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Can China's Savers Save the World?

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Table of Contents

Why China Matters	4
China's Banking System: A Public/Private Partnership	6
Why Funding Matters.....	8
Who Funds the Party?.....	9
Domestic Savings Growth Rates Must Decline	10
Total Social Funding: The Great Splurge	11
Going Off-Balance Sheet: Where the Bodies Are Buried	12
Is The Engine Slowing Down? Total Social Funding and GDP Growth	14
Has Policy Tightened?.....	15
The Real Estate Crash: Real or Unreal?	15
On the Land: A Fiscal Risk	16
Reasons to Sober Up	17
Reasons to Be Cheerful	18
How Bad is the Bad Debt Issue?	19
Interlude: A Brief Primer on Chinese Residential Housing.....	19
The System is Vulnerable	21
Why Loan Growth Should Slow — and Why It May Not Happen	21
Investment Implications and Conclusions	22

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Executive Summary

- ▶ China has experienced rapid credit-led growth in recent years. This growth has been an important contributor to global economic recovery.
- ▶ Many commentators anticipate that the rapid nature of Chinese credit growth, allied to a capital allocation process led by political direction and undertaken at highly subsidized rates of interest, will inevitably end in a credit bust.
- ▶ Further, these critics point to the opaque nature of China's banking system, rapidly growing off-balance-sheet exposures and an overblown real estate sector as evidence of a fragile Sino financial system overdue for a crisis that will, in turn, cripple world growth and extended financial systems elsewhere.
- ▶ While we are sympathetic to much of the logic behind these fears, we believe that these concerns float on some flimsy analysis. As one example, we cite the mismatch between the oft-cited story of 65 million empty apartments nationwide in China and the inconvenient truth that market estimates indicate that only 60 million apartments have been completed in the last decade.¹
- ▶ More importantly, we believe that the “panda bears” overlook the fact that much of the expansion in China's financial balance sheet has been quasi-fiscal lending and that such lending is backed and guaranteed by a system that is experiencing rapid growth in income and starting from a low level of overall debt.
- ▶ Domestic savings rates are high — indeed, excessive at over 50% of GDP. While external capital has funded much of the rise in banking system liabilities over the last 12 months, China also runs a current account surplus, is largely domestically funded and lacks many of the vulnerabilities that undid Western credit systems in 2007–08.²
- ▶ We agree that bad debt levels in China will rise — in fact, in a worst-case scenario, there could be as much as 7 trillion RMB of bad loans in the system at present, according to our estimates. But bank balance sheets are strong, profit growth is subsidized by fixed lending and deposit rates, and economic growth itself should be strong enough to absorb most reasonable estimates of losses without serious challenges to financial system stability.
- ▶ Bank deposits are the main source of domestic savings.¹ We are confident that Beijing will seek to avoid social discontent arising from any threat to the security of deposits with vigor and resources that would make Western bailouts appear puny by comparison.
- ▶ Our concern is that savings growth rates will slow over the next few years and that deposit growth will be much more pedestrian than over the last decade. The recent consolidation of data on funding growth under the banner of Total Social Financing (TSF) presents a clearer picture of the efficiency of deposit mobilization in funding growth. Even allowing for shortcomings in methodology, the incremental growth per unit of financing — Financial Incremental Capital Output Ratio, or FICOR, as we term it — has deteriorated over the last decade.
- ▶ As a consequence of slower savings rates and reduced FICOR, we expect a slowdown in trend growth over the next few years to 7-8% rather than the 8-10% level of recent times.
- ▶ State-led capital allocation and rate fixing was a feature of both Korea and Japan in the past. In both cases, financial crisis arising from this policy mix was triggered by financial reform. We believe the same holds for China, but will take a number of years to unfold.

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Why China Matters

China has been the leading contributor to world growth over the last decade. Prompt and effective action in 2008 ensured that the Middle Kingdom led Asia and, subsequently, the world out of the slump induced by Western financial failure.



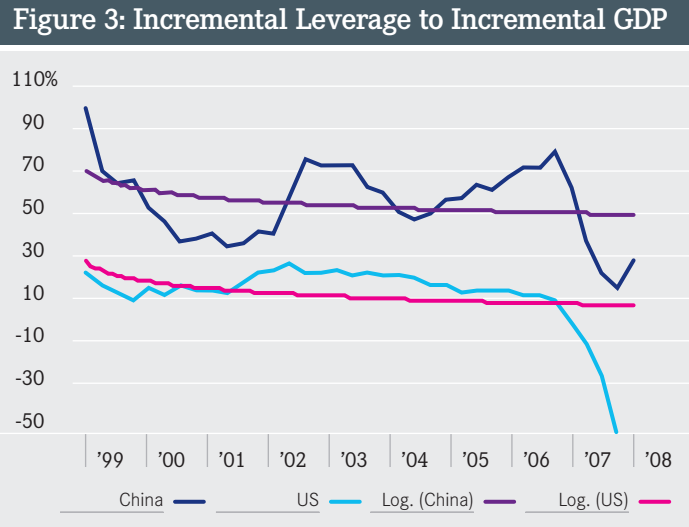
Source: UBS. For illustrative purposes only.

At the heart of this recovery lies the ability of China's state-led financial system to fund credit and investment growth. This funding and use of funds has been central to world growth over the last decade and, in particular, the recovery from 2008. It was not the Fed who saved the world — rather, it was China's savers, policy-makers and banks.

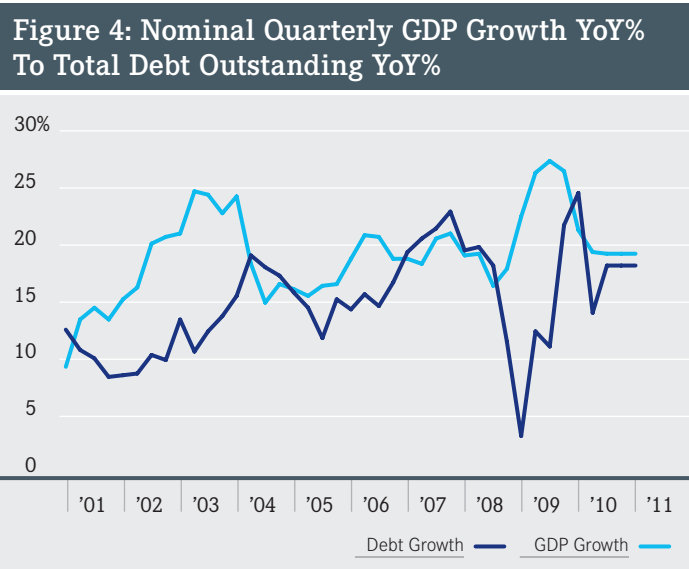
In doing so, however, China presents the classic picture of an over-expanding economy. The country's money growth has significantly outpaced nominal economic growth. In addition, both theory and bitter experience associate excessive credit-to-GDP growth with eventual financial crisis through the transmission mechanism of borrowers being unable to service loans and an ensuing solvency-led crash. So the question is: Can China's party continue without a major hangover?



Source: Moody's and IMF. For illustrative purposes only.



For illustrative purposes only.



Source: Citi, People's Bank of China. Shows the diminishing marginal utility of debt: this excludes off-balance sheet debt but still shows a level of effectiveness equivalent to the US in the 1950's. For illustrative purposes only.

China allocates capital in quantity terms on a contra-cyclical basis. This is in distinct contrast to the pro-cyclical approach adopted in most developed countries. China's government also directs capital to favored borrowers and preferred sectors. Debt costs have no relationship to borrower or economic risk. A 12-month lending rate of 6.3% (and limited premiums over this level for credit risk) can hardly be described as a pricing signal in an economy with trend nominal growth in the mid-teens. The exchange rate — not a freely floating rate, and one that is undervalued — is also not a pricing signal. For students of financial crisis, and for economists, this absence of pricing signals and furious rates of credit growth

all presage disaster. Yet China hardly stumbles — a source of deep frustration for those holding views based on past experience.

The problem of misallocation is amply framed by the recent release by the People's Bank of China (PBOC) of new data covering Total Social Financing (TSF), a category that measures the annual flow of all financing. The picture that emerges — as discussed later in this paper — is one of sharply declining growth per unit of finance. We dub this “Financial ICOR” — or FICOR, where “ICOR” stands for incremental capital output ratio, a measure of the quantity of inputs required to generate an additional unit of growth. If an economy was a car, a decline in FICOR or ICOR would equal fewer miles per gallon of gas.

Seasoned observers of financial crises know that a decline in FICOR has preceded every major financial crisis in recent times — although, in fairness, a decline in FICOR does not of itself predict a crisis. In particular, this was the case in East Asia during the early and mid-1990's.

However, does this lower bang for the yuan matter in a state-led financial system where credit quality is an explicit responsibility of the state? We think not. The state, in our view, will not allow the banking system to fail.

This sounds like a Western-style bailout (and, indeed, this has been the case in past Chinese banking crises). But China is different. Savings rates are high (although they will inevitably decline). The fiscal deficit — which might rise to 3% of GDP over the next 24 months — is hardly burdensome. Total tax revenues are growing at a breakneck pace — up 31% in 2011. Overall tax revenues are 30% of GDP (well below Western norms). Land sales revenue — roundly viewed as an Achilles heel — represents 7% of GDP, which is no greater than for many developed economies. This fiscal bounty supports the critical role of deposits in the savings universe. A driving desire to avoid social upheaval means that we should expect determined and direct government action to address financial risk.

A parade of commentators — perhaps best described as “panda haters” — await China's decline and fall. These pundits contend (with some reasonable perspective) that high credit growth rates and poor capital allocation will bring down asset prices, economic growth and the banking system, in a Chinese re-run of the 2007-08 financial crisis. If the doom-mongers are correct, China will suffer a financial crisis and a recession that, in turn, will stymie world growth and impact the fragile and vulnerable fiscal and banking systems of the developed world. In contrast, China's cheerleaders — the “panda huggers” — contend that ample liquidity and active government policy will help avoid this outcome.

Leaving aside the irony of a strong banking system bringing down a weak one (as measured by past due coverage, Tier 1 capital ratios, fiscal coverage and a fiscal system uncomplicated by warring political parties), the (panda) bear argument based around solvency risk is probably addressing the wrong end of the equation.

We completely agree that loan quality is far worse than the 1% non-performing loan (NPL) level disclosed by China's banks. We make this presumption given the rapid growth in credit relative to GDP. At the same time, however, aggressive action to limit a spiral in real estate risk and rapid moves to identify and limit off-balance-sheet risk suggest to us that solvency risk is overstated.

We also strongly agree with analysis suggesting that purchasers of real estate in China are assuming a continuation of strong price appreciation. These beliefs — implicit in the very high price-to-rent levels seen in major cities — are based on short time histories. As such, buyers' expectations of price rises are open to disappointment. We contend that the pattern of price appreciation in real estate in China is similar to that seen in other developing markets where deregulation encourages a rush to invest (similar to price appreciation in markets such as Moscow in the mid-1990s and Southeast Asia from 1992 onwards). The key difference, however, is that China has high savings rates and that many purchasers are state-backed. Moral hazard is clearly involved in the real estate cycle — as always — but the peculiar nature of China's mixed state/private-sector banking and investment relationship suggests that the evil day of reckoning is a fair ways off.

We believe that China's risk — and the global growth risk — is insufficient funding to meet the myriad investment demands of the country's warring (at least for funding) economic actors. Financial system liquidity — not solvency — matters.

This may seem like an unusual view, given the frantic efforts to mop up excess liquidity by raising required reserve ratios (RRRs) for banks. However, it does reflect the “wasteful” nature of much of the investment demonstrated by declines in FICOR and the shortcomings of a diktat-led capital allocation process. Banking crises are created by bad assets and caused by bad liabilities.

It is clear that a great part of China's investment- and export-led boom has been mirrored by an extraordinarily high savings rate. Since economic reforms began in 1978, the annual savings rate has represented more than 34% of GDP per annum, and in the last decade alone it has climbed to 51%. However, we believe that rebalancing China's economy towards a more domestic-led growth pattern and providing an improved social security net will reduce the savings rate and, in turn, funding growth rates.

We believe that there are constraints on growth funded by politically-directed credit mobilization (Western regulators and politicians, please take note). Subsidized loans and directed lending have limits in supporting long-term growth. Interestingly, in Japan and Korea — two countries that previously adopted this policy approach — the limits were reached when financial liberalization offered depositors some freedom from financial repression.

In China's case, while there is clearly a need to develop a deeper and more diversified financial system, we believe that vested interests — including those of local governments and the Party itself — will act as a brake on the pace of reform. Establishing investment vehicles such as the Social Security Fund and China Investment Corp., as well as plans for a larger social safety net and increased healthcare spending outlined in the government's 12th five-year plan all make sense and require, among other things, a deeper bond market. But these measures will take time to implement, and preferred lending is likely to remain a lynchpin of the system for some years to come.

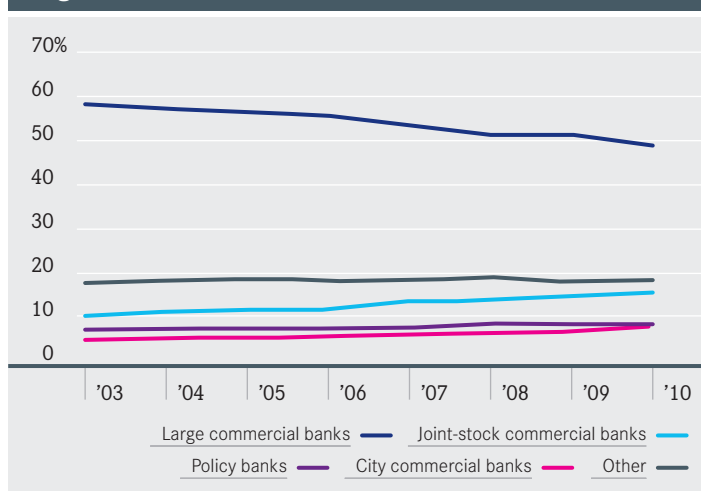
We conclude that a gradual slowdown in China's growth rate is inevitable. We believe that the Chinese banking system will lose some of the subsidy that households have supplied through negative deposit rates, and that a loan allocation process dictated by policy considerations is a handicap if savings and funding growth slows. In the short term, we suspect that the current squeeze on private enterprise funding will abate later in 2011 and that the pro-growth agenda will continue to support commodity demand. Some lead indicators are turning downward in China, but these measure the change in the rate of growth rather than absolute declines. China will slow, not dip.

This paper addresses our reasons for taking the view that China will not suffer financial collapse but, rather, a slowdown in growth rates and growth potential, as well as the investment consequences of this view. We acknowledge that one of the biggest risks lies around land prices — not through over-leveraged borrowers per se, but rather the importance of land as collateral in a country with a small bond market. This collateral is relevant for local governments (the source of much analysis of risk in the last 12 months), based on our observations and for the system as a whole, where real estate is a part of more than 40% of all loans, according to BlackRock estimates. However, we conclude that there is ample coverage and bank capital — at least for now — and that growth momentum will continue to paper over many of the risks.

China's Banking System: A Public/Private Partnership

China's banking system comprises four primary segments: state-owned banks, joint stock banks, city commercial banks and foreign

Figure 5: Chinese Banks' Share of Assets



* 2010 figure is estimated to be unchanged from 2009. Source: CBRC. For illustrative purposes only.

institutions. State-owned banks — the so-called Big Five — control 50% of system assets, while joint stock banks comprise 15%, city commercial 10% and other (including foreign and policy banks) 25%.

State ownership and direction is pervasive throughout the system. The Big Five banks — ICBC, Agricultural Bank of China, China Construction Bank, Bank of China and Bank of Communications — are majority state-owned, the 15 joint stock banks have state entities as partial shareholders, and the 150 or so city and commercial banks have close links to, or shareholdings by, their provincial or city governments.

State banks are deposit-takers first and lenders second, while joint stock banks are lenders first and deposit-takers second. Spare balances move between the banks through the interbank market, where rates and quantities are closely managed by the PBOC.

The PBOC oversees monetary policy, while the China Banking Regulatory Commission (CBRC) acts as regulator and supervisor of the system. In practice, as lending is quota driven and deposit and lending rates are fixed, the PBOC acts as the main supervisor of the system. (As an aside, our personal experience has been that both bodies have excellent personnel, and that perceptions of apparatchik regulators of limited ability stem from uninformed prejudice.)

The table on the following page shows bank lending by sector and rates of lending growth. It should be noted that this analysis categorizes borrowing by end user — in fact, many loans are channeled into real estate or land itself is used as collateral. We believe that combined exposure (either by end use or collateral) to land and buildings represents at least 40% of loans in the system.

Table 1: Bank Lending by Sector

Sector	Loan Mix as of 6/30/2010*	New Bank Lending by Sector			
		6M2010*	2009	2008	2007
Mining	2%	3%	2%	4%	2%
Manufacturing	19%	18%	12%	18%	26%
Production and Supply of Electricity, Gas and Water	8%	-1%	3%	15%	8%
Construction	2%	4%	2%	3%	4%
Transport, Storage and Post	11%	13%	8%	14%	7%
Wholesale and Retail Trades	5%	9%	8%	3%	8%
Financial Services (Sector)	1%	0%	5%	7%	-2%
Real Estate	9%	13%	7%	7%	12%
Leasing and Business Services	7%	8%	9%	7%	3%
Management of Water Conservancy, Environment and Public Facilities	6%	5%	14%	7%	5%
Public Management and Social Organizations	1%	1%	2%	1%	-1%
Personal Loans	23%	36%	25%	17%	30%
Others**	8%	-10%	2%	-3%	-3%

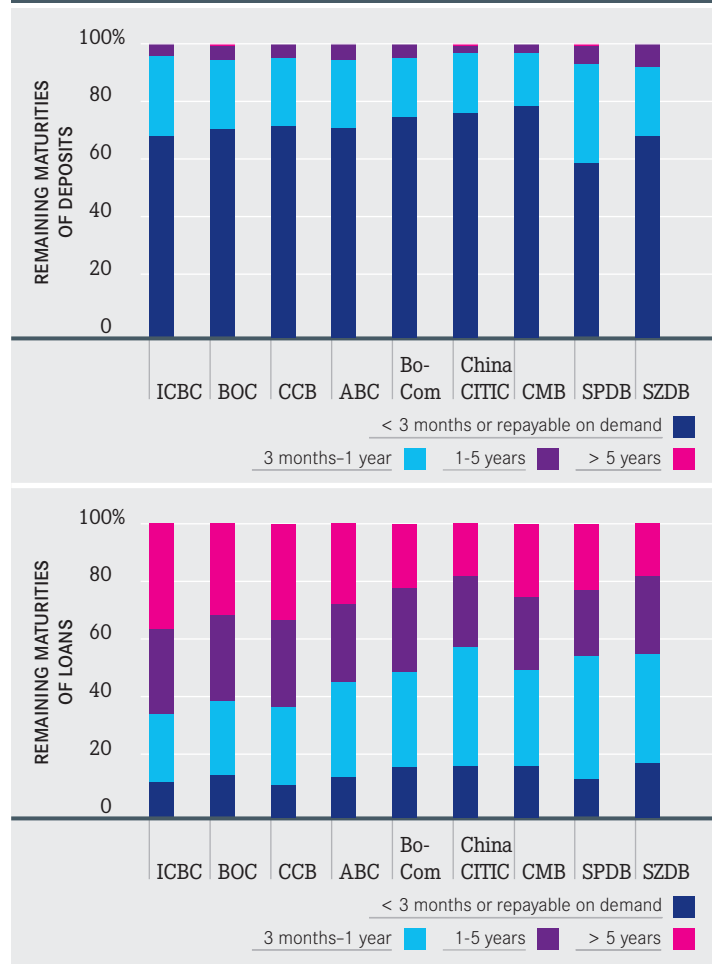
* Only includes the data from ICBC, BOC, ABC, CCB, BoCom, CITIC, CMB, SBDB and SZDB. ** Others include discount bills for 6M2010. Source: CBRC annual reports and company filings.

NPLs have declined significantly since the banking crisis, which peaked in 2002. At that stage, NPLs represented nearly 25% of GDP as a result of policy-led support for state-owned enterprises and the zombie capitalism that this process encouraged. NPLs have steadily declined as banking exposures diversified into private lending, regulatory oversight improved and capital raising since 2006 restored coverage ratios. (Currently, NPL coverage averages more than 200% for leading banks, with low write-off ratios.) In part, this improvement stems from enhanced capital management, but it is also rare for banks to foreclose on state-preferred borrowers or individuals, which make up the lion's share of debt.

In addition, loan duration has been lengthening. The consequence of this trend and the lack of a deep corporate bond market is a growing asset/liability mismatch. This mismatch is a potential source of risk if deposit growth slows and longer-term borrowers experience difficulties in repayment.

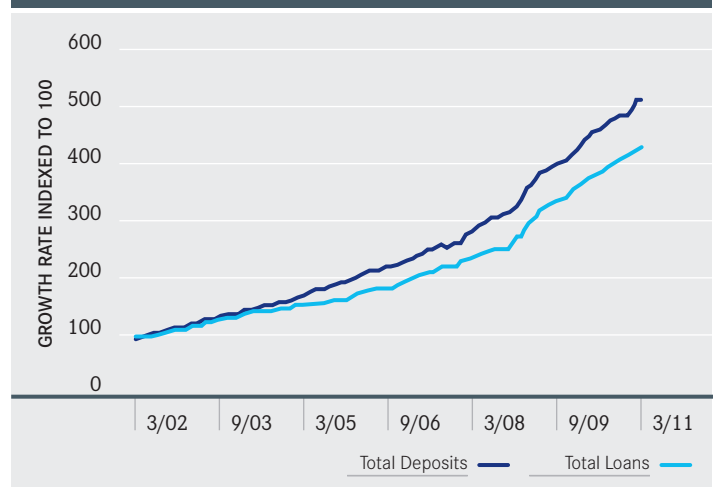
Systemwide growth has been rapid in recent years, funded by brisk deposit growth. The table to the right shows rates of growth in loans and deposits.

Figure 6: Deposits and Loans by Remaining Maturity



Source: Company filings. For illustrative purposes only.

Figure 7: Growth Rate of Loans and Deposits



Source: Bloomberg (China Economic Information Network). For illustrative purposes only.

Lending policies are closely controlled and directed by the PBOC and CBRC, acting on the instructions of China's ruling body, the State Council. Thus, lending tends to be contra-cyclical, in direct contrast to the pro-cyclical policies of private-sector banking systems. In some respects, China's use of its financial system echoes the approaches of Japan in the 1960-1980 period and Korea a decade later. It is crucial to any understanding of bad debt risks to see lending through approved channels as an extension of fiscal policy, with attendant risks and backstops. (An irony here is that state-directed lending to support financial systems now seems to be de rigueur in many Western economies that criticize China for a similar approach.)

The PBOC sets floors and ceilings for lending and deposit rates, but in practice, most lending takes place at floor rates (i.e., there is no distinction made between the credit risks of borrowers). In practice, this means that interest rates do not act as a pricing discipline for preferred borrowers and that depositors receiving negative yields on their deposits subsidize borrowers. This process reflects a fiscal transfer, as most borrowers are state-owned companies or organizations involved in supporting state-directed programs. It also goes some way towards explaining the low share of consumption in the economy, as this subsidy is a new universal tax that channels capital for consumption towards investment.

Table 2: Banks' Liability Mix (Year-End 2009)

% of Total	SOCBS	JSCBS	CCBS	Foreign Banks
Corporate Deposits	35.6	50.9	56.2	32.8
Retail Deposits	38.6	15.2	21.7	2.9
Other Deposits	3.5	3.0	0.8	21.7
Due to Other Depository Institutions	3.6	9.8	8.3	8.9
Due to Other Financial Institutions	2.6	3.4	0.8	-
Bonds	0.7	1.8	0.9	-
Overseas Liabilities	0.2	0.3	0.0	19.2
Other Liabilities	15.1	15.6	11.3	11.6
Total Liabilities	100.0	100.0	100.0	97.1
Total Liabilities (in RMB Bn)	38,852	156,103	57,343	14,351

Source: PBoC, 2009 Financial Stability Report.

Deposits represent the main source of funding, although the mix differs by type and size of institution. Within the overall mix, retail deposits have been declining and corporate deposits increasing partially as a result of offered rates and partially because corporate deposits include the re-deposit of loans made in 2008-09 that were not fully utilized upon drawdown.

Why Funding Matters

Availability of funding is the major weakness of the Chinese financial system. Retail depositors have suffered from negative real deposit rates for some years; recent inflation increases have made this worse. In partial consequence, retail deposits have declined as a share of funding and banks have sought to hold on to customers by offering higher-yielding products such as credit-related wealth management products (CWMPs). These funds — as we will see — have also afforded banks some regulatory arbitrage and escape from loan quotas. In turn, this has led to an increase in off-balance-sheet lending and credit growth in excess of official targets.

Retail investors have more choices than corporate investors. In the lending binge of 2009-10, corporate borrowers (particularly state-owned enterprises) were forced to re-deposit their loan balances with banks. As these loan balances are drawn down, we expect a slowdown in corporate deposit growth unless profits rise to provide an offset.

Either way, unless retail rates rise in real terms, the temptation will grow for retail investors to seek out investment opportunities beyond bank deposits. In effect, the rise in retail deposits absent other factors should reflect rises in real income plus or minus changes in savings rates. With inflation increasing, the incentive to save relative to consumption declines.

The financial repression represented by negative real interest rates and a lack of other savings options amounts to an explicit subsidy of borrowers by lenders, and can be regarded as a substitute for government borrowing and investment.

We find it hard to presume that systemwide deposit growth will be much higher than nominal GDP growth into the future, given: a) already high savings rates; and b) negative real rates. Thus, with loan-to-deposit rates varying between 58% and 73%, a systemwide average of 67% and a mandated maximum of 75% asset growth well above GDP require new sources of funding. This does not mean a reduction in asset growth, but rather a slowing growth rate.

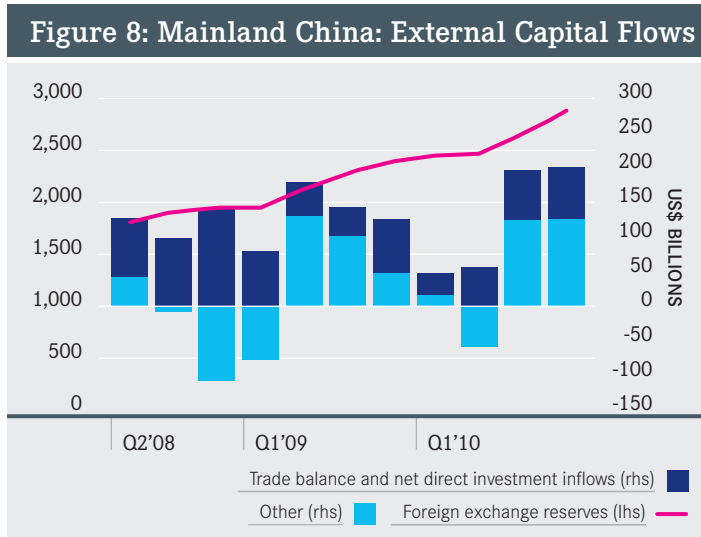
Table 3: Key Financial Metrics of the H-Share Banks (FY10)

YoY Change	ABC	BOC	BoComm	CCB	ICBC	CMB	CNCB	MSB*	CQRB	Average
Net Interest Margin	+30bp	+3bp	+16bp	+8bp	+18bp	+42bp	+12bp	+35bp	+1bp	+18bp
Gross Loans	+19.8%	+15.3%	+21.6%	+17.6%	+18.5%	+18.0%	+18.6%	+19.8%	+20.0%	+18.8%
Customer Deposits	+18.5%	+13.0%	+20.9%	+13.4%	+14.1%	+18.0%	+29.0%	+25.6%	+33.7%	+20.7%
Assets	+16.4%	+19.5%	+19.4%	+12.3%	+14.2%	+20.7%	+17.3%	+27.9%	+18.3%	+18.4%
RWA	+23.1%	+14.0%	+28.0%	+15.7%	+20.1%	+24.5%	+25.2%	+28.9%	+36.5%	+24.0%
NPLS	-16.5%	-16.06%	-0.1%	-10.3%	-17.2%	-0.5%	-16.0%	-0.8%	-26.2%	-11.5%
Net Fee Income	+29.4%	+18.4%	+27.0%	+36.7%	+32.1%	+41.7%	+35.0%	+77.7%	+109.0%	+45.3%
Operating Income	+30.7%	+18.9%	+28.4%	+21.0%	+23.1%	+38.7%	+37.5%	+30.0*	+35.4%	+29.3%
Operating Expenses	+16.9%	+14.1%	+32.9%	+15.4%	+15.4%	+24.5%	+18.3%	+24.3%	+22.5%	+20.5%
Pre-Provision Profit	+43.9%	+23.0%	+25.5%	+24.5%	+27.9%	+53.4%	+54.3%	+35.9%	+51.1%	+37.7%
Profit Before Tax	+63.3%	+27.9%	+30.4%	+26.3%	+28.8%	+49.0%	+48.9%	+46.8%	+60.4%	+42.4%
Net Profit After Tax	+46.0%	+29.3%	+29.6%	+26.3%	+28.4%	+41.3%	+50.2%	+45.2%	+62.3%	+39.9%

Source: BofA Merrill Lynch Global Research, company reports. * MBS YOY growth distortedly low due to the one-off gain in 2009, underlying PPP growth should be 47% in 2010.

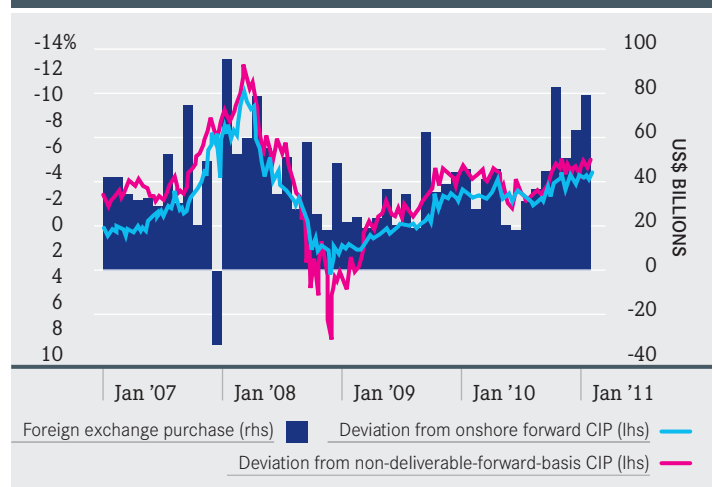
Who Funds the Party?

One source of funds is offshore. This can take two forms: trade or capital inflow. As seen in the chart below, the relative role of trade inflow has declined and portfolio inflows have risen.



Sources: CEIC and staff estimates. For illustrative purposes only.

China's State Administration of Foreign Exchange (SAFE) estimates that the contribution of "Others" — such as FDI, repatriation, valuation gains on non-US-dollar FX reserves, etc. — is in line with economic expectations and does not reflect speculative inflows.

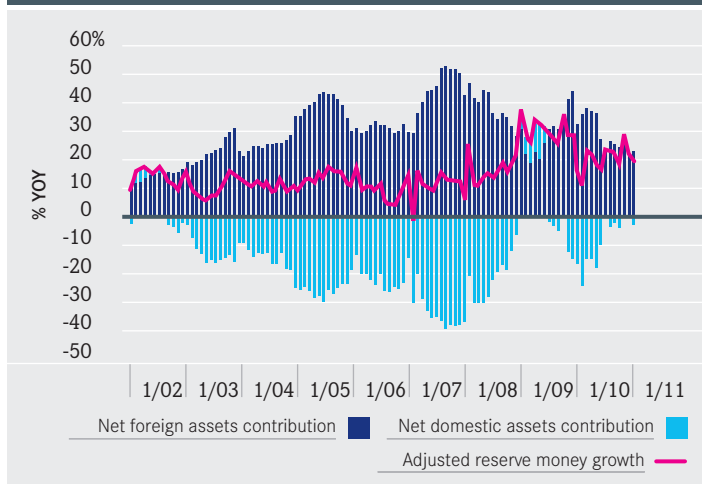
Figure 9: Mainland China: Forex Purchase and Deviations From Covered Interest Parity

Note: Negative deviation from the CIP indicates incentives for capital inflows, and vice versa. Sources: CEIC and staff estimates. For illustrative purposes only.

However, Hong Kong's Monetary Authority (HKMA) disagrees, and produced the following analysis of flows in its March 2011 Financial Stability and Monetary Report (note that the pink line effectively represents the incentive for speculative inflow).

It is also clear in the chart below that the foreign contribution to reserve money growth has assumed an increasing importance, and has, in turn, led to policies such as RRR designed to sterilize some or all of these flows.

Figure 10: Mainland China: Contribution to Reserve Money Growth



Note: Total reserve money is adjusted for the changes in the reserve requirement ratio. Sources: CEIC and staff estimates. For illustrative purposes only.

Hong Kong is the main source of offshore loans. As shown below, loans raised in Hong Kong for use in China have risen materially in recent years.

Table 4: Hong Kong Banks' Claims on Banks In Mainland China

As At	HK\$b	FC (in HK\$b)	Total (in HK\$b)
12/07	32	274	306
12/08	26	307	333
12/09	35	343	378
6/10	37	554	591
12/10	41	1016	1057
2/11	45	1238	1283

Source: HKMA, Monthly Statistical Bulletin, May 2011.

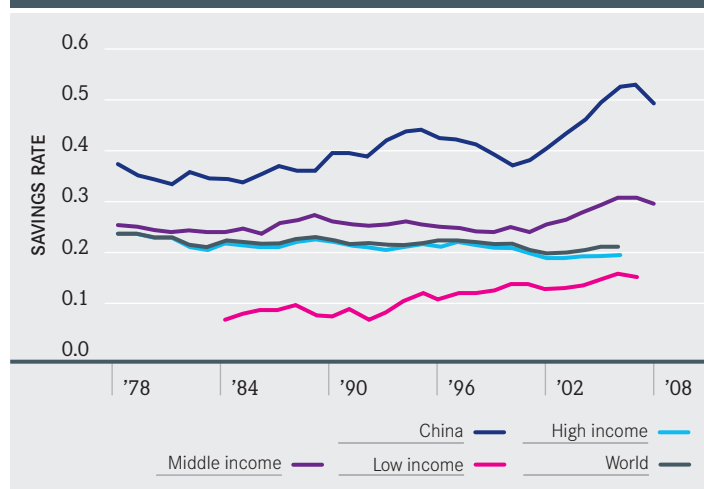
Regulated lending is only part of the story; capital account inflows, if unsterilized, are the other. In recent years, capital inflows — hot money and retained profits on net exports — have risen materially. Using an average margin of 15% (in line with listed non-financial companies' profits), we estimate that the net export profit inflow in 2010 totaled 175 billion RMB. The amount of hot money is difficult to determine, but we have read reports estimating this to be as much as 140RMB billion in Q1 2011 alone. Compare this increase to the balance tied up by the PBOC, where the reserve rate required for loans has risen from 15.5% to 21.0% over the last 15 months and estimated sterilized funds have risen from 10 to 15 trillion RMB (calculated as 15.5% on 1/10 deposits of 62.7 trillion RMB and 20.5% on 2/11 deposits of 72.6 trillion RMB).

Domestic Savings Growth Rates Must Decline

China boasts an enormous savings rate and has done so since economic reforms began in 1978.

For many years, this rate ran consistently at 35% or so of GDP. Since the millennium, however, it has risen significantly, reaching 53% in 2007. All four primary savings categories — government, enterprises, households and net foreign flows — have contributed to the increase, with households and government showing particular growth.

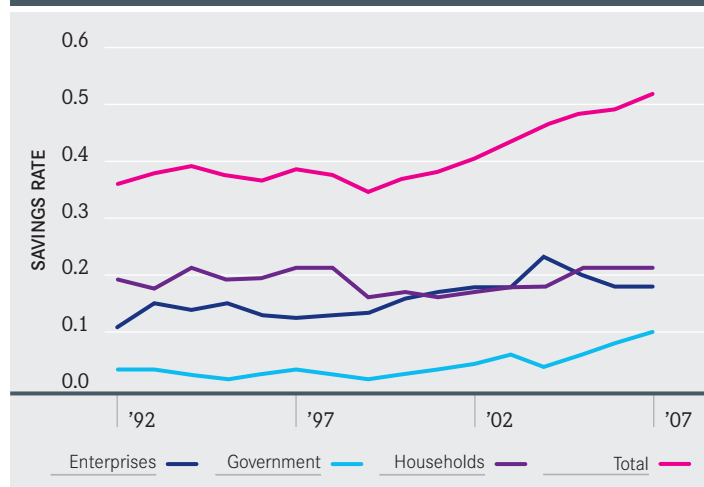
Figure 11: China Out-Saves the World



Source: World Bank. For illustrative purposes only.

However, we believe that these trends will reverse. Net government savings are due to decline as social welfare programs rise under the government's 12th five-year plan. Enterprise savings will decrease as wages and social taxes increase over the next decade. Households — the nominal beneficiaries — may actually

Figure 12: Who Saves What in China



Source: NBS (1995-2009). For illustrative purposes only.

save less as a formal social security net is established, but this is unproven, so we assume that this cohort's behavior will remain unchanged. Rebalancing towards domestic demand will reduce the net foreign contribution (alongside a decline in trade implied by rising import costs and currency appreciation). While this can be a slow process, it is, in our view, inevitable — not least for the improbability in the longer term of 15% of the global population getting rich selling goods to 50%.

One obvious question concerns the timing of a slowdown in savings rates. We are fairly certain that the fiscal deficit will rise over the next one to three years as spending on social programs ramps up. We also suspect that closing down funding sources for local governments will lead to an increase in transfer payments to these entities, funded in part by increased levels of deficit spending. Enterprise savings have clearly been under pressure in 2011 in the private sector, given reduced access to funds — as evidenced

by increases in black-market lending rates and labor costs. This leaves households and their attitudes to savings in a period of rising inflation risk. We suspect that savings will not decline for this cohort, but that there will be increased demand for non-deposit sources of savings as inflation hedges, including precious metals.

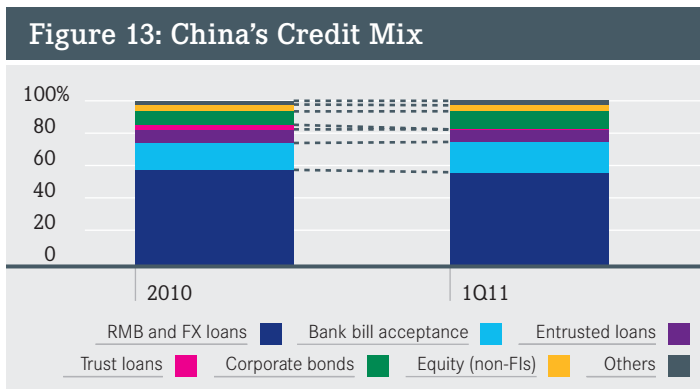
Total Social Funding: The Great Splurge

TSF is a new arrival in the panoply of Chinese statistics (albeit one that rearranges previously published figures). This data, first released in April 2011, covers the majority of change in the supply of funds that the economy receives from the financial system during a reporting period (intended to be quarterly). It is a flow rather than stock item.

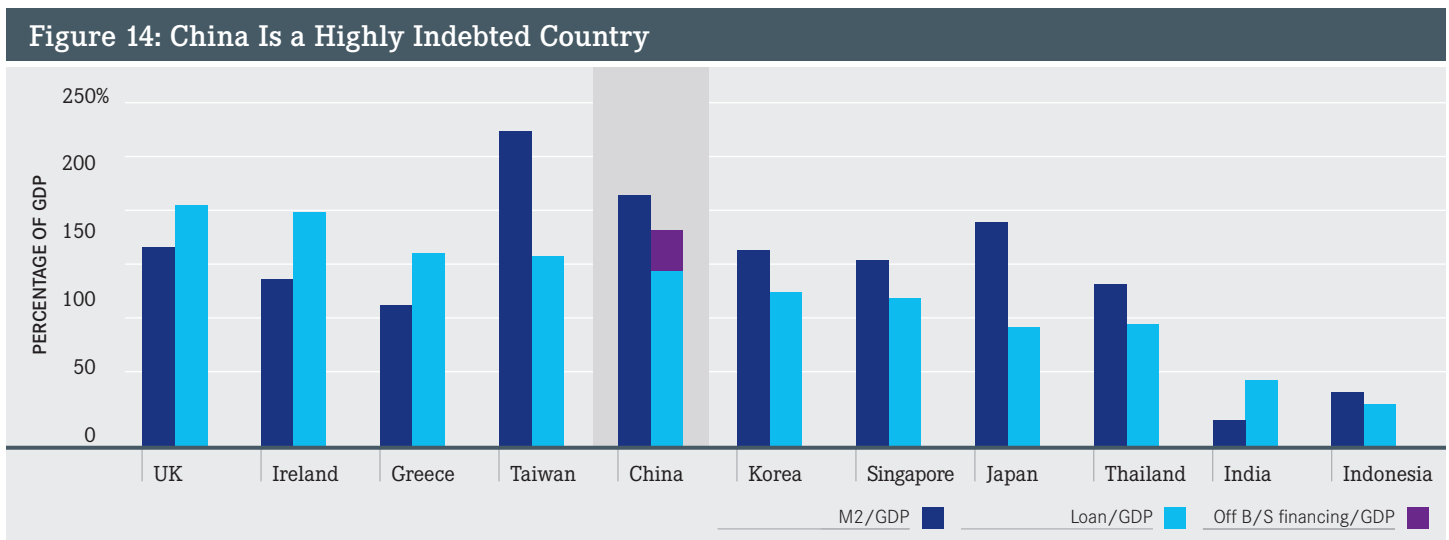
One of the potential motives for PBOC in tracking TSF is to understand the financing available to the economy. It is also an implicit acknowledgement that official quotas for total bank lending do not constrain economy-wide lending growth.

Off-balance-sheet items are growing as a part of TSF faster than the core loans from the banking system, emphasizing the need to look at the system's total financing rather than just the recorded loan data from the banks. Loans — the instruments most subject to regulation — have declined from 95% of social financing in 2002 to 56% in Q1 2011.

All components of TSF are measured on a book-value basis (that is, they are not distorted by any mark-to-market dynamics). The total flow of funds to the economy is much greater than TSF suggests, including items such as foreign direct investment and underground loans that are not measured in the data.

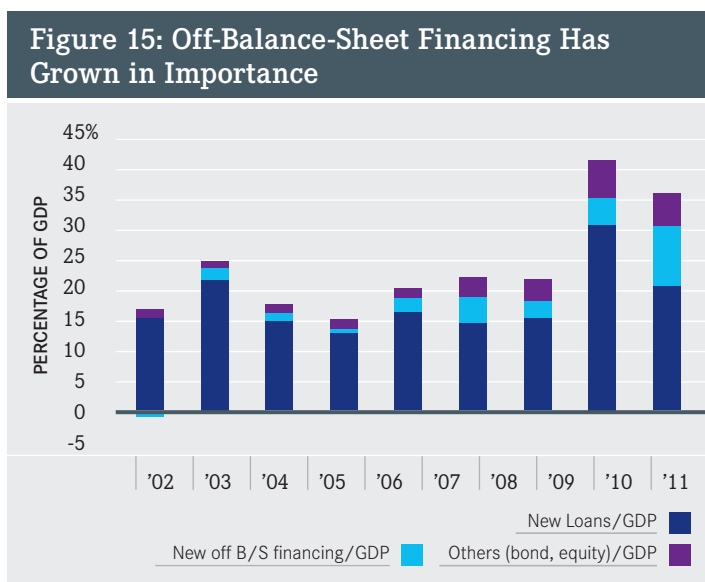


Source: Bank of America Merrill Lynch. For illustrative purposes only.



Source: BofA Merrill Lynch Global Research, GEIC. For illustrative purposes only.

The PBOC states that this data is based on the International Monetary Fund framework for compiling credit and total debt indicators. As such, it includes loans (RMB- and foreign currency-denominated), entrusted loans, trust loans, bank acceptance bills, corporate bonds, non-financial corporate equity compensation from insurers and real estate held by insurers for investment. One key issue for the banks remains the risk weighting for various off-balance-sheet items and the lack of understanding of real risk among their employees. According to some sources, less than 5% of employees have any understanding of their banks' off-balance-sheet items — which clearly contributes to a much higher risk for the system in the current scenario.



Source: BofA Merrill Lynch Global Research, PBOC. * New off B/S financing include bill acceptance, trust loans, and entrusted loans. For illustrative purposes only.

This diversification of funding sources reflects both good and bad. On the positive side, it reflects an economy that is diversifying its sources of funding. As a negative, much of the non-bank loan growth is unregulated and therefore has been beyond government control. In addition, the higher the rate of TSF growth relative to GDP, the worse the FICOR becomes and, by extension, the lower the quality of lending and higher the possibility of financial distress.

Going Off-Balance Sheet: Where the Bodies Are Buried

The banks revealed a number of off-balance-sheet items within the TSF data, but the risk weighting among other data remains unclear.

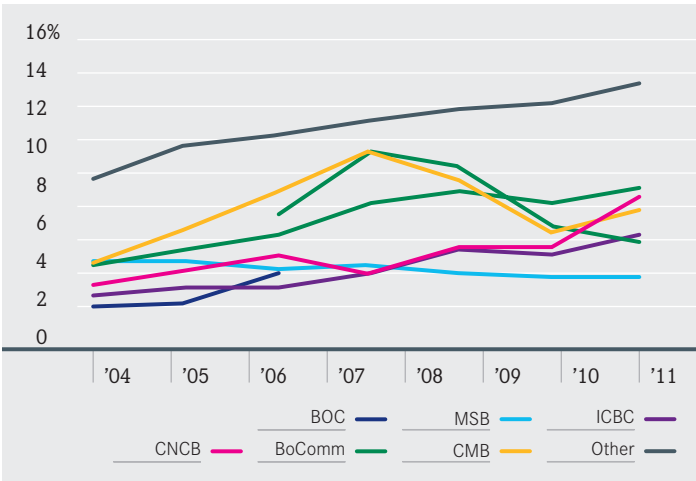
Of the various components of TSF, one area that remains opaque is entrusted loans. These loans can occur in two potential scenarios: 1) Intra-group loans within separate legal entities or loans to non-related parties, or 2) Inter-company loans that can be more speculative in nature. While intra-group loans are maintained within separate legal entities to ensure arm's-length transactions, in practice such loans have now moved beyond uses inside the enterprise and into speculative loans from corporate to real estate sectors. This significantly adds to the loans extended to real estate developers beyond what is recorded by the "official banking sector". Entrusted loans have been growing at double the pace of regular bank loans, leading to increased exposure within the system to the real estate sector. One additional issue that makes it difficult to observe and track such lending is that it is often recorded as an accounts receivable on lenders' balance sheets rather than a loan. However, the average risk rating for these loans remains very low for most banks, which, in our view, does not fully reflect the risk these transactions represent.

Table 5: Banks' Key Off-Balance-Sheet Activities, Size, Growth and Coverage

Items	Disclosed by Banks	Average Size (as % Of Loans)	Average Growth	Counted in Total Social Financing	% of 2010 TSF	Risk Weighting Used (CCF)	Provisions
Entrusted Loans	Most banks did	~8%	~36%	Y	~8%	0	0
Trust Loans	N	~2%?	n/a	Y	~2%	0	0
Bank Bill Acceptance	Y	~16%	~26%	Y	~16%	20% or 50%	0
Letters of Guarantee	Y	~7%	~12%	N	n/a	~50%	0
Letters of Credit	Y	~4%	~71%	N	n/a	20% or 50%	0
ST Loan Commitments	Y	~3%	~27%	N	n/a	0%	0
LT Loan Commitments	Y	~6%	~21%	N	n/a	0 or 50%	0
Card Loan Commitments	Y	~3%	~23%	N	n/a	0 or 50%	0

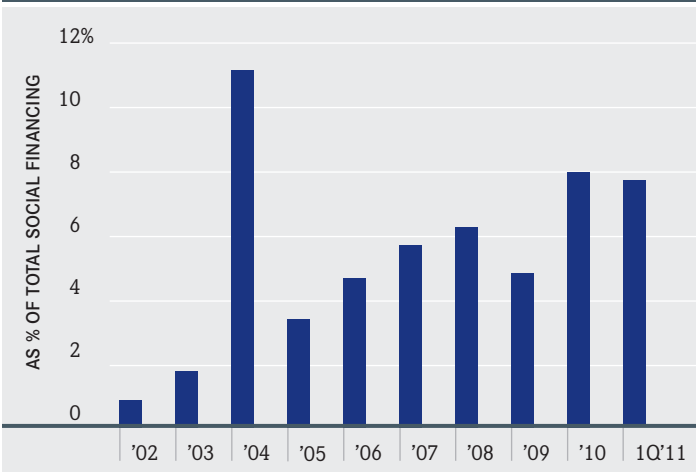
Source: BofA Merrill Lynch Global Research, company reports, PBOC, CBRC.

Figure 16: Entrusted Loans (Off-B/S) As % of Total Loans



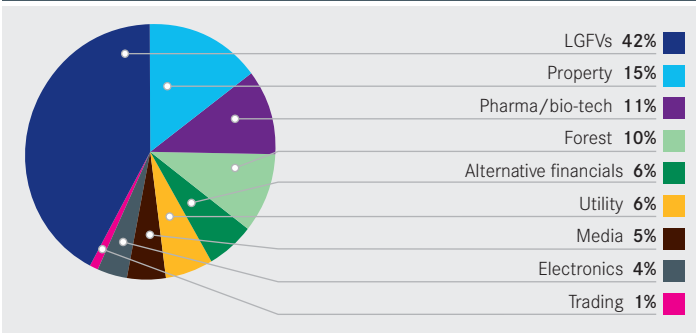
Source: BofA Merrill Lynch Global Research, company reports. * ABC did not disclose the size, BOC did not disclose after 2007. For illustrative purposes only.

Figure 17: Entrusted Loans Accounted For 8% of New TSF in 2010



Source: BofA Merrill Lynch Global Research, PBOC. For illustrative purposes only.

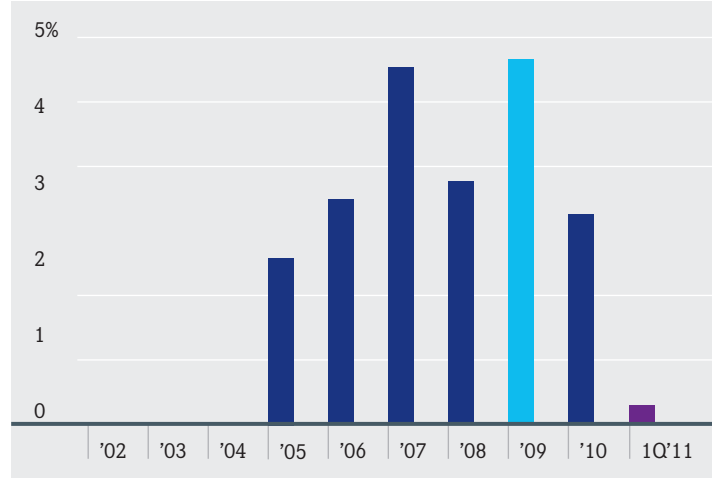
Figure 18: Source of Entrusted Loans to Developers



Source: BofA Merrill Lynch Global Research, company reports.

Another off-balance-sheet area that has been difficult to track is trust loans. Even though CBRC is keen on banning these loans completely, it is tough to do so due to their high yields — although the decline in Q1 2011 on an annualized basis reflects the official clampdown, as well as the rolldown of balances in a short-duration product.

Figure 19: Trust Loans as % of TSF Declined Significantly From 1Q10's High

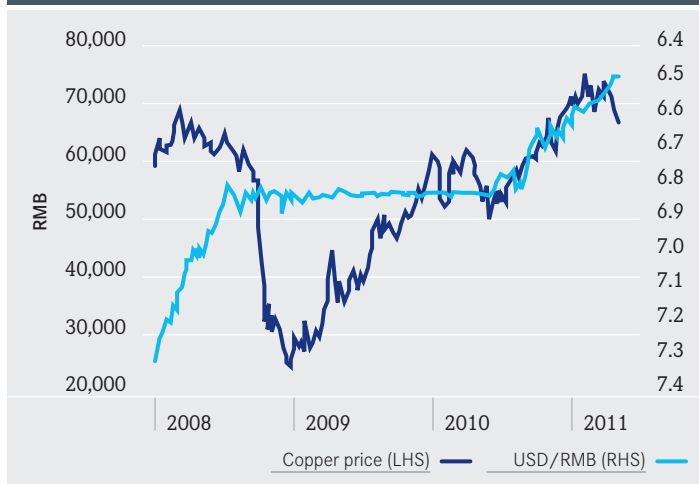


Source: Bank of America Merrill Lynch. For illustrative purposes only.

Letters-of-credit volumes have also been growing significantly. These instruments have been used primarily by import/export players for trade finance, although L/C growth has been significantly higher than trade growth. One possible explanation for this discrepancy is that the growth in the L/C market has been supported by speculation in the commodity market. Even though small traders have to put up to 50% of margin for L/C, many larger players can access L/Cs without any margin. Rising commodity prices and a strengthening RMB have provided more than enough incentive for large traders to use these instruments to speculate on commodity prices. Additionally, some of the large traders have also started distributing their L/C quota to smaller traders at a price. The whole system works and depends on increasing commodity prices and a strengthening RMB, a trend that could reverse and hurt a number of market participants (this has already happened to some extent in copper) in a re-run of events from the winter of 2009-10, when prices soared and then fell back.

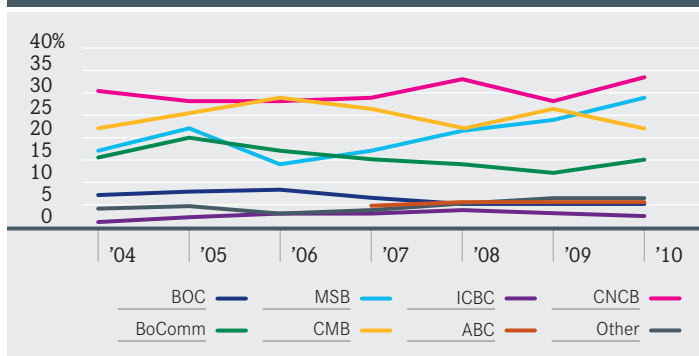
Finally, bill acceptance and discounted bills have been an important part of off-balance-sheet liabilities for the banks. Even though bill acceptance as a percentage of total loan size has remained fairly consistent, discounted bills for banks dropped significantly in 2010.

Figure 20: Commodity, RMB Appreciation Provided Room for Arbitrage



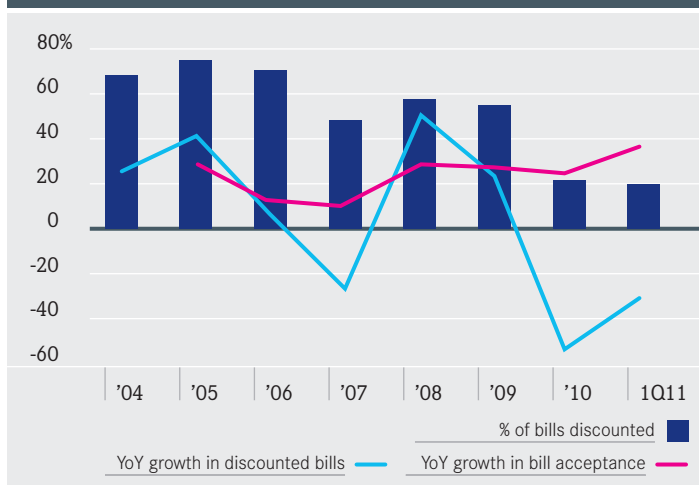
Sources: CEIC and staff estimates. For illustrative purposes only.

Figure 21: Bill Acceptance as % of Loan Size



Source: BofA Merrill Lynch Global Research, company reports. For illustrative purposes only.

Figure 22: Percentage of Bills Discounted By Banks Dropped Sharply in 2010



Source: BofA Merrill Lynch Global Research, PBOC. For illustrative purposes only.

The drop in the quantity of discounted bills has caused some confusion among market players, though there are some plausible explanations that have been highlighted by Fitch Ratings: 1) bills can be sold as a trust product driven by low credit risk and short maturity, 2) small, unlisted banks can use the bills in repo in collateral transactions not reflected on their balance sheets, and 3) the evergreening of some of the bills by issuers.

Is the Engine Slowing Down? Total Social Funding and GDP Growth

Table 6: TSF Growth and GDP

Year	Gross Domestic Product (RMB billion)	Total social funding (RMB billion)	TSF/GDP(%)
2002	12,047	2,015	16.7
2003	13,663	3,419	25.0
2004	16,080	2,868	17.8
2005	18,713	2,862	15.3
2006	22,224	4,010	18.0
2007	26,583	5,921	22.3
2008	31,490	6,868	21.8
2009	34,502	14,082	40.8
2010	39,796	14,270	35.9
2011 (Q1)	43,732	16,760	38.3

Source: PBOC/UBS.

TSF continues to play an important role in financing China's growth. Introducing a higher level of transparency on TSF signifies a couple of things: 1) The government is focused on the overall market and drivers beyond simply bank loans; and 2) The PBOC could look at the quota for banks' asset growth not just at the "official loan" level but also at the total "TSF" level in order to properly manage overall financial system risk.

In terms of a deterioration in FICOR, the chart on the following page shows TSF as a multiple of the change in GDP. It is interesting to note that, on a bottom-up basis, Chinese companies have also begun to show a decline in return on capital invested.

To be fair, it must be noted that a decline in FICOR is to be expected if the tenor of loans is increasing, given that TSF reflects a flow in one period of time and returns will lag as investment rises in longer-term projects such as infrastructure. It is also fair to observe that much of the growth in infrastructure is likely productive on a longer-term basis in whole-economy terms, given the low level of fixed capital per capita (similar to Japan circa 1970). However, this does not disqualify the sense in the medium term that China is becoming a less profitable place to invest and that growth rates require an ever-increasing quantity of inputs if output returns are in decline.

Figure 23: Total Social Financing Growth To GDP Growth



Source: CEIC, UBS. For illustrative purposes only.

Has Policy Tightened?

The rise in RRR and its recent partner in crime, directed required reserve ratio (DRRR), a reserve method aimed at individual banks and applied at PBOC discretion on a daily basis, has tightened policy if defined as the difference between loanable funds and loans. On this basis, the cushion for lending has dropped by some 2 trillion RMB. This somewhat limited decline simply emphasizes that the rapid growth in deposits has funded much of the increase in loans. With a systemwide 75% loan-to-deposit cap (assuming 15% deposit growth in 2011, a rise in the RRR to 23% and a 75% loan to deposit cap), new loans could still rise by 12-13 trillion RMB in 2011, as compared to the unofficial official target of around 7.5 trillion RMB. In other words, policy is tighter now but not yet tight. Using similar estimates, we believe that an RRR of 26-28% would be restrictive.

Recent sharp rises in short-term interbank rates suggest a struggle for funding. Fluctuations in repo and interbank rates have been a feature of China's banking system over many years. At the time of this writing (July 2011), it seems that the most recent upward spikes may reflect a rise in demand for funds as off-balance-sheet programs such as trust funds are reduced by regulatory pressure yet demand for credit remains high. Our view is that we will continue to see sharp rises and falls in short-term funding rates and that these moves will increasingly reflect an imbalance between funding growth (impacted by lower savings rates) and credit demand.

The Real Estate Crash: Real or Unreal?

Critics seeking a gap in the financial wall of China look closely at real estate. This is unsurprising given experiences elsewhere and

a number of disturbing features of the Chinese property scene.

Official figures state that real estate loans represented 9% of total advances as of June 30, 2010. The estimated increase in real estate loans was 7% in each of 2008 and 2009, and 13% in 2010.

These numbers, however, clearly understate the reality, as they only capture loans where the applicant has stated that real estate is the end use. The figures also omit cases where land is used as collateral or where a borrower (usually a state-owned enterprise) has borrowed for one purpose and is actually using the funds for other purposes. If we assume that local government financing vehicle loans (LGFVs) totaled around 11 trillion RMB at the end of 2010, and that these loans were at least 75% collateralized by land sales, we already find real estate exposure of at least 20% of all loans. We have actually seen estimates that real estate lending and lending collateralized by real estate represents as much as 40% of all loans, which, on a fairly unscientific and heavily skeptical basis, seems quite likely.

If we believe the Jeremiahs, China's exposure to speculative building is going to sink the banking system. While we acknowledge that material risks do indeed exist, we also believe that they are manageable.

One reason for our skepticism is that the oft-quoted countrywide figure of 65 million empty apartments ignores the inconvenient fact that new apartment permits over the last decade only amount to some 60 million. We presume, given urbanization and demand for housing, that more than 5 million of these apartments are occupied. Equally, some commentators' estimates for commercial property construction per capita lump in investment in official buildings such as airports, hospitals and government buildings (which represent a material share of annual building).

Secondly, the equally oft-quoted and shocking figures for housing affordability — nearly 10 times average incomes — are misleading. It is important to note that average prices are based primarily on sales of new housing and are not adjusted for quality and location. With average incomes for the wealthiest 40% of urban dwellers at 1.7 times the overall urban average, it follows that affordability for most active purchasers is probably closer to 4-5 times income — high, certainly, but not excessive by global standards.

Thirdly, serious regulations have been introduced in China since 2009 to avoid a Western-style meltdown. First-time buyers are now required to make a minimum down payment of 30%, while purchase of a second unit requires a 50% deposit. Add in nascent property taxes being trialed to discourage rapid transfer and speculation, and a pure real estate bust that busts the world seems unlikely.

That said, it is clear that risk levels in real estate are rising. A cursory glance at the balance sheets of listed property companies shows that the categories of capitalized interest and “others” have risen materially as a share of profits in the last two years. Profit inflation to sustain debt covenants is a time-honored ruse associated with rising financial risk.

It is also clear that buyers’ expectations of price appreciation have risen materially. The evidence for this — compellingly argued by Wu, Gysuko and Deng (*Evaluating Conditions in Major Chinese Housing Markets*, NBER Paper 16189, July 2010) — is that price-to-rental levels in Beijing and seven other cities that represent around 40% of housing transactions have risen to levels where owners are only investing on the assumption of further significant price gains. With a mere 13 years of private housing markets and a rise in prices of more than 200% in real terms in Beijing over the last decade, Chinese buyers naturally focus on recent experience in their actions. It appears that large, state-owned enterprises with access to preferred lending rates have played an important role in this process, representing more than 70% of transactions in Beijing alone in 2010.

This pattern of preferred buyers pushing up property prices and an eventual financial accident is familiar for students of emerging markets (and perhaps also of government-sponsored enterprises in the US). It also echoes experiences the authors observed in Asia in the late 1990s and in Moscow in the middle of that decade. The three key differences are: a) savings rates are high, b) the borrowers are and will remain preferred clients of a well-capitalized banking system, and c) as argued below, the authorities are taking the current situation seriously.

Based on our observations, the Chinese authorities indeed take property price inflation very seriously, as it is seen as a major social issue. Growth depends in part on ongoing urbanization. At the same time, housing availability for migrants has become a serious source of discontent. In this context, the ambitious goal of building 10 million units of social housing per year speaks to the government’s sense of priorities.

On the Land: A Fiscal Risk

The Chinese central government depends on the provinces and municipalities to implement many policies — not least the funding of infrastructure and social programs.

At the same time, Beijing operates a net fiscal transfer from localities to the center. Official policy requires local governments to fund and implement centrally mandated infrastructure and

social spending programs. Yet Beijing takes money on a net basis from provinces. As a consequence, the total budget deficit of the provinces in 2009 was 2.8 trillion RMB and every province ran a deficit relative to income.

Municipal bonds are — for now — forbidden. The Investment Trust Investment Company (ITIC) scandal of the late 1990s, where leading provinces and cities formed investment companies to fund development, came about because several prominent investment companies—most notably, Guangdong’s ITIC — borrowed money through listings and bank syndications (at home and abroad) and simply embezzled much of the money. As a result, after picking up much of the bill, Beijing forbade direct fund raising by municipalities and provinces.

In response, local governments dreamt up LGFVs, which are ostensibly private companies (but often state-backed), and use land given or sold to the entity by the local government as collateral to borrow funds. As these funds are usually for government-directed programs — in particular, the infrastructure boom of 2008-10 — banks are happy to lend to these projects. Yet, clearly, this is a problem if the underlying project is unable to generate cash flows to service and repay debt. In 2010, this problem — known but not explicitly acknowledged by the CBRC — surfaced because of the rapid growth of these vehicles, and the fact that at an estimated 7.7 trillion RMB of their loans represented around 20% of outstandings, up from less than 5% in 2007. In turn, the CBRC has effectively banned new LGFV programs.

Land sales also represent the main source of income for local governments over and above fiscal transfers. In 2009, for example, land sales represented about 45% of budgetary income for local governments. This explains in part why many local governments have focused on land assembly ahead of enforcement of agricultural land rights. It further explains some of the deals that have been offered to rural permit holders, whereby urban status has been traded for land ownership. One way or another, developers, local governments, mortgage borrowers and state-owned enterprises that have borrowed ostensibly for fixed asset investment, but in actuality bought land or property, all depend on avoiding sharp declines in land prices. It is impossible to be precise, but we believe that estimates of 40% of loans being tied to land or property prices seem reasonable.

A study in mid-2010 undertaken by the CBRC estimated that 23% of LGFV loans had high repayment risk and that another 50% relied on underlying collateral (i.e., land) to be regarded as safe loans. We assume, in line with a June 2011 survey by China’s National

Audit Office, that the real LGFV loan level is around 11 trillion RMB on a lifetime basis. We accept the CBRC view that 23% of the loans are high risk (we have no other basis to use) and that the eventual recovery rate on these loans is approximately 40% (i.e., in line with Morgan Stanley's estimated CRE severity rate for Ireland's bank stress test). We also accept the CBRC figure of 50% for loans requiring collateral and assume a 60% recovery rate on these loans. If we agree with the National Audit Office's 11 trillion level for LGFV loans and accept the CBRC view that 18% of such loans rests wholly on the private sector, and use the recovery and bad debt assumptions above, this amounts to a 500 billion RMB bill for the private sector (spread out over several years). The remainder of the LGFV loan book has been assigned — at it rightly should be — as an explicit liability of the central government.

This private-sector bill, in our view, is affordable. The current system has NPL provisions of some 200% — or 433 billion RMB. Net profits for the top 15 banks in 2011 are estimated at 800 billion RMB, and these institutions hold Tier 1 capital in excess of 3 trillion RMB. Even assuming a worst-case scenario emerging over the next four to five years — and leaving aside the simple point that these projects are explicitly a liability of the state and, therefore, a fiscal obligation — it seems unlikely that LGFV debt will sink the ship.

It should also be noted that if GDP expands over the next five years by 8% per annum in real terms and 12% on a nominal basis, this will add some 20 trillion RMB to the economy's size. Even assuming a dramatic drop in savings to 30% of GDP from the current 53%, that still adds some 6 trillion RMB to savings — more than enough to absorb the level of bad-loan losses implied in our analysis without threatening banking solvency.

This is even more the case given the explicit guarantee of local government obligations provided by Beijing. With a fiscal deficit of 2% of GDP, and with the backing of enormous central governmental liquidity, the chances of a solvency crisis bringing down the banking system seem, in our view, to be low.

Reasons to Sober Up

If China's government(s) are driven by growth agendas, why has policy tightened? And, as a follow-up, why won't these liquidity spigots be turned on again in response to funding pressures?

In a word, inflation; in a phrase, maintaining social stability. Any understanding of Chinese state and provincial policy must acknowledge the deep historic bogey of inflation. It is also worth noting that within a single-party state, Chinese leaders pay a great

deal of attention to surveys and public opinion. The memory of 1989, when inflation increased, growth collapsed and thousands of protests were held throughout the country, is still recent enough to be central to policymaking.

Inflation is seen as a particular threat in the areas of deposit rates and property prices. Negative real deposit rates could (and have) led to money exiting the regulated banking system for higher potential returns off-balance sheet or in the underground system. Rising property prices and an inability to house workers as they move to the cities impacts the cost of labor, social stability and the enormous migration that has fueled much of the growth over the last 30 years. Hence, the government has introduced a range of tightening measures (such as RRR and the like) in the monetary space, as well as regulations and taxes, to slow down price appreciation in real estate. The turning points for policy change would be one or more of a decline in M1 growth below the target rate for nominal economic growth (say, to 10% annualised) and a drop in housing price inflation below the rate of growth of average earnings (probably measured best in terms of transaction volumes).

Both trends — inflation risk and property appreciation — are nearing an inflection point. Both policy initiatives — land taxes and restrictions on banking system asset growth — will inevitably move too far given the limited levers available.

The M1 inflation relationship, the need to hold inflation within a 2-3% level, and the slowing ability of China's savings growth to fund an acceleration in loans, all argue for a reduction in trend growth expectations unless the efficiency of lending rises.

Figure 24: CPI vs. M1 Change



Source: Wind, CLSA Asia-Pacific Markets. For illustrative purposes only.

Better lending and a market system are longer-term imperatives and will be extremely difficult to deliver, but for now China's fiscal position is strong enough to act as a real guarantor of the financial system — unlike in the developed world.

Reasons to Be Cheerful

China's rulers and regulators are acutely aware of the risks posed by an agenda in which bank credit is the dominant conduit for funding growth.

In the last two years, these authorities, led by the PBOC and CBRC, have identified and regulated problems relating to LGFVs, trust companies and discounted bills. They have, with the full backing of the State Council, cooled down the rate of property price acceleration and speculation. In no one case is the genie back in the bottle — witness the increase in loans drawn on Hong Kong — but at least the initial problems have been identified if not accurately quantified.

The authorities' vigilance is understandable — deposits represent more than 90% of domestic savings stock. The banks have had crises in the not-too-distant past — NPL levels were at 12% of loans as recently as 2005 — and poorly directed lending, for political rather than economic reasons, remains the central feature of banking asset allocation.

On the other hand, China's banks are enormously profitable — average net interest margins of 2.5%-plus compare favorably with global peers — and heavily capitalised, with more than \$70 billion of new capital raised in 2010 alone, and Tier 1 Capital ratios of 10-11%. Banking is an extension and explicit liability of the state — but by design rather than accident, as is the case in the West. Thus, we believe it is correct to view the banking system as a public — and not a private-sector — liability. The quasi-fiscal nature of bank policy explains why credit creation is noticeably anti-cyclical (as opposed to the pro-cyclical, private-led banking systems of the West).

Economic growth rates are also crucial. If the economy grows at 12% nominal and savings decline to 30%, then an extra 6 trillion RMB enters the savings pool. If the growth rate slows — as we expect — to around 10% nominal and savings rates also fall to 30%, then the extra savings are in the 4.5-5 trillion RMB range. The bear case must see a savage decline in growth and rise in bad debts for there to be a massive macro-economic risk.

There is plenty of room on the fiscal side of the ledger to accommodate a step up in financial system losses. Current government debt to GDP is around 20% — even assuming some dreadful outcomes, it is hard to see how this can rise beyond the 60% level. Economic growth rates would surely slow, but the drive away from export-oriented growth towards consumption, added to lower savings rates, will boost revenues, given that consumption is always taxed more heavily than growth. China does have plenty of fiscal challenges — not the least is the potential need to recapitalize the PBOC in the event of a dramatic dollar collapse and consequent mark-to-market losses on FX reserve values, or the longer-term need to fund a social security net. However, these issues lie well into the future and are unlikely to crystallize in the next two to three years, given the managed nature of the exchange rate and the normal long-term time horizon of social welfare liabilities in a young population. Better lending and a market system are longer-term imperatives and will be extremely difficult to deliver, but for now the fiscal position is strong enough to act as a real guarantor of the financial system — unlike in the developed world.

Finally — and crucially — China runs a substantial current account surplus. In practice, it does not rely on foreign funding. While moves to internationalize the currency will make the current account more permeable, wholesale capital flight is unlikely, given the close regulation of corporate deposits and relative immobility of the lower-income portions of retail deposits.

How Bad is the Bad Debt Issue?

As noted above, the main areas of stress are LGFV borrowings, loans collateralized by real estate and to real estate, and off-balance-sheet lending (the latter because of a lack of transparency rather than any specific issues of quality).

Loans at the end of February 2011 stood at 53 trillion RMB. We need to add on the various off-balance-sheet items — many of which are short in duration — to get a picture of whole-economy indebtedness. We would guess that off balance sheet could add up to another 25 trillion, but emphasize that this figure simply represents our best estimate. As a cross-check, we assume that all off-balance-sheet items sum to the year-on-year increase of TSF over the last nine years. This estimate — 25 trillion RMB — of off-balance-sheet credit may seem fanciful, but we would rather err towards a pessimistic than optimistic view. We would stress that this is a very imprecise estimate, and that much of the off-balance-sheet exposures are revolving credits with limited credit risk. On this inexact and probably overstated basis, China's "private" sector debt could be of the order of \$75 trillion RMB. But, to be honest, no one really knows the true sums.³

Mortgages — 16% of bank advances⁴ — appear reasonably safe by virtue of the stringent regulations on loan-to-value and second purchases. Other real estate collateral-backed loans may be up to 40% of system exposure, including land-backed LGFV borrowings. Moody's March 2011 Banking System Outlook assumed 8% past-due loans for real estate exposures and 40% loss on these loans. We have no means of assessing if this is correct (nor, to be fair, does Moody's). Experience elsewhere is of limited use; China's growing population and urbanization rate suggest that 40% losses — the level assumed in the case of Irish mortgages (as estimated by Morgan Stanley) — are at the extreme end of the equation. On past due, we do not share the gloom of some commentators — there simply cannot be 65 million empty apartments if only 60 million were constructed in the last 13 years and commercial space remains well bid in most major locations.

It is also worth taking a brief look at China's residential housing sector to assess if Moody's and other estimates are fanciful.

Interlude: A Brief Primer on Chinese Residential Housing⁵

The housing stock in China can be split between urban and rural, and the analysis here concentrates on the urban market. Official estimates suggest that urbanization is now around 45%, although we suspect that the real number is somewhat higher. The housing market consists of "Dan wei" housing (which are properties mostly built between 1949 and 1977, following the nationalization of housing markets), and commodity housing built after 1978 (during a period of privatization that ended with the gifting of public housing to their owners). The split today based on 265 cities in China is as follows:

- ▶ **Commodity Housing:** 32% (privately-built housing post-1978)
- ▶ **Privatized Public Housing:** 29% (mostly Dan wei housing built by the state)
- ▶ **Original Privatized Housing:** 21% (old housing that was nationalized in 1977)
- ▶ **Private Rental:** 7%
- ▶ **Public Rental:** 6%
- ▶ **Other:** 7%

We do not share the gloom of some commentators — there simply cannot be 65 million empty apartments if only 60 million were constructed in the last 13 years and commercial space remains well bid in most major locations.

³ Source: PBOC. ⁴ Source: PBOC, BlackRock, Fitch Global Ratings. ⁵ Source for the figures in this section: CLSA.

Residential property prices in China have surged over the past two years since credit expansion accelerated, but over the past five years the growth seems less exceptional relative to income growth.

China's home ownership rate of 84% is extremely high, as the majority of the nationalized and publicly built housing of the past were given to occupants in 1998. The average urban property is 91.9 sqm and houses 2.9 people. No one knows exactly how many households exist in urban China, but on the basis of 50% urbanization, and 2.9 people per household, there could be roughly 230 million households. The rate of new build in urban areas has been increasing consistently, with the exception of a slowdown in 2008, from around 4 million units per annum in 2005 to 9 million in 2010. This translates to a gross new build rate of 4.0%, which seems rather high, but demolition reduces the net number, and urbanization and household fragmentation remain robust drivers of demand. Although the statistics are likely of dubious quality, estimates suggest that urbanization has been running at 21 million for the past few years. Nine million units translates into housing for 26-27 million people (gross of demolition). Cross-referencing this with data from Japan, the US and Korea also suggests these build rates are not unprecedented for an industrializing nation. During the 1950s-1960s industrialization in the US, the country built roughly 1.45 million units per annum for about 20 years, representing a build rate of 8.9 units per 1,000 of population. In the 1970s-1980s, Japan's equivalent ratio was about 14 units per 1,000 of population, and Korea's equivalent in the 1990s was about 14.4 units per 1,000. China (urban only), is now at about 13.5 units per 1,000. Construction and real estate value added as a percentage of GDP, likewise, is around 12% in China, compared to pre-Asian crisis levels of 18% to 20% for Thailand, Malaysia and Korea.

The build rates above, however, will be complemented in 2011 and beyond by China's ambitious social housing plan, with 10 million new starts targeted this year alone, up from 5.9 million in 2010. Although the average size of an economic unit will be significantly smaller than a commodity unit (60-70 sqm vs. 90-100 sqm), it is likely that the increase in the construction of social housing units will largely offset the expected fall in the production of commodity units, provided that the private-sector market is not now at the beginning of a crash.

If build rates are one way to judge potential capital misallocation, the other factors to look for are prices as measured by affordability and vacancy rates.

Residential property prices in China have surged over the past two years since credit expansion accelerated, but over the past five years the growth seems less exceptional relative to income growth. According to the CEIC data, China's housing prices over the past five years have risen by a compound 10% per annum across the country, versus a 13% compound growth in nominal income. These statistics probably understate the real level of housing price appreciation that is occurring, but again do not point toward a bubble-like development. Affordability according to a Lincoln Institute study suggests that housing price-to-income ratios across 265 cities have a median of 6.25x, albeit with much higher ratios in Tier 1 cities. Other data sources suggest that for the top 36 cities, the housing-price-to-income level is close to 10x. Prices are clearly getting high, but with double-digit income growth expected in the future, this should be expected.

Vacancy rates are, again, hard to obtain reliable data for, but the CLSA Realty team has tried to estimate vacancies with various studies. Their data suggests a high level of vacancies in commodity housing of around 17%, but a lower level in Dan wei older housing stock of around 5%, generating a blended average of 8%. Using the vacancy

rates by housing type from CLSA along with our own housing breakdown, we achieve a blended average of approximately 10%. This is clearly higher than would seem optimal but not manifestly wrong in a fast-growing economy.

In short, the residential sector, in our view, does not pose a systemic risk to financial system solvency.

The System Is Vulnerable

Nevertheless, China's banking system is vulnerable to a significant decline in land prices, given the importance of this asset in backing loans. Taking Moody's numbers at face value, but applying them to one-third of loans excluding mortgages, generates an NPL level of 9 trillion RMB. If we add off-balance-sheet loans and assume that 50% of these are bad, and that there is only 50% recovery, and write off all discounted bills with no recovery, we can inflate the bad debt problem to around 7 trillion RMB — or 18% of current loans. Covering these losses without a solvency crisis would require significant issues of new capital and fiscal support — both of which would be forthcoming from the explicit government guarantee of the financial system.

In normal cases, where a problem arises on the asset side of the balance sheet, funding melts away — leading to a liquidity crisis first and a solvency crisis second. However, China's closed capital account and reliance on domestic deposits for 90% of funding suggests that this is an unlikely outcome. We suspect that Beijing's recognition of this risk lies in part behind the slow progress towards capital account liberalization.

Further, it is worth noting that 32% of bank assets are investment securities (largely government bonds), and interbank and non-mandatory central bank deposits, which would count as surplus liquidity in the event of a liquidity crisis.

Add in the current level of capital of nearly 6 trillion RMB, plus profits of nearly 800 billion a year and explicit fiscal support, and it seems reasonable to conclude that an asset quality-led banking crisis, while extremely feasible, is highly fungible. The experience — and a fall in land prices is always possible — would be bitter and disruptive for China and the world. In our view, however, it would not be life threatening for China's banks or depositors.

Why Loan Growth Should Slow — and Why It May Not Happen

Loan growth in China should slow for several reasons.

First, deposit growth rates are slowing and on-balance-sheet loan-to-deposit maximums of 75% are close at hand. Intense competition for capital from non-preferred private-sector borrowers equals a drawdown on corporate cash flow and slower deposit growth, as does a shrinking trade balance.

Secondly, a regulatory crackdown on off-balance-sheet financing (and the use of TSF as a policy tool) suggests fewer avenues for regulatory arbitrage and growth in excess of official targets.

Thirdly, the LGFV problem is now clearly identified and local governments are unable to gear up on land sales. Instead, Beijing is now considering establishing a municipal bond market alongside the introduction of property transaction taxes, and in one stroke reducing potential land sales (via a tax on short-term profits).

Covering loan losses without a solvency crisis would require significant issues of new capital and fiscal support — both of which would be forthcoming from the explicit government guarantee of the financial system.

Finally, tightening reserve policy management, including targeting individual banks alongside the declining trade surplus, reduces the growth rates of lendable funds.

On the flip side, virtually every economic actor has a growth agenda and a consequential need for funding. This includes the Communist Party and the People's Army, both significant commercial enterprises in their own right. Beijing recognizes the need for growth to create employment, along with the baser motives of retaining political authority — it is no accident that the most serious threats to China's government came in 1989, when economic activity actually declined. With a leadership handover in 2013, and an urgent and recognized need for reform of social welfare, it seems unlikely that the State Council will wear too itchy an economic hair shirt.

Investment Implications and Conclusions

Saint Augustine's famous plea — “Oh Lord, help me to be pure... but not yet” — seems apt.

China's financial system is well funded and as seen above is an arm of fiscal policy, with its focus on state-owned borrowers and lenders. This does not insure it from risk but probably limits the degree of pain involved in a rise of bad debt levels.

At the same time, we doubt that 12% nominal growth, allied to an already high savings rate and a structural trade surplus unlikely to exceed 3-4% of GDP, can produce enough deposit growth to fund much above a 15-18% medium-term increase in loan growth. Reserve ratios and Treasury bill management programs allow a counter-cyclical cushion to support this target during periods of slower growth.

Land and building price levels are the most risky collateral in the system, and are crucial to fiscal revenues and loan quality. Ongoing urbanization helps support demand for land — and, therefore, one presumes, recovery rates on poor lending. An overall growth slowdown arising from declining rates of FICOR would inevitably lead to problems in this area.

The banking system is well capitalized and highly profitable. Official policy is bound to support this state of affairs. Chinese banks are an interesting example of the fallacy that high capitalization rates and constant capital increasingly deliver great returns for shareholders.

Credit demand is still higher than prudence dictates. Working capital funding is a problem for private-sector companies and we would expect to see more cases similar to Sinoval, a leading manufacturer of wind turbines that simultaneously reported a healthy order book and an inability to accept or pay for any more supplier goods.

Real estate developers have some high-profile empty developments and potential financing problems. This makes for great headlines and faulty analysis. As discussed, there are not as many as 65 million empty apartments, as some suggest. In addition, government policy remains focused on providing affordable housing to the population, both through policy to limit private-sector price appreciation as well as increases in the provision of social housing. Real estate developers are vulnerable and some will go to the wall. But many are arms of large, state-owned enterprises (the dominant player in Beijing property, for example) and until or unless China's state capitalism system is abandoned, the casualties here will be limited. In short, individual credit risk exists — and will rise — but rising risk in this area is likely to bring forth a vigorous fiscal response.

The conditions exist for an increase in bad debts, and we fully expect that NPL levels will rise over the next few years. We are equally confident that the reported level will understate reality, given that “extend and pretend” is a key aspect of beleaguered financial systems wherever they are located. In turn, this will impact the chances of loan growth running far above nominal economic growth. Lending allocation will be an issue of political tension (it already is) but a Western-style collapse in credit demand or credit growth is unlikely. Our central case is that TSF will slowly contract relative to economic activity but that this will be a function of funding more than solvency.

We also contend that the panda bears have ignored the quasi-fiscal nature of much of the borrowing undertaken in the system and the explicit guarantee of much of the lending and borrowing. Further, we believe that the uber-bears ignore the critical relationship between the security of bank deposits and social stability and, as a result, the need to avoid serious banking crisis. In this respect, China is very Western, with the important caveat of having sufficient tax revenues and growth potential to avoid the Emperor's Clothes aspect of many Western social deposit guarantees.

In investment terms, China will remain an important engine of world growth. But the bulls have to recognize, as Beijing does, that this growth has speed limits. This suggests that commodity price hyper-inflation has to be more a result of supply rather than demand shock from here — a topic that the BlackRock Investment Institute plans to examine in more detail.

We would also suggest that the outlook for free cash flow for private-sector Chinese companies has deteriorated. Increases in labor costs and a rising exchange rate lie behind this view. The pick-up in claims on Hong Kong banks from China, the slew of equity capital raising, a focus on taking manufacturing up the value-added chain (with associated front-end loaded costs) and high levels of ongoing maintenance expenditure all support this view. As a result, it seems unreasonable to expect sparkling aggregate share returns from this area until valuations are attractive (not yet) or liquidity is loosened (also not yet).

Funding needs also suggest that while China's leaders remain committed to the growing internationalization of the RMB, the desire to retain control of the deposit base limits the medium-term chances of full convertibility. It could also be argued that neighboring countries with ample liquidity and common cultural and racial links will benefit from the need to diversify international funding sources. We believe that this trend will help financial sector growth and price performance beyond Hong Kong, where domestic bank stocks have produced spectacular performance over the last year. It may be, for example, that the growth prospects for Taiwanese financial companies are transformed over time by this development.

As an aside, we believe that capital account opening is a multi-year process. A rapid rise in the exchange rate, for example, would cause a significant loss for the PBOC, which is long dollars and short RMB as a result of exchange-rate management. Equally, full liberalization could result in capital flight and a loss of authority over the domestic banking system. Needless to say, neither option is hugely attractive for Beijing.

Rebalancing has become a major focus for global investors as well as for politicians. It should be stressed that this process does not guarantee faster growth if it involves lower rates of savings and thus investment. And, of course, a trade deficit — while attractive when viewed from the White House — would seem far less attractive for the US Treasury if a reduction in mercantilism led to lower growth in demand for US Treasury bonds.

We believe that China's growth rate must and will slow over the next few years as a result in part of the financial constraints to credit-led growth provided by slowing rates of deposit growth. We also suspect that low tariffs for power and water — which discourage private-sector investments in these areas — will act as a brake on growth rates. But at this stage — and the question does remain open — we do not believe that the case for a banking crisis and consequential credit contraction-led recession is anywhere near strong enough to merit adoption as a central investment case. It still seems that the risks to Chinese growth are more focused on exogenous issues such as a deterioration in the terms of trade created by rising commodity prices, and the limited prospects for Western growth posed by the aftermath of the financial crisis.

The world clearly needs China to succeed. Equally, the current picture of high credit growth will most likely evolve. If it does not, we fear that FICOR will continue to decline and that global risk will increase significantly. Far from worrying about current measures to discipline credit aggregates, investors should cheer on the PBOC, CBRC and State Council, and perhaps wish that Western authorities had acted along similar lines over the last decade.

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