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Shadow Banking in China: Then and Now*

By* CHAO XI* and LE XIA*

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Shadow banking in China has continued to hit the financial headlines. China's rise as a global financial powerhouse has significant implications for investors, advisors, practitioners and regulators worldwide. This article discusses China's booming shadow banking sector from a regulatory point of view. The first part provides an overall assessment of the status quo: the forms of shadow banking transactions; the scale of the shadow sector; its risks; and the fast-evolving regulatory framework that aims to rein in those risks. The second part reflects on the primary economic and regulatory factors that have a direct bearing on the rise of China's shadow banking sector.

Where Are We Now?

A Snapshot of China's Shadow Banking Sector

The concept of shadow banking is not yet well defined. In the Chinese context, it broadly refers to banking transactions that take place outside the formal banking sector, although it is closely interconnected with formal banking.[1] While the ever-evolving nature of the shadow banking sector renders an inclusive account difficult, the following activities are typical shadow banking transactions:[2]

- *Wealth management products (WMPs)* encompass a wide range of financial notes issued by commercial banks or other financial institutions. WMPs are typically sold to individual investors through bank retail channels, with the proceeds then used to invest in the capital market or to extend credit. Although the principal of WMPs is not typically guaranteed, these products are attractive to individual investors because they promise higher yields than bank deposits.
- *Trust company products* generate proceeds allowing trust companies to extend loans and invest in financial products ranging from simple bonds to exotic derivatives. Trust companies are prohibited from deposit-taking under Chinese law, meaning that these products provide an important source of funding.

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[1] It has been argued that shadow banking in China is just formal banking in disguise: see D Elliott, A Kroeber and Y Qiao, Shadow Banking in China: A Primer (Brookings Institution, 2015).

[2] L Xia, A Garcia Herrero and S Schwartz, "An Update on China's Shadow Banking Activity: Have the Risks Increased?", *China Banking Watch,* 8 March 2013.

•*Entrusted loans* are company-to-company credits for which banks or other financial institutions (such as finance companies, trust companies or leasing companies) act as a broker. Such an intermediate role is essential, as Chinese law generally prohibits direct firm-to-firm loans.[3] Banks typically monitor the overall loan process, including contract signing and loan withdrawals and repayments, and receive fees without assuming any credit risk. Entrusted loans are thus treated as off-balance-sheet business by banks.

•*Bank acceptances* are drafts or bills issued by a company and endorsed by a bank. A bank endorsement allows companies to use bank acceptances as a means of payment. In essence, they are company credits backed by a bank guarantee.

•*Private lending* is the least transparent component of China's shadow banking sector. Those who engage in such lending include enterprises and individuals who either require liquidity or have excess funds to invest. Small financial intermediaries act as guarantors in the private lending market. Unlike entrusted loans, private lending activities are not channelled through the formal banking system, making them difficult to monitor and/or regulate. Indeed, many such intermediaries operate in a legal grey area and charge much higher interest rates than bank lending rates.

A brief account of WMPs follows to illustrate this type of shadow banking transaction. The emergence and rise of WMPs needs to be understood in the context of China's bank deposit regime, which until recently was stringently regulated. Deposit rates were traditionally set at artificially low levels by the People's Bank of China (PBoC), China's central bank, to help keep the cost of credit low for credit users – state-owned enterprises in particular. At the same time, consumer prices have been stubbornly high, as the Chinese economy remains investment-driven. This conflation of low interest rates and high consumer prices often leaves retail depositors with negative real returns on their deposits, rendering higher-yielding WMPs an attractive alternative investment option. With negative real interest rates still lingering in the post-global financial crisis (GFC) era, the WMP sector has experienced phenomenal growth. According to the China Banking Regulatory Commission (CBRC), total outstanding WMPs issued by banking institutions reached RMB7.1 trillion at the end of 2012 – a 55% increase over 2011. They were expected to reach RMB30.6 trillion by the end of 2016, according to one of the authors' estimate. Banks issue the majority of outstanding WMPs, although trust companies, insurance companies and securities firms are also important WMP issuers.

From a bank's perspective, WMPs serve important regulatory purposes. Most importantly, the Chinese authorities have adopted a regulatory light-touch approach toward what WMP proceeds can be invested in; a point that needs to be understood in the context of the various restrictions that the Chinese Government has from time to time imposed on what borrowers can do with bank loans. WMP proceeds, by contrast, afford much greater freedom, as they can be invested in a wide range of assets. The underlying assets can range from such liquid, low-risk assets as treasury bonds and money market funds to such illiquid, risk-bearing credit assets as small and medium enterprise (SME) loans, real estate loans and local government financing vehicle (LGFV) loans. Bank-originated WMPs that invest in bank loans, if properly structured, are no different from off-balance-sheet

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[3] A recent judicial development may well be the first crack in the wall, although firm-to-firm loans are treated with great caution to say the least.

lending: WMP proceeds are directed towards intended bank-designated users while being kept off the bank's balance sheet, and thus are not counted towards its risk-weighted assets. WMPs also have an additional benefit for banks. As bank-issued WMPs invested in loan assets are not counted as credit per se, banks can also circumvent credit quotas, an obsolete monetary policy instrument that has been revived and brought centre stage amidst Chinese regulators' efforts to curb excessive credit growth.

To measure the scale of China's shadow banking sector, one of the authors added up the liability side of all shadow banking activities, including all forms of WMPs, the asset management products of trust companies (from which are deducted WPMs under bank-trust cooperation to avoid double-counting) and the corresponding liabilities formed by such shadowing banking activities as entrusted loans, bank acceptances and private lending. According to one of the authors' estimates, the aggregate shadow banking sector totalled RMB61.9 trillion at the end of 2016 (see Fig 1), amounting to 83% of China's GDP and 28% of its formal banking assets (see Fig 2).

FIGURE 1 The Rise of China's Shadow Banking Sector

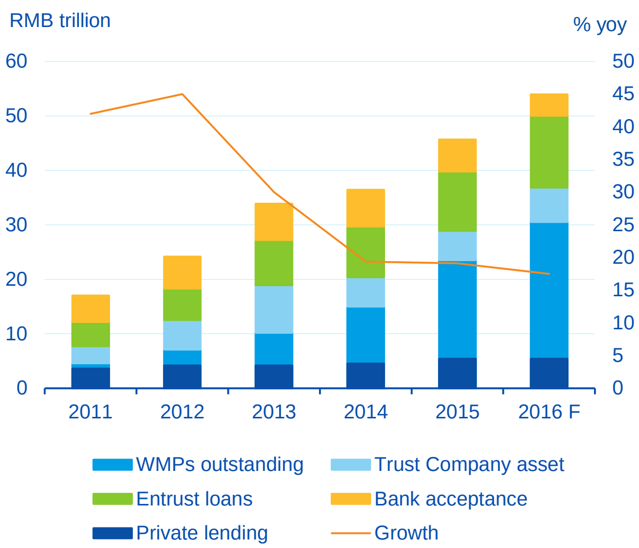
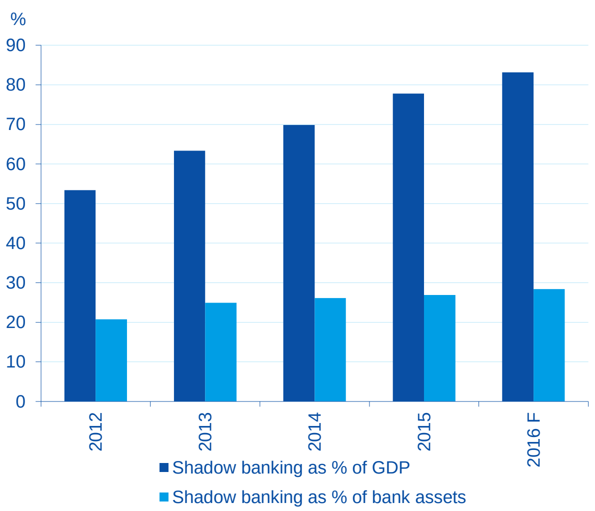


FIGURE 2 Significance of the Shadow Banking Sector to China's Economy

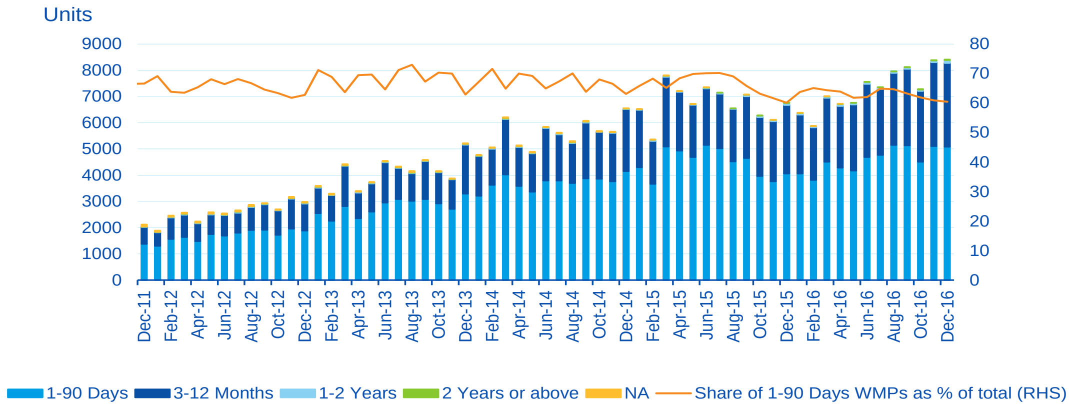


The Risks

The primary risk in the shadow banking sector is its growing exposure to the real estate sector in the broader context of China's economic slowdown.[4] The typical shadow bank borrower is an enterprise experiencing difficulties accessing funds from the formal banking system. Property developers, for example, generally look to the shadow sector, as they are the targets of policy constraints aimed at reining in what is perceived as an overheated housing market. In addition, local governments, through the LGFVs they control, are increasingly using informal credit channels to meet their financing needs. The asset quality of LGFVs can be dubious, which may accelerate the pace of bad debt accumulation if the economy continues to slow.

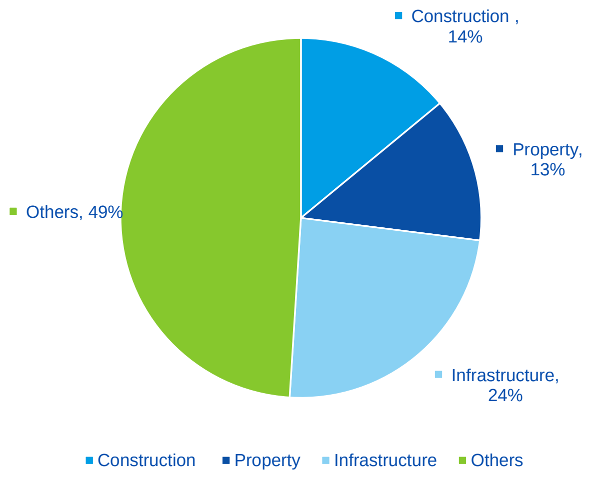
A related risk is maturity mismatch, given the short-term maturity structure of shadow banking transactions and the longer-term financing of the projects in which they are invested. Such mismatch is a particular risk when short-maturity WMPs are used to fund long-term infrastructure and real estate projects. The risk of maturity mismatch receded to some degree following the November 2011 prohibition on the issuance of WMPs maturing in less than one month. However, the share of short-term WMPs (one to three months) remains well above 60%, by far the largest share of such products (see Fig 3). Further, close to 50% of WMPs have underlying assets in the construction, property and infrastructure sectors (see Fig 4), and the significant mismatch between maturity and underlying assets imposes a potential liquidity risk.

FIGURE 3 Maturity of WMPs



[4] This section is based on Xia,Garcia Herrero and Schwartz, n 2.

FIGURE 4 Underlying Assets of WMPs



Regulatory Framework

To neutralise the risks associated with the fast-growing shadow banking sector, an increasingly complex and sophisticated regulatory framework has emerged (see Table 1). The regulatory emphasis has been on greater disclosure and transparency, on the basis of which a more accurate assessment of the magnitude and nature of the shadow banking system can be made. However, these efforts fall far short of an outright crackdown on the shadow sector; the Chinese authorities seem to recognise the instrumental role that shadow banking plays in increasing the SME sector's access to financing and, in turn, boosting economic growth.

TABLE 1A Chronicle of Legal and Regulatory Developments on Shadow Banking

August 2010	The CBRC instructs banks to move certain off-balance-sheet assets back onto their books by the end of 2011 and to hold a provision coverage ratio of 150%. The CBRC also caps the balance of financing business at 30% of total bank-trust cooperation business.
January 2011	The CBRC tightens the regulations on trust companies, including the following measures: 1. Banks should move off-balance-sheet assets related to bank-trust cooperation back onto their books by the end of the year. 2. Trust companies should set aside risk-weighted capital of 10.5% for trust loans extended in bank-trust cooperation not included on banks' balance sheets. 3. Trust companies should not distribute dividends if trust compensation reserves fall below 150% of non-performing bank-trust loans or 2.5% of the total balance of bank-trust cooperation loans.
August 2011	The PBoC issues a notice broadening the base for calculating banks' required reserve ratios by including their margin deposits. Six large banks are required to set aside 21.5% of deposits, and medium and small banks 19.5%, as of 5 September.
September 2011	The CBRC releases the "Notice on Further Strengthening Risk Management of Wealth Management Business of Commercial Banks", requiring banks to improve their disclosure of information on WMPs and strengthen their management operations. Media reports in

	November 2011 suggest that the CBRC is requiring banks to suspend the sale of WMPs that mature in less than one month.
January 2012	The CBRC requires trust companies to suspend the launch of bill-related trust products that circumvent loan quotas.
December 2012	The CBRC requires the country's major banks to conduct internal inspections of WMP sales on behalf of third parties to prevent potential risks.
March 2013	The CBRC introduces limits on WMPs used to fund trust loans, bank acceptances and entrusted loans (4% of total assets and 35% of total WMPs).
March 2013	The CBRC issues the "Notice on Relevant Issues concerning Regulating the Investment Operation of Wealth Management Business of Commercial Banks" with the aim of controlling, or preventing, the risks emerging from the investment operations of banks' wealth management business.
January 2014	The CBRC tightens its regulation of shadow banking activities by banks, trust companies, microfinance companies and credit guarantee companies.
April 2014	The CBRC strengthens the supervision of trust companies and bans non-standardised capital pool operations that involve covering the pay-outs of maturing WMPs with the proceeds of new WMP sales.
May 2014	The three sectoral regulators (CBRC, China Securities Regulatory Commission (CSRC) and China Insurance Regulatory Commission), together with the PBoC and State Administration of Foreign Exchange, jointly announce new measures on monitoring interbank business and business between banks and other financial institutions.
July 2014	The CBRC further tightens the regulation of banks' WMPs by establishing an independent supervision department and prohibiting banks from WMP intra-trading with the aim of improving the performance of their portfolios. These measures constitute another step towards stopping the practice of the "rigid redemption" of WMPs and enhancing the risk awareness of WMP investors.
December 2014	The CBRC announces plans to encourage banks to invest funds raised through WMPs directly rather than engaging the services of trust and security companies to reduce risky lending in the shadow banking market. Amongst other measures, banks are encouraged to set up their own investment accounts for funds raised from WMPs. The CBRC and the Ministry of Finance announce plans to establish an insurance fund for the trust sector, financed through trust company funds, and the Asset Management Association of China announces draft proposals to prohibit the packaging of local government debt in asset-backed securities.
January 2015	The CBRC proposes strengthening the regulation of entrusted (company-to-company) loans by prohibiting firms from re-lending bank loans and the borrowers of such funds from investing in such financial assets as WMPs, bonds and equities.
March 2015	The State Council announces the long-awaited bank deposit insurance scheme to be implemented on 1 May, which is considered an important step towards further interest rate liberalisation. When fully implemented, such liberalisation is expected to reduce the incentives

	for WMPs.
April 2015	The CSRC bans brokerage firms from using “umbrella trusts” (considered high-leverage) for margin trading in the stock market.
June 2015	The CSRC proposes amended rules on margin financing and securities lending, including a cap of 4x net capital on margin trading and short-selling business conducted by securities firms.
July 2015	The CSRC eases the margin rules on collateral for borrowers and expands the permissible range of funding channels for securities firms. It also authorises financial institutions to renegotiate the maturity terms of loans pledged with stocks and encourages banks to finance the China Securities Finance Corporation through interbank lending and extend collateralised loans to listed companies for share buybacks. The CSRC further instructs brokerage firms to review their securities trading accounts and avoid any illicit trading activities outside the regulatory framework. Separately, the PBoC and relevant ministries and regulators release guidelines aimed at facilitating the healthy development of internet financing.
September 2015	The CSRC issues informal guidelines instructing brokerage firms to suspend suspicious trading accounts by the end of October, reflecting an intensification of its crackdown on less-regulated margin financing activities such as umbrella trusts and private financing. Separately, the State Council announces new guidelines aimed at facilitating development of the financial leasing industry.
December 2015	The CBRC releases new supervision rules to better regulate the fast-growing peer-to-peer (P2P) lending industry.
January 2016	The CBRC signals greater scrutiny of banks’ bill financing operations by issuing a notice requesting banks to strengthen their internal controls, thereby reducing the risk of the misuse of such transactions to circumvent bank regulatory requirements.
March 2016	The CBRC steps up its scrutiny of distressed asset management companies to discourage them from engaging in transactions that conceal banks’ credit risks through, for example, repurchase agreements. The CBRC also issues a directive instructing trust companies to strengthen their risk-management practices by, for example, limiting the amount of leverage on products to be invested in the stock market.
April 2016	The CSRC proposes modifications to the risk control indicators of securities firms to help address the risks emerging in that industry. Reports also indicate that the State Council has launched a one-year crackdown on internet finance platforms, including P2P lenders. The PBoCand CBRC issue a joint directive announcing the enhanced scrutiny of banks’ issuance and discounting of bills.
May 2016	The CBRC issues guidance on banks’ loan-beneficiary rights transfers to curb the practice of transferring loans off the balance sheet without a full risk transfer and to enhance the transparency of the non-performing loans on their books. The CSRC also proposes limits on the setting up of subsidiaries by fund companies.

July 2016	The CSRC issues a regulation curbing the leverage of investments in the bond market by setting a cap on the financing ratios of structured asset management plans that invest in bonds. The CBRC proposes tighter regulations on banks' WMP business to curb the associated financial risks.
August 2016	The CBRC formally releases detailed measures on regulation of the P2P lending industry based on draft rules distributed in December 2015. These first-ever P2P regulatory measures also cap the aggregate borrowing amount for individuals (RMB1 million) and companies (RMB5 million) across all P2P lending platforms.
October 2016	The State Council formally issues detailed measures (initially drafted in April 2016) on regulation of the e-finance industry, including P2P lending, crowd-funding and third-party payment transactions. Limits are also imposed on the engagement by property developers and agents in property-related finance businessthrough such platforms, and the issuance of loans for property deposits by these institutions is strictly prohibited.

The main difficulty in regulating shadow banks appears to be a matter of regulatory arbitrage. The Chinese financial regulatory framework is sector-based along the traditional sectoral lines of banking, securities and insurance. A sectoral regulator is in charge of regulating each of these sectors, and interagency coordination between the three sectoral regulators is known to be lacking. This regulatory structure is arguably ill-suited to the regulation of shadow banking, as shadow bank operations transcend traditional sectoral lines. Tightening the regulations of one sector will only drive shadow banks into a quest for a more loosely regulated sector, thus failing to reduce the systemic risks faced by the overall financial system. For example, when the regulatory authorities stepped up the regulation of trust companies (by way of raising the capital requirements) to rein in their role in bank-originated WMPs, banks first turned to more lightly regulated securities firms, and subsequently to insurance firms, to play the role of intermediary.

How Did We Get Here?

The primary factor in the rise of China's gigantic shadow banking sector is the Chinese Government's reliance on massive stimulus programs to neutralise the impact of the GFC on the country's economy. Those programs have largely been supported by bank lending, resulting in the extraordinary expansion of Chinese banks' balance sheets. At the same time, banking regulatory rules, including capital requirements and liquidity rules, have been tightened, and are increasingly being enforced, by China's banking regulator. Chinese banks have thus come under considerable pressure to meet regulatory requirements, and have opted to remove assets from their balance sheets, sometimes tactically, and park them in the shadow banking sector.

China's Reactions to the GFC

At the height of the 2008–2009 GFC, Chinese authorities unveiled a massive stimulus package, seeking to counteract the adverse impact of that crisis on the domestic economy. The stimulus package effected from November 2008 comprised three main components: first, the authorities substantially loosened monetary and fiscal policy to spur domestic demand; secondly, a large-scale investment plan (estimated to be worth RMB4 trillion) was implemented, the main focus of which was infrastructure construction;[5] and, finally, the authorities subsidised the development of several important industries and eased the tightened measures imposed earlier on the property market in order to boost housing demand.[6]

According to the authorities' initial plan, the funds needed for the stimulus package would come from three sources – the central government, local governments and commercial banks – with each supplying roughly a one-third share.[7] In practice, however, local governments had to turn to the banks to meet their share because of their limited fiscal capacity. To circumvent the legal prohibition on local governments borrowing directly from banks, they established LGFVs to obtain bank credit.[8] Chinese banks generally find it difficult to decline loan requests from either the central or local governments because the majority are in essence government-owned and controlled.[9] At the same time, government subsidies for selected industries further boosted credit demand, as firms in those industries sought to capitalise on the newfound policy support to expand their production capacity.[10] Moreover, the revived housing market substantially raised the demand for loans amongst home buyers and property developers.[11]

The consequence of the stimulus measures implemented in the aftermath of the GFC was a lending binge starting from 2009. Chinese banks issued a record-high RMB9.6 trillion in new loans in 2009, relative to a mere RMB4.2 trillion in 2008. Accordingly, aggregate bank loans registered a record growth rate of 31.7% on a year-on-year basis, more than doubling the average loan growth rate of 15% during the 1998–2008 period. Of all new loans issued in 2009, RMB2.5 trillion flowed into the infrastructure sector, equivalent to a 43% year-on-year increase in outstanding infrastructure loans. New loans extended to home buyers and property developers accounted for RMB1.4 trillion and RMB0.6 trillion, leading to year-on-year increases of 47.9% and 30%, respectively.[12]

Capital Adequacy Requirements

Just as the commercial banks were experiencing capital adequacy ratio (CAR) declines amidst their excessive credit expansion, the Chinese regulatory authorities tightened up the capital regulation. A brief account of China's bank capital regulatory regime helps to set the stage of the following discussions.

The CAR requirement has been part of China's commercial banking regulations since 1995. Evidently inspired by Basel I, the country's 1995 *Commercial Banking Law* (now repealed) provided for a minimum CAR of 8%.[13] For close to a decade following its codification in 1995, this statutory CAR requirement had been little more than a dead letter. Official statistics paint a rather discouraging picture of CAR requirement compliance in the early 2000s. In 2003, for example, of the

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[5] XinHua Net, "China's 4 Trillion Yuan Stimulus to Boost Economy, Domestic Demand" (9 November 2008)<http://news.xinhuanet.com/english/2008-11/09/content_10331324.htm>.

[6] XinHua Net, n 5. The subsidised industries are automotive, iron and steel, non-ferrous metals, shipbuilding, textiles, IT, chemicals, logistics, machinery and equipment, and light engineering.

[7] XinHua Net, n 5.

[8] A Garcia Herrero, S Schwartz and L Xia, "Who Will Pay the Bill for Local Governments' Fiscal Stimulus?",*China Banking Watch*, 21 July 2011.

[9] MF Martin, *China's Banking System: Issues for Congress* (CRS Report for Congress, 20 February 2012).

[10] Y Yu, "China's Stimulus Shows the Problem of Success", *Financial Times*, 25 August 2009.

[11] M Sun, "China: Unscathed through the Global Financial Tsunami" (2009) 17(6) *China & World Economy* 24.

[12] See 2009 Q4 PBoC report on the implementation of monetary policies, <http://www.pbc.gov.cn/zhengcehuobisi/125207/125227/125957/126003/2844030/index.html>.

[13] Law of the People's Republic of China on Commercial Banks 1995, Art 39(1).

country's 230-odd commercial banks, a mere eight met the CAR requirement, and the total assets of those eight accounted for a negligible 0.6% of the aggregate assets of the commercial banking sector.[14] These figures suggest that none of China's major banks was compliant with the CAR requirement as recently as 2003. It was not until 2009 that all Chinese commercial banks reached compliance with the statutory CAR requirement for the first time.[15] Measured by the sector-wide weighted average CAR, the Chinese banking sector was already compliant by 2007, recording an 8.4% CAR across the sector in that year.[16] In 2008, the sector's weighted average CAR increased sharply by 3.6% to reach a historical high of 12%, far exceeding the statutory minimum of 8%.[17]

In 2009, however, the sector-wide weighted average CAR started to decline, falling to 11.4%.[18] The fall is apparently attributable to the rapid growth in bank assets, as commercial banks were placed under considerable pressure to help finance the Chinese Government's massive stimulus programs. New loans extended in the first four months of 2009 alone exceeded the total in all of 2008.[19] A CBRC document reports that the sector-wide average CAR slid by more than 1% to less than 11% at the end of June 2009 from 12% at the end of 2008.[20] At the Bank of China (BOC), whose lending rose the most in 2009 amongst the big four state-owned giants, capital adequacy fell to 11.63% at the end of September 2009 from 13.43% at the start of 2009, representing a greater than 1.5% fall in just nine months.[21]

Regulatory tightening started just at the time Chinese banks experienced significant decline in their CARs. In November 2009, without formally changing the overall regulatory framework for capital adequacy, the CBRC officially announced its embrace of counter-cyclical capital buffers as a regulatory tool.[22] On top of the 8% capital requirement, an additional counter-cyclical capital buffer of 3% was imposed on the large commercial banks of systemic importance and 2% on small and medium-sized banks. Thus, the minimum CAR was raised to 11% for the former, and to 10% for the latter. This was a bold and decisive move. Note that it was only in September 2009 that the Group of Central Bank Governors and Heads of Supervision at the Basel Committee had announced its commitment to introducing a framework for counter-cyclical capital buffers above the minimum requirement. And it was not until July 2010 that the Basel Committee held a consultation on a proposal for a counter-cyclical capital buffer regime. The CBRC decision thus made China one of the first countries to impose such buffers on its banks.

Moreover, the enforcement of more stringent capital requirements was apparently high on the CBRC's regulatory agenda, with enforcement measures taken against those banks reporting a sharp decline in capital adequacy as a consequence of excessive credit expansion. These measures ranged from private regulatory meetings with senior executives of the banks concerned to the issuance

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[14] CBRC, 2009 Annual Report, 121.
[15] CBRC, n 14, 121.
[16] CBRC, 2007 Annual Report, 27.
[17] CBRC, 2008 Annual Report, 33.
[18] CBRC, n 14, 10.
[19] A Batson and JLeow, "Chinese Banks Lend Now, May Pay Later", *Wall Street Journal*, 29 May 2009.
[20] W Ming and R Yu, "China's Banks Face Challenge to Loan Growth", *Wall Street Journal*, 4 August 2009.
[21] APeaple, "Cracks Appearing Among China's Banks", *Wall Street Journal*, 3 November 2009.
[22] The succeeding paragraphs in this section are based on C Xi, "Why has Basel III Become Hard Law for China? The Domestic Political Economy of International Financial Law" in R Buckley, D Arner and AEmilios (eds), *Reconceptualizing Global Finance and Its Regulation* (Cambridge University Press, 2016) 91, 100–102.

of regulatory “risk alert” letters. In more serious circumstances, the CBRC could order the suspension of certain bank activities of a bank’s business. Chinese banks were thus placed under considerable pressure to meet the stricter capital requirements.

One way for them to rectify their deteriorating CARs was, of course, to raise funds to strengthen their capital base, which explains the wave of major fundraising activities carried out by Chinese banks in the immediate aftermath of the 2009 credit spree. In 2010, the majority of China’s 16 listed – and hence larger – banks implemented or announced capital replenishmentplans to raise funds from the domestic bond market and Shanghai and Hong Kong stock markets. For example, the Industry and Commercial Bank of China, China Construction Bank and the BOC, which are ranked as the country’s first, second and fourth largest commercial banks, raised capital of US$6.6 billion, US$9.1 billion and RMB6.6 billion, respectively, in 2010 through rights issues in the two stock markets. Moreover, the medium-sized CITIC Bank boosted its capital by raising US$6.3 billion, including US$2.4 billion through subordinated debt issuance in the domestic bond market and US$3.9 billion through rights issues in the Shanghai and Hong Kong stock markets.

Large-scale capitalraising from the stock markets was, however, not without limitations. First, the massive influx of new bank shares and bonds exerted significant downward pressure on China’s already feeble stock markets. The benchmarking Shanghai Composite Index was amongst the worst performers globally in the post-GFC period. The scale and intensity with which the banks tapped the stock markets created significantly more funding demand than investors could supply, thereby pushing share prices down further. Secondly, and relatedly, the banks’ ability to raise funds through subordinated bond issuance was severely curtailed by the rules that the CBRC introduced in late 2010, which restricted the use of such bonds as a source of capital. Subordinated bond issuance had been the primary means of raising capital for Chinese banks. In the first seven months of 2009 alone, Chinese banks issued US$30.97 billion worth of subordinated bonds, representing the lion’s share of overall bank fundraising. Just over half (51%) of the subordinated bonds issued were actually held by other Chinese banks, according to a CBRC document, raising concerns that no real fresh capital was being channelled into the banking system to help shield banks against systemic risks. The CBRC thus issued rules limiting subordinated bonds to a maximum of 25% of a bank’s core capital and banning the cross-holding of such bonds by banks.

With these market and regulatory impediments to Chinese banks’ ability to strengthen their capital base, they were no longer able to count on fundraising alone to meet the tightened capital adequacy requirements. An alternative was to control asset growth by, for example, reining in lending. Plausible as it might sound, however, reining in lending was out of the question. For one thing, Chinese banks, virtually all of which are state-controlled, were under overwhelming central and local government pressure to continue lending to fuel China’s investment-driven economy. For another, Chinese banks enjoyed legally protected interest margins, and asset growth helps to boost profit levels, creating strong financial incentives for the banks themselves to continue lending. Accordingly, they were left with little choice but to move some of their traditional banking activities into more lightly regulated shadow banks.

Liquidity Rules

Another regulatory drive for Chinese banks to turn to shadow banking is the operation of a recentlyrepealed liquidity rule – the so-called loan-to-deposit (LTD) ratio, ie the ratio of the unweighted value of loans to deposits. Although the LTD ratio serves as a useful indicator of liquidity mismatch risk, it is not usually a component of banking supervision regimes.[23] However, it was a key building block of Chinese banking regulation until October 2015. The now repealed 1995 *Commercial Banking Law* provided that "the ratio of the balance of loans and the balance of deposits shall not exceed 75%".[24] This statutory ceiling of a 75% LTD ratio remained intact in the current 2003 *Commercial Banking Law* until its revision in October 2015.[25]

While the LTD ratio requirement had been written into the *Commercial Banking Law* since 1995, and thus enjoyed the status of a statutory requirement, it was not actually met by the commercial banking sector as a whole until 2004.[26] In 2004, the sector-wide LTD ratio moved into the 75% region for the first time, reaching 74.48%.[27] In subsequent years, it displayed a generally downward trend, declining to 68.9% in 2005, 68.47% in 2006 and 69.25% in 2007, before bottoming out at 66.91% in 2008.[28]

Since 2009, however, the LTD ratio has shifted upward, rising to 69.54% in 2009, 69.43% in 2010 and 70.39% in 2011, before peaking at 71.35% in 2012.[29] While sector-wide LTD ratios have remained compliant with the statutory LTD ratio requirement, instances of individual commercial banks, some of them major nation-wide banks, breaching the 75% threshold were quite common. In the third quarter of 2011, for example, the BOC and the Bank of Communications, China's fourth and fifth largest banks as measured by market capitalisation, were amongst the five listed banks to cross the 75% threshold.[30]

Once again, while the Chinese banks' LTD ratios were on the rise, the regulatory authorities started to tighten the LTD ratio regulation. A salient manifestation of such regulatory tightening is the increased frequency with which the LTD ratios of commercial banks were examined by the CBRC. In 2010, the CBRC reverted to its traditional, and once loosened, practice of evaluating those ratios on a quarterly basis. Subsequently, in early 2011 it further increased the frequency, requiring banks to report their month-end LTD ratios. The CBRC's emphasis on the LTD ratio in prudential bank supervision is also embodied in the CARPALS supervisory rating system. Developed by the CBRC in 2010, the system is the equivalent of the CAMELS rating system in the US and ARROW regulatory framework in the UK. It seeks to identify risks in seven key areas, namely <u>C</u>apital adequacy, <u>A</u>sset quality, <u>R</u>isk concentration, <u>P</u>rovisioning coverage, <u>A</u>ffiliated institutions, <u>L</u>iquidity, and <u>S</u>windling prevention and control. At the centre of the CARPALS supervisory regime lie 13 core risk indicators, one of which was the LTD ratio.[31]

The significance of the LTD ratio for banks can hardly be overestimated. First

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[23] Only China and the US have set a limit on the LTD ratio. See JW van den End, "A Macroprudential Approach to Address Liquidity Risk with the Loan-to-Deposit Ratio" (De Nederlandsche Bank Working Paper No 372, 2013).
[24] *Law of the People's Republic of China on Commercial Banks 1995*,Art 39(2). For the historical evolution of China's LTD ratio regime, see M Pei, "The Political Economy of Banking Reforms in China, 1993-1997"(1998) 7 *Journal of Contemporary China* 321; V Shih, "Factions Matter: Personal Networks and the Distribution of Bank Loans in China"(2004) 13 *Journal of Contemporary China* 3.
[25] Law of the People's Republic of China on Commercial Banks 2003,Art 39(2).
[26] Sun, n 11.
[27] Calculated from CBRC, *2006 Annual Report*, 116.
[28] Calculated from CBRC Annual Reports of various years.
[29] Calculated from CBRC Annual Reports of various years.
[30] "Five banks' LTD Ratios Crossed the 75 Per Cent Regulatory Line",*Securities Daily*, 1 November 2011.
[31] CBRC, 2010 Annual Report, 85.

and foremost, crossing the statutory LTD threshold of 75% significantly curtails a bank's ability to extend loans without increasing deposits. In addition, banks that breach that threshold face regulatory disincentives. Breaching – or even approaching – the LTD ratio cap warrants CBRC intervention. For example, the BOC, China's fourth largest lender, is reported to have received a CBRC warning in 2013 for approaching the cap.[32] Moreover, as the LTD ratio was one of the 13 core indicators in the CARPALS rating system, a low LTD score threatens to drag down the bank's overall rating, thereby increasing the chances of regulatory intervention.

One way for Chinese banks to comply with the LTD ratio requirement is certainly to increase their pools of deposits. However, thanks to a significantly narrowed current account surplus and increasingly volatile capital inflows, China's central bank tended to perform less sterilisation in the aftermath of the GFC.[33] As such sterilisation had been an important source of deposit creation in the domestic financial system, the end result of the PBoC's move was to dampen the pace of deposit growth and exert greater pressure on bank competition for deposits.[34] This constraint on Chinese banks' ability to hike their deposits in order to meet the LTD requirement created another powerful incentive for them to remove their loan assets from their balance sheets, and to siphon those assets into the shadow sector.

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[32] G Zhu, "China Regulators Move to Restrain Lending", *Wall Street Journal*, 5 February 2013.
[33] State Administration of Foreign Exchange,*2009 Annual Report*,15.
[34] X Wang, "China's Exchange Rate and Monetary Policies" (BIS Papers No 57, October 2011) <http://www.bis.org/publ/bppdf/bispap57h.pdf>.