetite and asset quality on the OBSF layer, different regional capital adequacy standards for the credit enhancement layer or simply the lack of a comprehensive regulatory framework for the non-bank lending layer.

Hence, there is little doubt that much remains to be done. This is the focus of the next section.

4. PROPOSED REFORM AGENDA

We have structured this section into three components:

- A suggested action plan for regulating the shadow banking sector
- A broader short-term agenda for the Chinese financial sector
- A view on the longer-term agenda

With regard to regulating the shadow banking sector, we see a reform agenda differentiated across all three layers of risk, addressing key root causes.

Exhibit 19: Key issues and regulatory/opportunities and regulatory implications

SEGMENTS	KEY ISSUES	REGULATORY IMPLICATIONS
Bank OBSF layer	• "Hidden bomb" to the banking system, due to increasing opaqueness of funds channelling • Most risk mismatch concentrated in the bank OBSF layer	• **Eliminate regulatory arbitrage** by redesigning the regulatory framework – Prevent risk mismatch and mislabelling – "Formalise" banks' off-balance lending to shadow banking institutions – Improve risk management on bank related shadow banking products • **Establish a credit "firewall"** between commercial banks and non-bank shadow banking activities – Prevent execution risk by prohibiting commercial bank employees' participation in non-bank shadow banking/financing activities • **Clarify credit liabilities** to avoid non-contract-binding risk spillover to banks via "guaranteed return" (刚性兑付)
Credit enhancement layer	• "At the frontier of default," due to naturally higher risk of loans • Relatively loose control over credit enhancement institutions (regulated under local government instead of CBRC)	• **Enhance risk management capabilities** – Regulations on capital requirements if credit enhancement institutions were to participate in lending – Tight regulation and execution on credit enhancement institutions illegally participating in shadow banking activities • **Better coordinated policy setting, ultimately facilitating further industry consolidation**
Non-bank lending layer	• "Healthy" complement to financing via bank loans but very little oversight/regulatory control	• **Increase transparency** in non-bank lending activities – Emphasis on establishment of proper risk management to facilitate more rational pricing of credit risk – Eliminate irregular practices to reduce moral hazard • **Regulate** to enhance non-bank FI's risk management

Source Expert interviews, FGI analysis, Oliver Wyman analysis.

Second, when we look at the Chinese financial system more broadly, the short term agenda should focus on improving transparency and establishing a safety net. In particular, we would:

- Expedite implementation of the deposit insurance scheme and bank restructuring/exit mechanism. This is urgently needed to address any potential buildup in shadow banking NPLs and facilitate the orderly resolution of any shadow bank failures. It would also clarify public misperceptions about the implicit guarantee and reduce moral hazard about state bailout of troubled shadow banking products
- Implement the FSB's Legal Entity Identifier (LEI) initiative to clarify who owes what to whom and untangle the bundling of risks between shadow and commercial banks. At the same time, the establishment of a property registry will help to clarify property rights

- Set up a market-based credit bureau with private sector participation and promote financial consumer education to strengthen the credit culture in China as the basis for a sound and stable financial system
- Continue with the orderly process of financial liberalisation to reduce the opportunities for regulatory arbitrage

In addition, focus should be put on restructuring/simplifying the regulatory supervision model. In particular, we would argue for:

- Establishing an interagency task force to sort out the inter-enterprise credit problem and improve credit accountability, removing the joint-guarantee, joint-credit system. This is closely related to the underlying problem of real sector funding for long-term investments
- Clarifying the roles of regulatory authorities, including through legislative amendments, to strengthen interagency cooperation and minimise supervisory gaps

Finally, the longer-term reform agenda should focus on:

- Developing the capital/equity markets and long-term pension and insurance funds to reduce the over-reliance on short-term bank lending to finance long-term development. This will address the maturity and structural capital (debt/equity) mismatch, as well as meet the social security needs of an aging population
- Promoting private equity and equity funds to inject capital into innovative enterprises and to deleverage the borrowers
- Improving the management of state assets and separating the role of the state from one of ownership to one of promoting competition and efficiency so as to spearhead innovation and maintain long-term inclusive growth
- Controlling and managing the property market risks among local governments, by way of the fiscal revenue sharing reforms currently under consideration and through the development of the long-term municipal bond market and creation of secondary mortgage markets

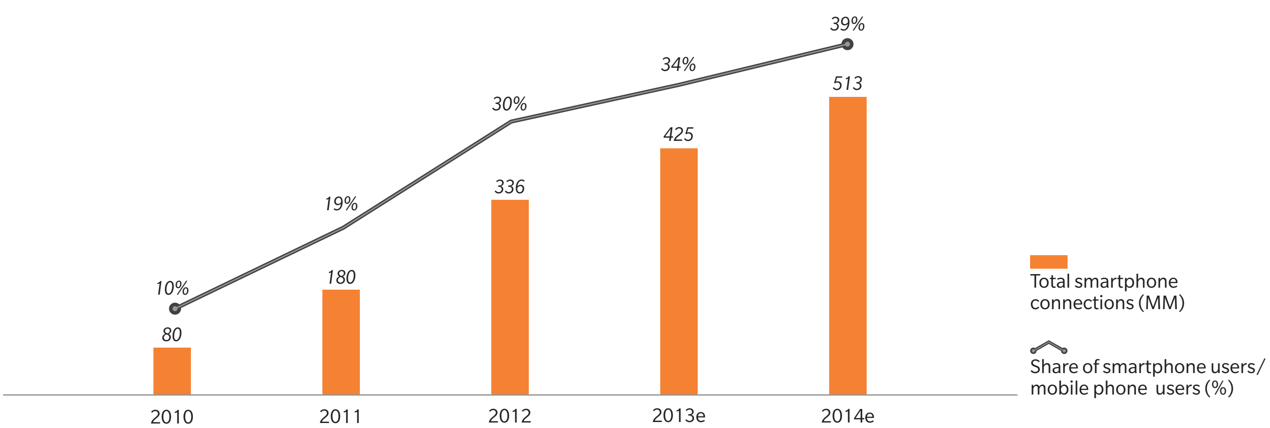
In conclusion, China's shadow banking problem is still manageable, but time is of the essence to pre-empt any escalation of shadow banking NPLs, which could have contagion effects. The current juncture represents an opportunity for a holistic solution to address the structural imbalances in the Chinese economy and financial system. This will ensure that the financial system meets China's changing funding requirements as its economy moves towards a middle class, urbanized consumption and production model that will be broadly based, technologically driven, mobile-Internet friendly, inclusive and ecologically sustainable.

5. IMPLICATIONS FOR THE PRIVATE SECTOR

In this section, we discuss the implications for the private sector, both for domestic incumbents as well as for foreign players looking to grow in China. It reflects the fact that shadow banking is to a large extent provided by new digitally enabled players (e.g. P2P or asset transfer platforms). Many of them suffer from poor profitability and inexperienced management teams, and in many cases we have seen rather loose risk management practices and controls. However, we believe that some of them have the potential to at least partially disrupt traditional banking models. This, in fact, is the other side of the coin of the Chinese shadow banking sector.

To put things into context, we first need to review client demand. And in doing so, we observe quick adoption of technology in China, in terms of the rapid development of online/mobile infrastructure, as demonstrated in Exhibit 20 below.

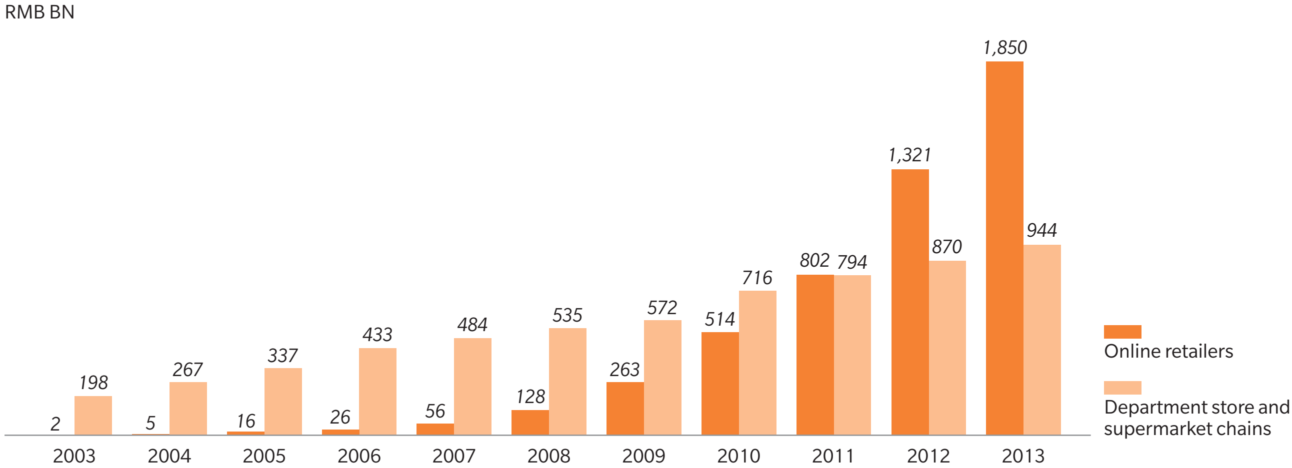
Exhibit 20: Smartphone usage in China



Source Ovum, Oliver Wyman analysis.

Moreover, we see the preference of young, wealthy, educated retail investors for convenient, transparent, informative investing/trading/financing platforms. This has been developed through online social networking and e-commerce champions such as Alibaba, Baidu and Tencent. In less than a decade, E-commerce sales, for example, have surpassed the total sales of department store chains and supermarket chains in China.

Exhibit 21: Online retail sales have surpassed those of department store chains and supermarket chains in China



Source: China Trade and Economic Statistical Yearbook, Oliver Wyman analysis.

To appreciate the significance of these "alternative business models", one has to look at the breadth of the customer reach that many of the leading Chinese "online pioneers" have achieved, which already goes beyond that of the largest banks in the country.

What this implies is that in light of rising customer expectations, in tandem with a young, sophisticated urban population, the supply side needs to constantly innovate.

For example, beyond alternative lending platforms, we also observe the emergence of online financial-asset trading platforms, allowing retail and institutional investors to trade assets in a more transparent and increasingly liquid market. Such initiatives are blossoming, as they are ultimately supported by the government's interest in overcoming information asymmetry and the widely different level of sophistication across geographies and client segments.

Beyond these product/platform innovations, we also see some of the emerging players in the shadow banking sector ahead of the curve in terms of how they use "big data." Because China lacks a credit-rating bureau, innovation in collecting and applying information for business purposes is particularly critical. Having led a number of due diligences on some of the fastest growing peer-to-peer lenders in China, we have been particularly struck by the broad range of innovation in such areas as credit-scoring processes.

In our view, this wave of innovation has clear implications, both for the incumbent Chinese financial services players and international institutions seeking to gain a foothold in the Chinese market.

For the incumbents we would argue they focus on:

- Strengthening the credit culture, leveraging available data to a much larger extent
- Building strong deposit characterisation and pricing capabilities, particularly in light of further interest rate liberalisation and the opening of the capital account
- Strengthening asset/liability management capabilities, covering both on- and off-balance-sheet components
- Developing an integrated investor product perspective (across various segments of WMPs, mutual fund products, brokerage/asset trading offerings, deposits, and potentially insurance/pension solutions)
- Innovating SME/retail investor financing products (as the range of products offered amounts to only about 10% to 20% of what we see in more developed markets)

This agenda is a largely "defensive" one, particularly the first three points. But we are convinced that strengthening these capabilities will be decisive in determining the future winners in China's banking system.

The agenda for international competitors is an entirely different one, particularly as most of them have struggled to build a sustainable and profitable business in China.

Historically, most foreign banks have focused their efforts on trying to participate in the wholesale banking segment, serving their global MNC clients or leveraging global product expertise such as mergers-and-acquisitions (M&A) banking and trade finance.

Going forward, we believe that the emergence of the shadow banking sector also creates opportunities in the fast-growing retail/SME sector.

The future leaders have started to scrutinise the new landscape and are looking for investment opportunities beyond the banking sector (P2P platforms, financial asset trading platforms, etc.). This sector is also less regulated in terms of foreign ownership and hence creates an opportunity for a higher level of management influence.

We see a few competitors getting ready to leverage a set-up in the China (Shanghai) Pilot Free Trade Zone (SHFTZ) to funnel offshore RMB liquidity into higher yielding onshore investment opportunities for their global investor clients. Particularly in a global low-yield environment, this can increasingly turn into an attractive differentiator for institutions serving the investor segment.

Most importantly, we believe these developments require a reversing of the mind-set: instead of only looking for areas where their global capabilities can be important in China, we believe that successful banks must also look at the opposite: leveraging Chinese alternative business model capabilities in their home markets.

APPENDIX

PRODUCT GLOSSARY	
NAME	**DEFINITION/DESCRIPTION**
Bank WMP	Bank-generated investment products that are sold to banks' retail and institutional customers.
Entrusted loan	Loans organised by an agent bank between borrowers and lenders, which are often enterprises or individuals.
Bankers' acceptance	A short-term debt instrument issued by a firm that is guaranteed by a commercial bank.
AMP	"Directional asset management" products provided by securities companies to banks as a form of "funds channelling" from banks via security firms to borrowers.
LGFV direct financing	Local governments (or through their financing vehicles/platforms) borrow directly from individuals, companies, and government treasury bond funds.
Bonds (SME)	SME private placement bonds, often issued by securities firms.
Trust loans	Trust companies raise money from investors via the sale of various trust products which are in turn lent to corporates.
Trust co-op	Trust companies raise money from banks and security firms, which then form a funds "channelling" business known as "trust cooperation".
Leasing	The lessee (user) pays the lessor (owner) for use of an asset. In China, a corporate often sells the asset to a leasing company, and the leasing company gives cash to the corporate. Then the leasing company can lease the asset back to the corporate.
Financial guarantee	Credit enhancement institutions help enlarge lending size by providing guarantees (indirect participation) for low credit score customers, so that banks can issue the loan.
Pawnshops	A business that offers secured loans to retail clients/SME, with personal assets serving as collateral.
Microfinance Loans	Small size loans (mostly RMB 3-5 MM or below), offered to retail clients/SME.
Internet funds (P2P)	Online direct financing where individuals or corporates borrow money from other individuals or corporates without the use of a credit-intermediating financial institution.
High yield private loans	Loans with high yield, often directly between borrowers/lenders, without involvement of any formal financial institutions.

ACRONYM LIST			
ABS	Asset-Backed Securities	**MOC**	Ministry of Commerce
AMP	Asset Management Products	**NBFI**	Non-Bank Financial Institutions
CAR	Capital Adequacy Requirements	**NPL**	Non performing Loan
CBRC	China Banking Regulatory Commission	**OBSF**	Off-Balance-Sheet Financing
CSRC	China Securities Regulatory Commission	**OFI**	Other Financial Institutions
EAD	Exposure At Default	**P2P**	Peer-to-Peer
FGI	Fung Global Institute	**PBOC**	People's Bank of China
FSB	Financial Stability Board	**PD**	Probability of Default
LDR	Loan-to-Deposit Ratio	**PE**	Private Equity
LEI	Legal Entity Identifier	**SHFTZ**	China (Shanghai) Pilot Free Trade Zone
LGFP	Local Government Financing Platforms	**SME**	Small-and-Medium Enterprises
LGFV	Local Government Financing Vehicles	**SOE**	State-Owned Enterprises
MMF	Money Market Fund	**TBR**	Trust Beneficiary Rights
MNC	Multinational Corporations	**WMP**	Wealth Management Products

BREAKDOWN OF SHADOW BANKING SIZE		
	SCALE IN RMB BN	
BUSINESS/PRODUCTS	END 2012	END 2013
Entrusted loans	5,806	8,786
Banker's acceptance	7,730	8,499
Security firm AMP	144	587
LGFV direct financing/private placement bonds of SMEs	1,161	1,264
Trust products/loans	4,141	7,007
Leasing	1,550	2,100
Financial guarantee	2,170	2,532
Pawnshop products	71	87
Microfinance loans	592	819
Internet funds, P2P	6	12
Private lending	416	750
Off-balance-sheet bank WMP	4,691	6,700
Less: overlap	5,377	7,920
Total sizing	23,100	31,222

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