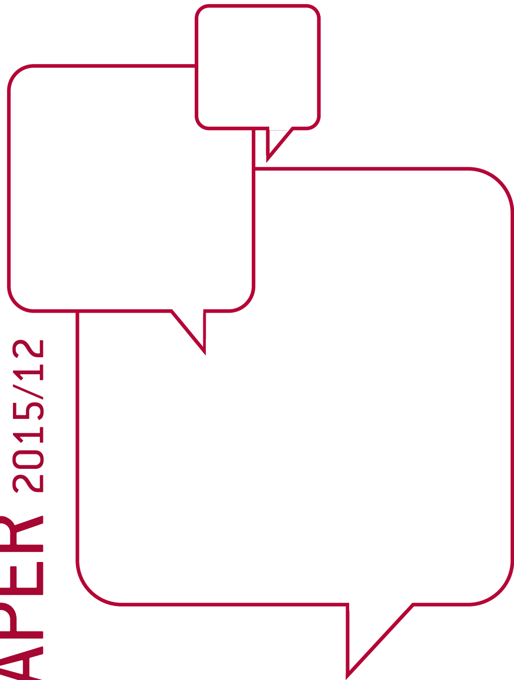

BRUEGEL WORKING PAPER 2015/12

INTERNATIONALISING THE CURRENCY WHILE LEVERAGING MASSIVELY: THE CASE OF CHINA

ALICIA GARCIA-HERRERO

Highlights

- This paper reviews the steps that China has taken towards financial reform with a particular focus on capital account liberalisation and internationalisation of the use of the renminbi.
- After a slowdown in reform momentum during the global financial crisis, there is a clear push towards reform, especially in terms of RMB internationalisation.
- During the same period, though, China's debt has doubled, reaching levels that are clearly above those of most emerging markets. This increases the risks embedded in financial reform and, in particular, capital account liberalisation.
- At this juncture, however, China has no option but to press for reform since the current growth model is no longer working and China urgently needs to better allocate its savings.

JEL classification: G15, G18, E44, E58, F31, F32
Keywords: China, RMB internationalisation, Yuan, Capital account convertibility, Financial Reform, Debt, Leveraging

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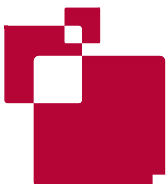


OCTOBER 2015

1. Introduction

After years of stagnation in the aftermath of the Global Financial Crisis (GFC), China's financial reform started gaining traction in 2012, marked by the widening of the RMB daily trading band (from +/-0.5 percent to +/-1 percent) and the expansion of interest rate permissible ranges. Among of the reforms announced since Xi Jinping came to power, the financial sector seems to have attracted the greatest attention, be it domestic financial reform or capital account liberalisation. Embracing of capital account liberalisation looks particularly bold for a government still very concerned about maintaining stable financial markets. The extreme reaction to the stock market sell-off in summer 2015 says it all in this regard. Such 'boldness' can only be explained by China's desire to become a real economic power, which has historically been associated with having an international currency. For the RMB to become an international currency, convertibility is obviously needed. The real question is how 'managed' that convertibility could possibly be for the Chinese government to attain both objectives: having a grandiose international currency and relatively stable financial markets.

At the same time, China has embarked on a massive leveraging. It all started with the public sector and, in particular, local governments, which borrowed from banks to invest in infrastructure projects as a way to implement a massive stimulus package. Companies followed suit with huge borrowing both at home and abroad. By October 2015, neither the state nor corporates had stopped that leveraging process. This paper reflects on these two major trends, financial reform – and in particular capital account liberalisation – and concurrent leveraging, and draws a number of conclusions for China's policymakers. The most important is that leveraging might actually be a huge hindrance to capital account liberalisation and even (if the course of liberalisation is not changed) a major cost for the Chinese economy. In other words, the processes of financial reform and leveraging could be seen as two trains running towards one another, which are bound to crash unless one of them moves aside.

The rest of this paper is organised as follows. First, an overview of the degree of financial liberalisation is offered in Section 2. Section 3 looks into the next steps and what may be the consequences for China in terms of capital inflows and outflows. Section 4 turns towards the other side of the coin, China's indebtedness, reviewing the main reasons for this. Section 5 evaluates why China's leveraging process may be a major problem, particularly in a context of renewed financial liberalisation efforts. Finally, Section 6 offers possible solutions to the potentially crashing trains that may undermine the Chinese economy in its transformation process.

2. How much has China liberalised its financial system and what are the next steps

After quite a slow start in 2005, when the RMB was expanded – albeit only marginally – and the interest rate corridor was partially liberalised, financial reform received another push from 2012 onwards and, even more so, since the new administration, led by Xi Jinping, took office in March 2013.

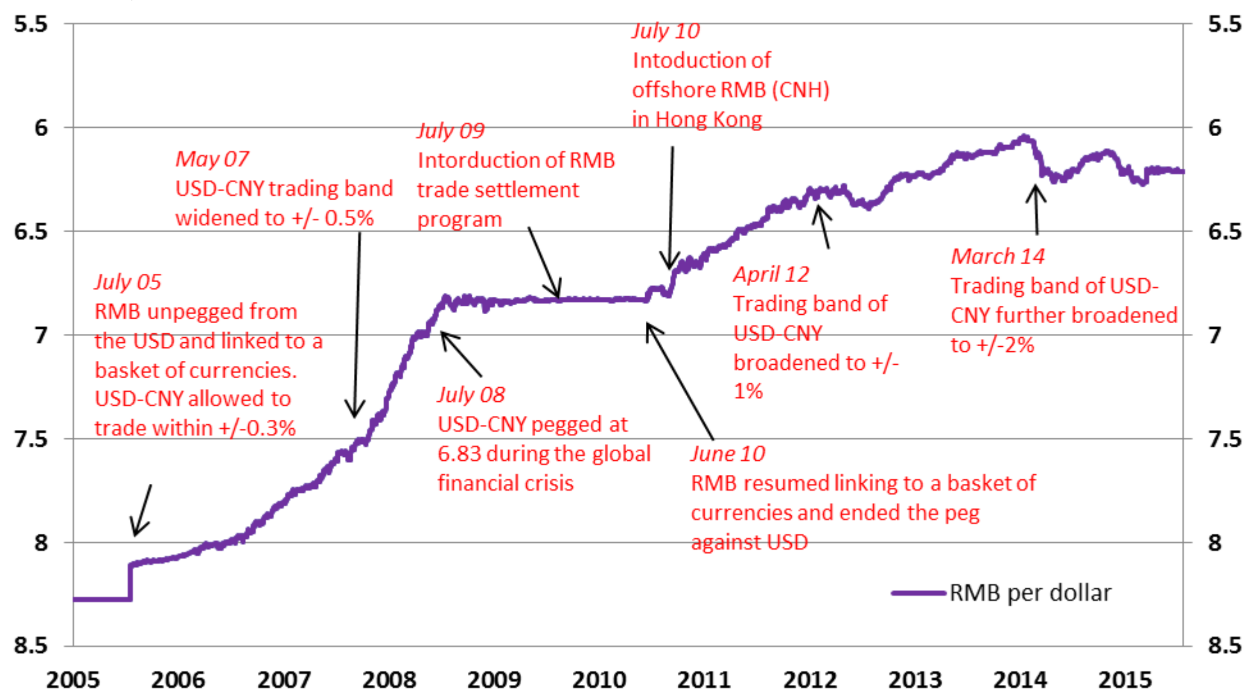
In fact, in the most important gathering since Xi Jinping came to power, namely the Third Plenum in November 2013, the Chinese authorities gave clear priority to financial liberalisation along with a few other important areas on the blueprint of reforms. In particular, a number of important 'breakthroughs' to take place by 2020 were announced. This message was understood in terms of interest rate liberalisation, the free float of the RMB and full capital account liberalisation by that date. More generally, the objective was to reduce financial repression in the following areas: i) formidable entry barriers for private capital in the banking sector; ii) controlled interest rates to protect banks' profit margins; iii) underdeveloped domestic bond and equity markets; and iv) the inflexible exchange rate and the largely closed capital account.

With these objectives, the authorities moved in several directions. On the external side, the exchange rate band was widened and there was a big push for the RMB to be used as an international currency, not only in more jurisdictions but also in many more ways, as we shall explain. On the domestic side, interest rates continued to be liberalised and more competition was introduced into the banking sector.

External financial reform

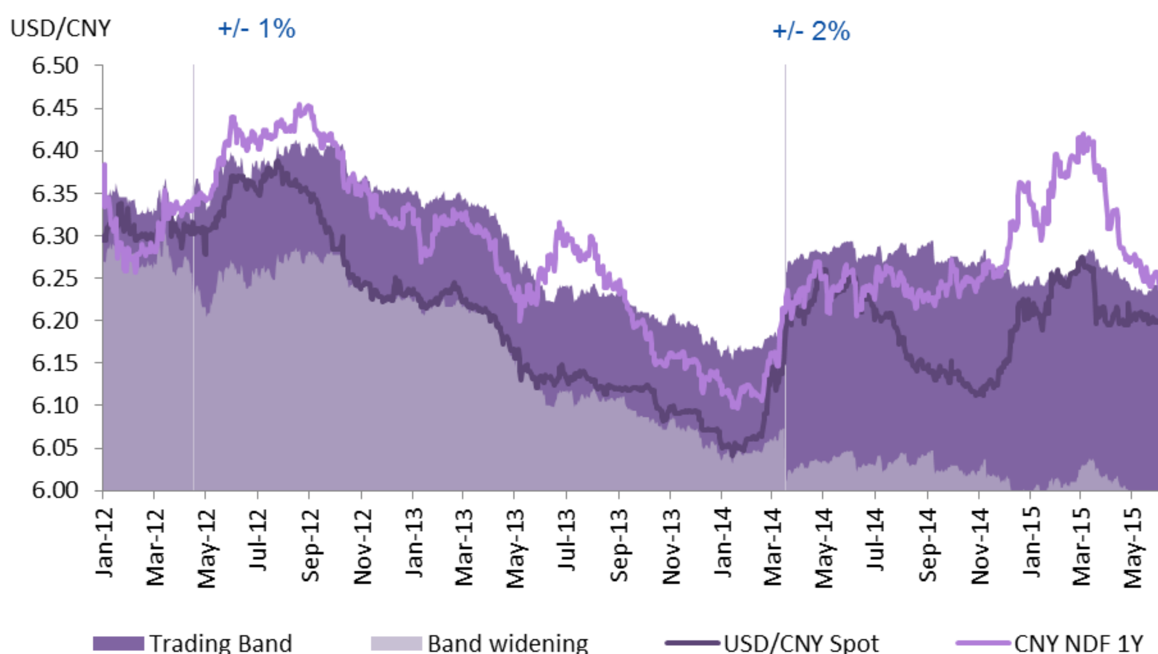
China started liberalising a very tightly controlled exchange rate regime in July 2015 when a narrow band of fluctuation was announced. The band was widened on a number of special occasions in 2005 (Figure 1 marks them all and Table 1 in the Annex has a list of all measures taken towards financial liberalisation). The latest ones were in March 2014 (daily trading band expanded to +/-2 percent) and a wider band, +/-3 percent was announced by the State Council on 24 July 2015 although it has not yet been implemented. The first move marked the People's Bank of China's (PBoC) first intention not to allow a one-way bet on the RMB, which had generally been the case before, and introduce more two-way volatility to the currency. In fact, the RMB was brought to a sudden depreciation right after scaring many investors at a time at which China was receiving a large amount of portfolio inflows (Figure 2). Since then the RMB has been hovering comfortably within the band, although closer to its upper limit. Most analysts now, including the International Monetary Fund, consider the RMB to be close to 'fair value'. The most recent decision was probably driven by the PBoC's eagerness to show additional liberalisation steps after the very many interventionist measures to prop up the stock market after its collapse. This is especially relevant in China's race for the RMB to become part of the Special Drawing Rights (SDR) basket.

Figure 1: Major RMB's liberalisation steps since 2005



Source: Natixis Research.

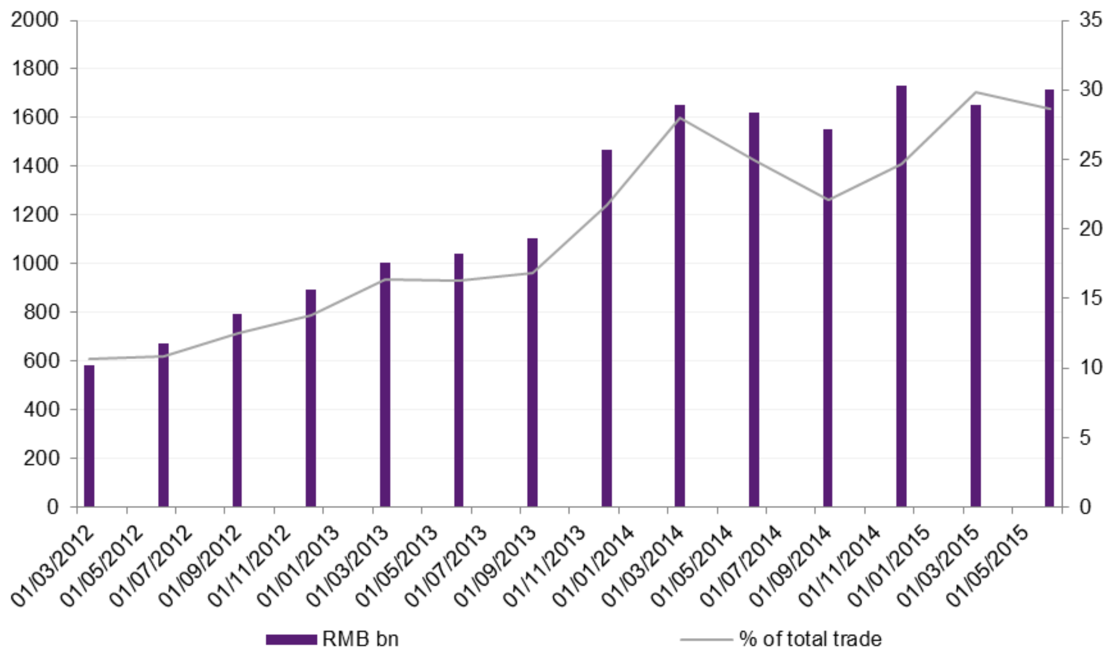
Figure 2: RMB fluctuations within the band both on-shore (CNY) and off-shore (CNH)



Source: Bloomberg.

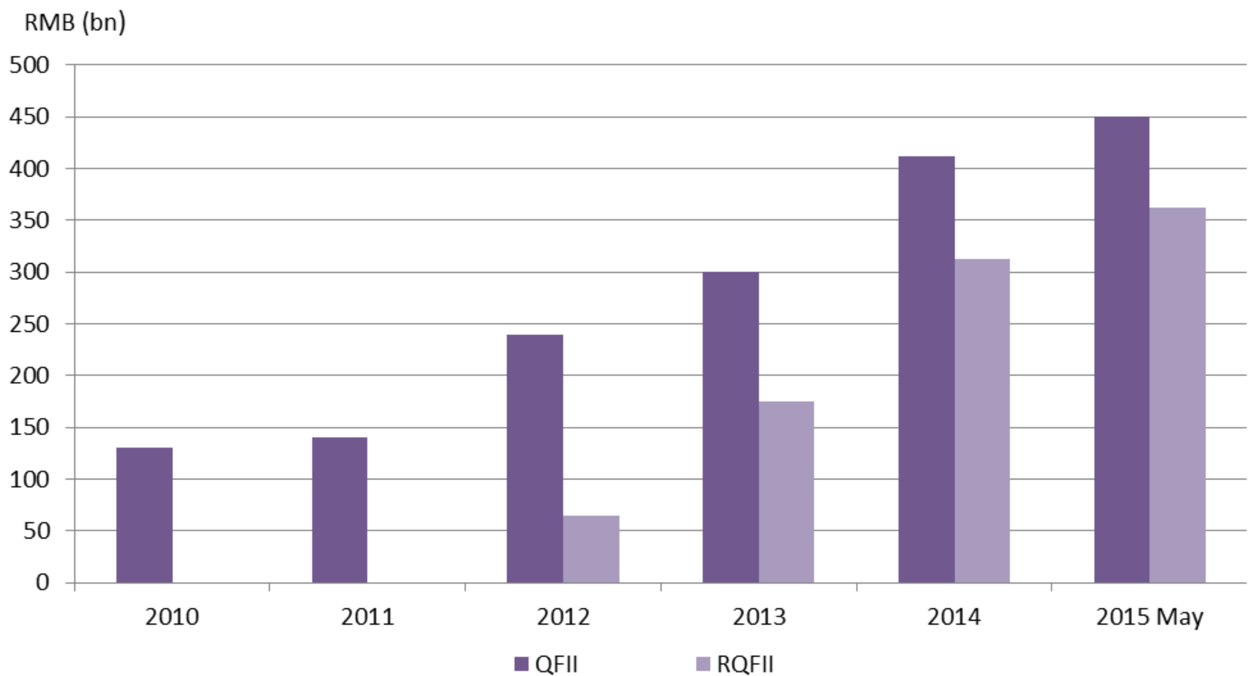
In terms of RMB internationalisation, the process has moved clearly faster than exchange rate flexibility. RMB trade settlements have ballooned since the pilot programme was introduced in 2009 (Figure 3) and today are already 22 percent of total global settlements. One of the landmarks actually took place in mid-2010 with the introduction of an off-shore RMB market (CNY) which has been fluctuating relatively close to the CNY as shown in Figure 2 but still with arbitrage opportunities. In addition, a large number of swap lines have been agreed with a number of countries, thereby boosting RMB settlements around the globe (Table 2 in the Annex). Finally, China has opened up to portfolio flows from abroad in a massive way since 2012 although following a special quota system, namely the Qualified Foreign Institutional Investor Programme (QFII) and RMB Qualified Foreign Institutional Investor Programme (RQFII), enabling off-shore RMB to be brought back to the Mainland (Figure 4). In that vein, an increasing number of central banks around the world are starting to hold some of their reserves in RMB, although it remains a very marginal proportion (Table 3 in the Annex). In addition, although foreign direct investment (FDI) has been largely open for decades, there is still an approval process as well as restrictions on many sectors. Trade credit and offshore borrowing are subject to controls for prudential reasons, but they are relatively accessible for many companies. China has also simplified foreign exchange regulations to give companies more freedom in dealing with their foreign currency assets. All in all, according to the IMF's classification, 35 out of 40 capital account items are already fully or partly convertible in China, leaving only five inconvertible. The biggest remaining restrictions on capital flows today are on foreign currency exchange for individuals and outward portfolio investment. The latter was opened in 2006 through a quota system called Qualified Domestic Institutional Investor (QDII), although it remains limited compared to the total amount of financial holdings in China. Finally, the largest recent liberalisation step was the link between Shanghai and Hong Kong stock markets through the Stock Connect in November 2014. This pilot programme allows investors in Hong Kong and Mainland China to trade and settle some of the shares listed on the other market via the exchange and clearing house in their home market.

Figure 3: RMB trade settlements



Source: PBoC, SAFE, Natixis research

Figure 4: Quotas for RQFII and QFII over time



Source: Dragonomics.

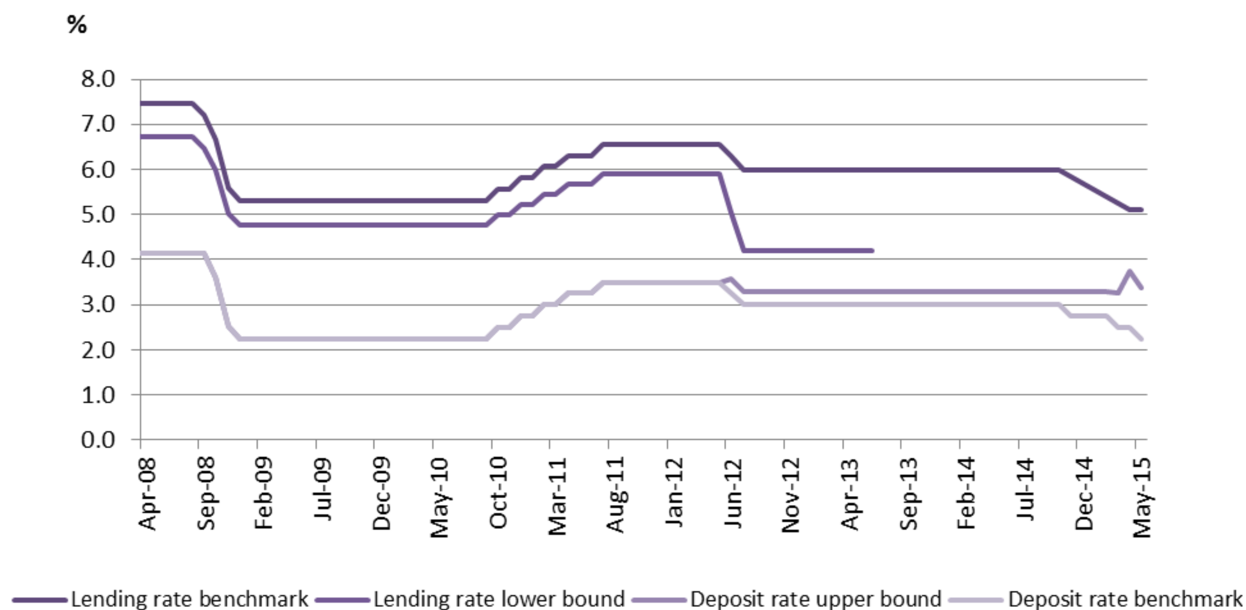
Domestic financial reform

As for external liberalisation, domestic financial reform started in the early 2000s. The lending rate was liberalised more rapidly than the deposit rate, which somehow got stuck in that process during the global financial crisis. The new wave of liberalisation measures took place after the Plenum, again in March 2014, as with the exchange rate. In this case, five bank licenses were made available to private enterprise applicants, inaugurating the long-awaited pilot programme of opening the state-dominated banking sector to private capital. It became evident only later that the newcomers would be major internet companies, namely Alibaba and Tencent. In addition, the CBRC also relaxed the restrictions for private capital to invest in other non-banking financial institutions, such as consumer finance companies and financial leasing companies. At the same time the Shanghai Free Trade Zone (FTZ) became the new favourite of the government to catalyse financial reforms. This pilot programme was meant to pioneer full interest rate liberalisation, allow cross-border borrowings from foreign countries and permit FTZ residents to invest overseas.

A second important measure was to completely lift the lending rate floor in June 2014, while keeping intact the cap on deposit rates (10 percent above official benchmark deposit rates, Figure 5). However, the lifting of the lending rate was done at time when it was not really binding, so it did not have a big macroeconomic impact. Other measures taken in the interest rate liberalisation sphere were to allow banks to issue CDs in the interbank market and set up the prime rate mechanism to encourage banks to establish a market-based[1] benchmark lending rate. These coordinating measures also helped lay a solid institutional foundation for the authorities to start freeing up deposit rates later. In that context, a formal deposit guarantee was introduced in November 2014, in line with the general perception that a deposit insurance scheme is a necessary precondition for the full liberalisation of deposit rates to avoid moral hazard. Finally, the ceiling on the deposit rate was finally lifted on 23 October 2015, which should have very important consequences in terms of stiffening competition for funds among Chinese banks and reducing the relatively large net interest margin that Chinese banks have been enjoying for decades.

[1]Today every Chinese individual is allowed to buy no more than US$50,000 worth of foreign currency from banks each year.

Figure 5: Evolution of interest rates and liberalisation measures



Source: Bloomberg and BBVA Research.

3. Next steps in financial liberalisation: What to expect?

Notwithstanding how surprising it may be that a stability-obsessed government like China's pushes for capital account convertibility, the reality is that the project is up and running. There are two important points to remember. The first is that the capital account is already quite opened *de facto*. The second is that the government is probably not planning to completely open up cross-border capital flows. In fact, 'managed convertibility' might actually be the target. In other words, there is no question that China's capital account will become more open than it is today, but the change is one of degree not of kind. In fact, South Korea and Taiwan also used the QFII/QDII model in the early stages of their financial opening and gradually lifted them.

Once China liberalises the capital account to a degree similar to most Asian economies, the key question is what will happen to its gross capital inflows and outflows. He *et al* (2012) analyse that question empirically and conclude that China's gross international investment positions would grow significantly, and inflows and outflows would become much more balanced. The private sector would turn its net liability position into a balanced position, and the official sector would reduce its net asset position significantly, relative to the country's GDP. This basically means that outward FDI will continue to grow substantially over the years. He *et al* also conclude that China would continue to be a net creditor, with the net foreign asset position as a share of GDP remaining largely stable through this decade. The implication of this picture for the RMB is that of stability, which is in line with the idea that the RMB today is close to fair value.

4. The other side of the coin: China's leveraging

China's financial liberalisation has come hand in hand with a process of continuous leveraging, especially since the global financial crisis. This section analyses the reasons behind this, how big the problem is, and for whom.

Over-borrowing by the public and corporate sectors can be traced by the huge stimulus package and lax monetary policy which Chinese economic authorities introduced during the global financial crisis of 2008-09. In fact, a massive stimulus package was unveiled to counteract the adverse impact of the crisis on the domestic economy. The stimulus package consisted of three key components. First, the authorities substantially loosened monetary policy with interest rate cuts, reductions in reserve requirements and even very aggressive credit targets for banks. Second, a tremendous investment plan was deployed, with the main focus on infrastructure. The plan was estimated to be RMB 4 trillion when announced, but ended up being much bigger. Finally, the government subsidised the development of several important industries and lowered mortgage rates to boost housing demand.

According to the authorities' initial plan, funds needed for the stimulus package would come from three sources: central government, local governments and banks, with each accounting for about one-third. However, in practice, given their limited fiscal capacity, local governments had to turn to banks to meet their borrowing needs. To circumvent the legal prohibition on direct borrowing by local governments from banks, local governments established special purposed vehicles (called 'Local Government Financing Vehicles' or LGFVs) to obtain bank loans. Banks, on their side, could not decline loan requests from either central or local government because the majority of banks are in essence owned and controlled by governments. In the meantime, the government's subsidies for specific industries boosted credit demand as firms in these sectors sought to take advantage of policy support and expand their production capacity.

As a consequence, the stimulus measures implemented during the global financial crisis led to a huge lending binge with Chinese banks splashing out a record-high RMB 9.6 trillion of new loans in 2009, compared to a mere 4.2 trillion in 2008. Accordingly, the aggregate bank loans registered a record growth of 31.7 percent in 2009 and 19.9 percent in 2010 on a year-on-year basis, substantially higher than the average loans growth rate of 15 percent during the period 1998-2008.

Stimulus packages have since become the new norm of China's economic policy. When growth slowed down again in 2012 and 2013, the authorities responded by rolling out more infrastructure projects to revive the economy. Meanwhile, corporate borrowers felt they could leverage on the basis of this new norm. Given that banks' balance sheets were not enough to accommodate the borrowing from both public and private sectors, a good part of the corporate sector, especially the smaller corporate, has increasingly used the shadow banking sector to meet its financing needs and circumvent tightening regulations on bank loan issuance. As such, both public and corporate debt have snowballed during the last few years.

The banking sector is still the biggest lender in China. However, the shadow banking sector has become an important source of funding, accounting for more than one-quarter of total outstanding debt (Figure 6).

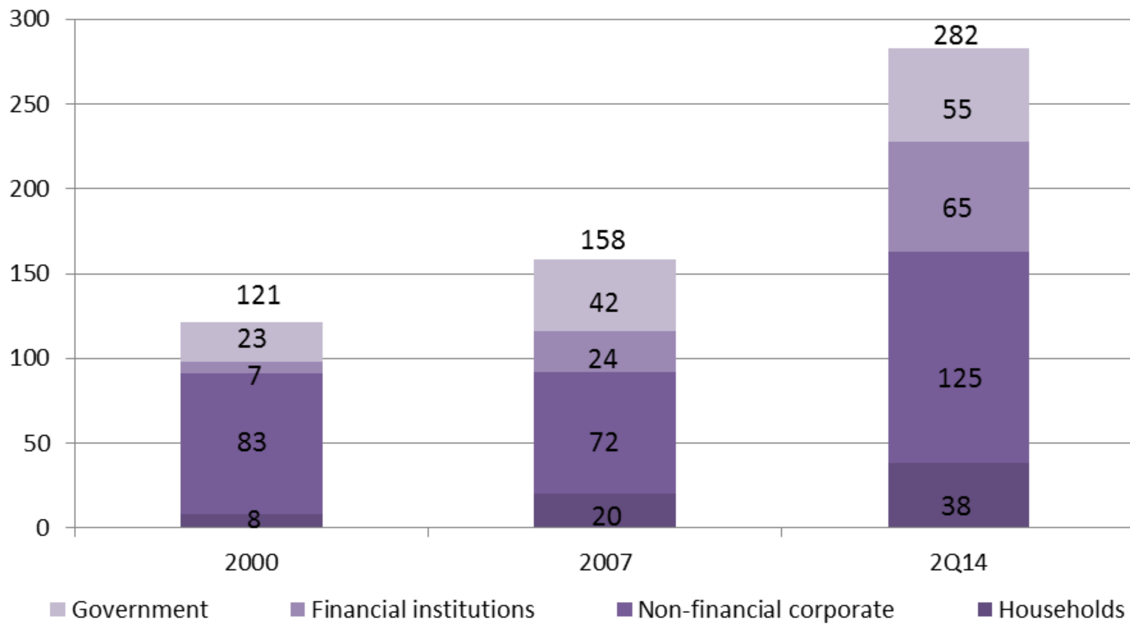
Figure 6: Shadow banking has become an important sources

Source: CEIC and BBVA Research.

There is a lack of official data on China's total public debt. The latest, most comprehensive official data comes from a report by National Audit Office, released at end-2013. At that time, the debt level of the central government was 21.8 percent of GDP, which included both the general fiscal debt of the central government (16.7 percent of GDP) and the debt of the national railway company (5.1 percent of GDP). Meanwhile, total local government debt (excluding debt of state-owned enterprises and contingent pension debt, which are not covered in the NAO report) amounted to 31.5 percent of GDP. Total public debt was thus hovering around 53 percent of GDP. Interestingly, more recent private sources have relatively similar estimates of public debt (55 percent of GDP according to McKinsey, 2015) (Figure 7). Even if the stock of public debt might look relatively contained, especially when compared to developed economies, some characteristics of local government debt ring alarm bells (Garcia Herrero *et al*, 2014). First, maturity mismatches are present, especially for LGFVs, which use short-term borrowing to finance long-term infrastructure projects. Second, interest rates of local government debt (6-8 percent) are well above the average interest rate paid by the central government (4-5 percent) and the benchmark lending rate (6 percent).

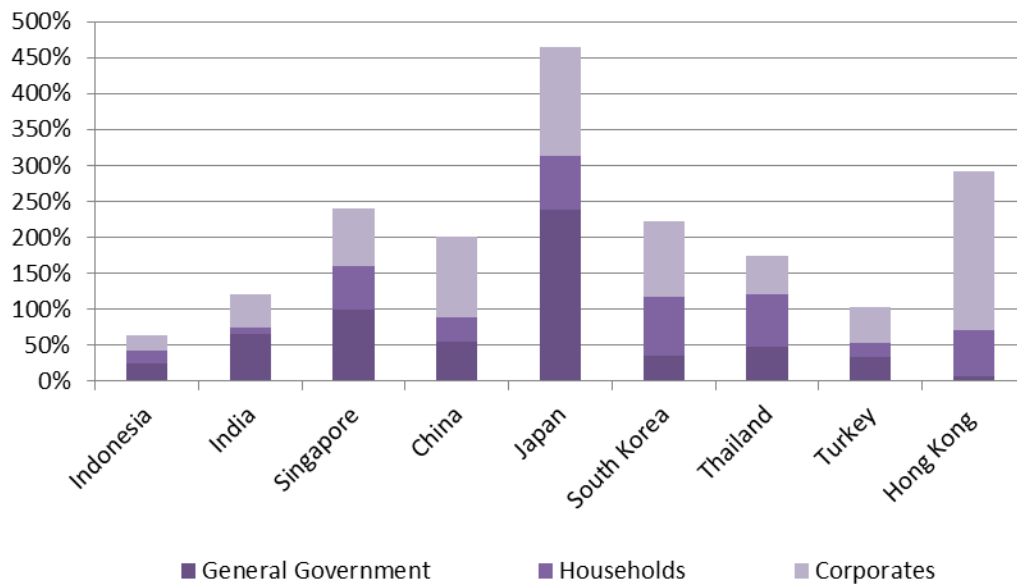
Figure 7: Evolution of China's debt by component

Debt-to-GDP ratio (%)



Source: McKinsey.

Figure 8: Total debt in selected Asian countries



Source: DataStream, CEIC and McKinsey.

Beyond public debt, corporates have been leveraging much faster. In fact, as much as 52 percentage points of GDP was added to the stock of private debt between 2007 and 2014. This, together with some additional although still limited leveraging from households, puts China's total debt at a level close to 300 percent of GDP, the largest in Asia after Japan (see Figures 7 and 8). Beyond the stock of private debt, debt service is becoming an issue. According to Garcia Herrero *et al* (2013), corporate indebtedness has been at stress levels for several years, and has been rising fast (Figure 9). In particular, as of end-2014, more than one quarter of the companies in our sample of domestically-listed firms had a ratio of EBITDA to interest expenses of less than one, implying that their operating cash flow was insufficient to service their interest payments. This, of course, does not bode well for the health of the corporate sector in China. In this context, we cannot forget that further financial reform would probably push the cost of funding up as part of domestic savings will be invested abroad for diversification reasons. There could thus be a trade-off between financial reform and financial stability, which will make it even tougher for the Chinese authorities to push reform further. The negative impact of financial reform on corporate funding is also behind a good part of the opposition to reform from corporate China, in particular the large SOEs.

Figure 9: Corporate debt stress ratios

Source: Wind, CEIC and BBVA Research. Note: Stress ratios calculated for Chinese listed companies.

Finally, it is important to note that most of this pile of debt is in the hands of residents, which many argue is a good enough reason not to worry about China's leveraging. I would argue that there are three main reasons why we should worry about China's debt problem. First, local government debt will need to be cleaned up at some point, which will undermine banks' asset quality (unless the current loan for debt swap programme is enlarged to all of the bank loans extended to local governments, but we are still far from that). Second, as Elmendorf and Mankiw (1999) argue, a heavy debt burden – even if moved to the central government – could weigh on the growth rate both in the short and on the long term. Third, both domestic and external liberalisation will increase funding costs for the government, and corporates and savers will become free to choose from other investment opportunities.

How to push for financial reform while piling up debt

The history of financial reform is plagued with crises as a natural consequences of investors' behaviour once they are freed from tight controls. There are two well-known cases for which this is especially true: weak regulation, and excessive leverage. We do not judge the former here, although it would be easy to make that argument at least for shadow banking (being virtually unregulated). For the latter, the previous section shows enough evidence of the risks ahead. The issue can be summarised as follows. China's debt problem is associated with several rounds of stimulus that aimed to counter the negative shocks from global financial crisis. The stimulus packages have led to over-investment in infrastructure by local governments, and the build-up of excess production capacity in a number of industries. On the positive side, all the investment in China is mainly financed by domestic savings, given China's persistent surpluses under the current account. This should give some relief to investors worrying about an imminent crash in China. On the flip side, it also indicates that there exist deep-rooted institutional flaws in China's economy (such as a variety of financial repression), which have channelled high national savings into less-efficient investment (wasteful infrastructure investment and the build-up of over-capacity). Opening up the current account will allow investors to better allocate their savings, but it will also be harder for the Chinese authorities and corporates to find cheap funding because currently repressed savings can move elsewhere. This really means that leverage would need to be tamed – and if possible reduced – before the capital account is opened.

To that end, a number of key structural reforms are needed. In particular, fiscal reform is clearly a must to improve central government control over local governments and other sources of the now extremely large consolidated fiscal deficit in China. Local governments should be entitled to more tax revenues, commensurate with their social spending obligations. The authorities are also seeking to reduce the weight of provincial GDP in the performance appraisal system of local government officials, which would help reduce their incentive to engage in wasteful infrastructure projects. Finally, local governments are increasingly being allowed to directly issue long-term municipal bonds to replace their existing borrowing from banks. Given the central government backing, this at least is a recognition of a public debt that before was hard to account for. In any event, to reduce the stock problem, local governments have substantial assets they could sell, including their participation in state-owned enterprises. Regarding the corporate debt problem, the authorities should also increase their regulatory efforts to effectively curb shadow banking activities and prevent a further build-up of the corporate debt level. Finally, the current situation in which the system is flooded with liquidity to avoid raising interest rates is clearly not the best way to curb leverage.

In conclusion, although financial reform is being pushed at a difficult time, given China's massive leverage, it does seem important to keep pushing. Otherwise, the leveraging process will continue to keep interest rates artificially low, and savings will continue to be allocated inefficiently. Finally, the internationalisation of the RMB cannot but help the Chinese government and Chinese corporates to fund themselves in the international markets without having to rely on the US dollar.

Annex

Table 1: Selected steps in financial liberalisation

Reform	Date	Key Points
CNH market was born	July-August 2010	Offshore RMB officially becomes deliverable in HK and RMB clearing bank established.
Dim-sum bonds	August 2011	Corporates in China allowed to issue dim-sum bonds.
RQFII programme kick-started	December 2011	Foreigners allowed to use offshore RMB for onshore investments.
Wenzhou Financial Liberalisation	March 2012	Allow private lenders in the city to operate as investment companies with the goal of increasing small and medium enterprise (SME) finance. Wenzhou residents are allowed to invest in non-financial companies overseas.
Exchange Rate Band Widening	April 2012	The daily band for the renminbi /US dollar exchange rate increased from +/-0.5% to +/-1% around the fix daily rate set by the PBoC.
Enlargement of QFII Quota	April 2012	Increased the quotas for qualified foreign institutional investors to $80 billion from $30 billion.
Over-the-Counter (OTC) Market	April 2012	Creation of a new OTC market primarily consisted of SMEs, which is aimed to broaden the finance channels for SMEs, especially high-tech companies.
Qianhai Pilot Programme	June 2012	Companies in Qianhai will be encouraged to sell renminbi bonds in Hong Kong and to experiment with cross- border loans in the Chinese currency.
SME Bond Market	June 2012	Creation of a high-yield (aka junk bond) market for SMEs through private placement.
Interest Rate Benchmark Band Widening	June/July 2012	Allows 10% of premium for deposit rates and 30% discount for lending rates.
Enlargement of RMB-QFII Quota	November 2012	Increased the quotas for RMB qualified foreign institutional investors to RMB 270 billion from RMB 70 billion.
Pilot scheme for RMB sweeping	November 2012	Scheme for cross-border inter-company RMB loans dished out.
More access to the QFII investors	March 2013	Qualified QFII institutions are allowed to investment in the inter-bank bond market. Previously, QFII investors were only allowed to invest in the A-share market and bonds listed in the Shanghai and Shenzhen exchanges.
Guidelines for the program of RMB Qualified Foreign Institutional Investors (RQFII)	May 2013	Designated foreign institutional investors (mainly including banks, insurances companies, pension, and other financial institutions) are allowed to repatriate offshore RMB to the Mainland for investment use.
Introduction of CNH Hibor fixing	June 2013	Treasury Markets Association unveils launch of CNH Hibor fixing.
Removal of lending rate floor	July 2013	Removed: (i) the lending rate floor on bank loans (before set at 70% of the benchmark lending rate); (ii) controls on the price setting of banks' bill discounting; and (iii) lending rate caps (previously set at 2.3x the benchmark lending rate) on rural credit unions
Expansion of a pilot programme of consumer finance companies	September 2013	The pilot program will be expanded from previous 4 cities to 16 cities. Before, the CBRC will only approve one consumer finance company for every eligible city and strictly prohibit their cross-city operation.
Launch of Shanghai Free Trade Zone	September 2013	The government officially launched the Shanghai Free Trade Zone. In addition to the promised implementation of trade and investment liberalising measures, the Zone has attracted market attention for its plans to become a test ground for the liberalisation of interest rates and capital account opening.
Creation of New Prime Lending Rate	October 2013	The new prime lending rate will be calculated daily as a weighted average of nine banks' actual lending rates, and is meant to assist banks in pricing their loans.
Issuance of the CDs in the interbank market	December 2013	Issuance of the new CDs (ranging from one-month to three years) is open to commercial and policy banks, while purchase is open to both banks and non-bank financial institutions. Interest rates on the CDs are to be market-determined, with the Shibor to serve as a benchmark.
Greater private entry into the banking sector	March 2014	China Banking Regulatory Commission issued bank licenses to five banks owned by private capital in a pilot program, marking the opening the country's banking sector to private investors.
Exchange Rate Band Widening, Part Ⅱ	March 2014	Daily trading band for USD-CNY widened to +/-2%.
Cross-border stock investment between Shanghai and Hong Kong	April 2014	The China Securities Regulatory Commission (CSRC) announced a pilot programme to allow cross-border stock investment between Shanghai and Hong Kong stock exchanges.
Shanghai-Hong Kong Stock Connect	November 2014	Shanghai-Hong Kong Stock Connect launched.

Source: Regulators' websites, BBVA Research and HSBC Global Research.

Table 2: China's RMB BSAs with Other Countries

Country/Economy	Amount	Effective Date	Expiration Date
China-Korea	180 bn RMB/38 Tr Won	Dec-08	Dec-11
renewed and expanded	360 bn RMB/64 Tr Won	Oct-11	Oct-14
China-Hong Kong	200 bn RMB/227 bn HKD	Jan-09	Jan-12
renewed and expanded	400 bn RMB/490 bn HKD	Nov-11	Nov-14
China-Malaysia	80 bn RMB/40 bn MYR	Feb-09	Feb-12
renewed and expanded	180 bn RMB/90 bn MYR	Feb-12	Feb-15
China-Belarus	20 bn RMB/8 tr BYB	Mar-09	Mar-12
China-Indonesia	100 bn RMB/ 175 tr Rupiah	Mar-09	Mar-12
renewed	100 bn RMB/ 175 tr Rupiah	Oct-13	Oct-16
China-Argentina	70 bn RMB/ Equal Amount Peso	Mar-09	Mar-12
China-Iceland	3.5 bn RMB/66 bn ISK	Jun-10	Jun-13
renewed	3.5 bn RMB/66 bn ISK	Sep-13	Sep-16
China-Singapore	150 bn RMB/30 bn SGD	Jul-10	Jul-13
renewed	300 bn RMB/60 bn SGD	Mar-13	Mar-16
China-New Zealand	25 bn RMB	Apr-11	Apr-14
China-Uzbekistan	0.7 bn RMB	Apr-11	Apr-14
China-Mongolia	5 bn RMB	May-11	May-14
renewed and expanded	10 bn RMB	Mar-12	May-14
China-Kazakhstan	7 bn RMB	Jun-11	Jun-14
China-Thailand	70 bn RMB/ 320 bn THB	Dec-11	Dec-14
China-Pakistan	10 bn RMB/140 bn PKR	Dec-11	Dec-14
China-UAE	35 bn RMB/20 bn AED	Jan-12	Jan-15
China-Turkey	10 bn RMB/3 bn TRY	Feb-12	Feb-15
China-Australia	200 bn RMB/30 bn AUD	Mar-12	Mar-15
China-Ukraine	15 bn RMB/19 bn UAH	Jun-12	Jun-15
China-Brazil	190 bn RMB/60 bn BRL	Mar-13	Mar-16
China-UK	200 bn RMB/20 bn GBP	Jun-13	Jun-16
China-Hungary	10 bn RMB/375 bn HUF	Sep-13	Sep-16
China-Albania	2 bn RMB/3.58 bn ALL	Sep-13	Sep-16
China-ECB	350 bn RMB/45 bn EUR	Oct-13	Oct-16
China-Switzerland	150 bn RMB/21 bn Sfr	July-14	July-17
China-Qatar	35 bn RMB/20.8 bn QAR	Nov-14	Nov-17
China-Canada	200 bn RMB/30 bn CAD	Nov-14	Nov-17
China-Chile	22 bn RMB/ 2.2 tr CLP	May-15	May-18

Source: BBVA Research, Natixis Research.

Table 3: Countries were RMB is used a reserve currency

Announcement Date	Country/Economy	% of RMB Assets in Foreign Reserve
2010 Sep	Malaysia	N.A.
2011 May	South Korea	N.A.
2011 Sep	Chile	0.30%
2011 Sep	Venezuela	N.A.
2011 Nov	Thailand	<1%
2012 Mar	Japan	N.A.
2012 Jul	Indonesia	N.A.
2013 Apr	Australia	5%
2013 Aug	Belarus	N.A.
2013 Oct	Taiwan	N.A.
2013 Oct	Taiwan	N.A.
2013 Nov	South Africa	3%
2014 Jan	Nigeria	7%
2014 Mar	Colombia	N.A.
2014 Oct	UK	N.A.

Source: BBVA Research

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