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China: Shadow banking – Road to heightened risks

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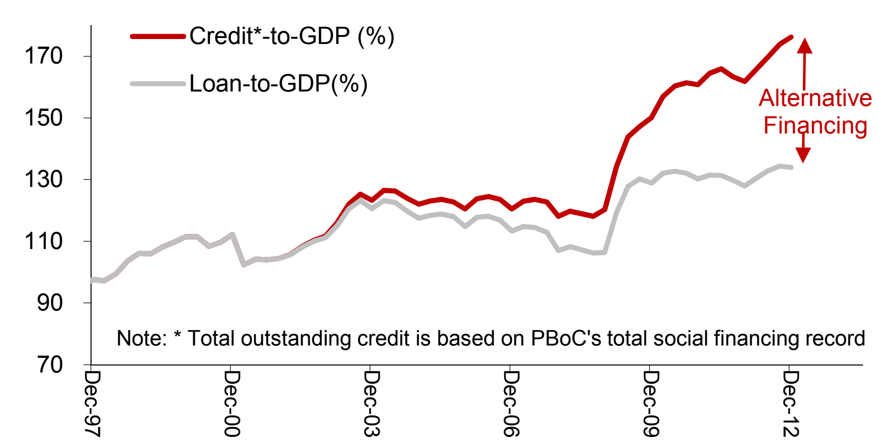
- Shadow banking activity in China has surged in recent years. We estimate its total size at RMB 22.8tn, 44% of GDP. We estimate it counts for 25% of total outstanding credit and half of new credit issued last year. In this report, we attempt to assess the medium-term risks related to shadow banking.
- The fund raising and lending activities of shadow banks are fraught with irregularities. Many products currently offered look like the CDOs offered in the US before the financial crisis, albeit without established regulation and surveillance. The trust sector has surpassed insurance as the second largest financial sector now, and the brokers' asset management business is growing at a pace of RMB 10bn per day. Outstanding bank WMPs hit RMB 7.6tn, while the corporate bond market is blossoming – and local governments are big on the receiving side of corporate bonds.
- A key catalyst for turning a boom into a bust is the rise of inflation, which could force the PBoC to raise interest rates were it to occur. That should dry up the fund influx into bond market and wealth management products. We believe any consequential defaults of shadow banks might force banks into bailout, triggering a credit contraction.
- We expect a potential credit contraction to be problematic for the property market, local government debt, and shadow banking. Bank NPLs may rise sharply. It is hard to pin down the timing of such an event, but we tentatively look at the period between 2015 and 2017.
- The central government debt-to-GDP ratio stands at 15%. Adding local debt and other tangible liabilities, the ratio is 72%. We believe that Beijing has the fiscal strength, political incentive, and policy know-how to bail out the banking system, but pre-emptive resolutions are unlikely.

Exhibit 1: The great credit surge



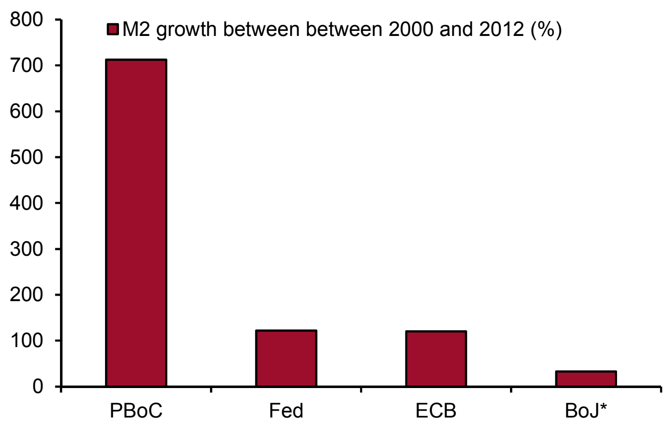
Source: PBoC, CEIC, Credit Suisse

Shadow Banking – Road to heightened risks

The great credit surge

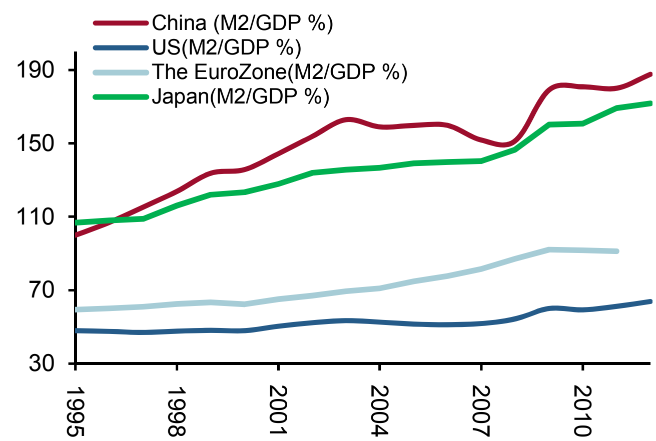
Throughout the past decade, China has been on a path of monetary expansion and leveraging-up. The People's Bank of China has printed more money, via an expansion of its balance sheet, than the Fed, ECB, or BoJ. As a result, property values and SOE assets have increased. The leveraging-up process generated a rapid expansion in industrial capacity between 2004 and 2008, a property boom between 2005 and 2011, and a local government debt surge between 2009 and now. In fact, China saw the biggest credit expansion relative to GDP over the past decade than any other country in modern history. China's M2 GDP ratio now stands at 187%, its gross capital formation GDP ratio at 48%, and its credit (based on total social financing) GDP ratio at 176%. When banks began to be reluctant to take on risk and slowed their lending, shadow banking activities took off.

Exhibit 2: China's exceptional growth is not only in its GDP, but also in its money stock



Source: Thomson Reuters DataStream, CEIC, Credit Suisse

Exhibit 3: … or putting these two variables together



Source: Thomson Reuters DataStream, CEIC, Credit Suisse

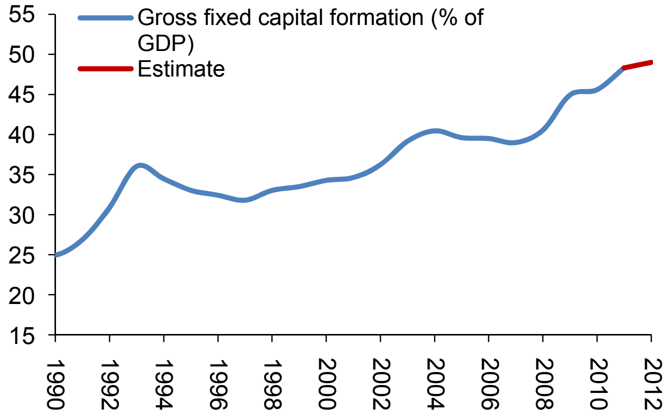
Today, we estimate that shadow banking activity totalled RMB 22.8tn, or 44% of GDP, in 2012. We estimate that it accounted for 25% of total outstanding credit and a half of total credit issuance last year, yet it operates without established regulation and surveillance. The question for us is no longer whether but when and how China's credit bubble will end. The next question, of course, is how this may affect the economy.

Exhibit 4: Size of shadow banking activities

RMB tn	As of 2012
Trust Funds	7.5
Bank Wealth Management Products	7.6
Broker Asset Management	1.9
Underground lending	4.0
LGFV corporate bonds outstanding	1.8
Total	22.8
% of GDP	43.9

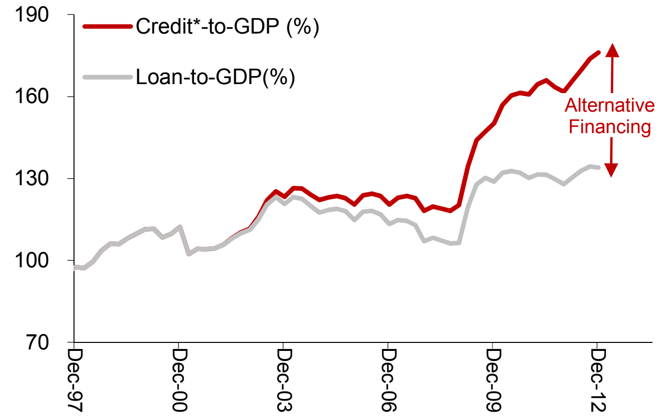
Source: CBRC, China Trustee Association, Securities Association of China, WIND, Credit Suisse estimates

Exhibit 5: With investment being the key driver of growth



Source: NBS, CEIC, Credit Suisse

Exhibit 6: … the Chinese credit boom became apparent



Note: * Total outstanding credit is based on PBoC's total social financing record

Source: NBS, CEIC, Credit Suisse

Anecdotal evidence

Allow us to start with a piece of anecdotal evidence that we believe is illustrative of the practice of the shadow banking. An acquaintance in Shenzhen was approached by a bank sales person selling a wealth management product (WMP) that offers 7.5% annualized guaranteed return. His requests to know what was behind the WMP's 7.5% return turned up little information from both the sales person and the product team that designed this product. Eventually, he tracked down the person who designed this product. According to the designer, this 7.5% guaranteed return product was structured from eight trust funds and four corporate bonds. Among the eight trust funds, three are lending to the property markets, three are lending to local governments' infrastructure projects, and in terms of the other two trust funds, even the designer did not know what the underlying investment was. It seems that high risk securities have been packaged into securitized products and are being sold as "low risk" financial instruments (sometimes with guaranteed returns). Buyers usually are not aware of the underlying risks. Bank sales people may be misinforming customers with an implicit guarantee.

Some of the WMPs the Chinese banks are offering today looks similar to the securitized products that investment banks in the US had offered before the crisis. These products have little transparency and a complicated structure, seem tied to higher-risk underlying investments, are lacking a regulatory framework, and are vulnerable to tail risks. We believe the good news for now is that it is not yet "fashionable" for Chinese WMPs to contain a leverage element. We believe the bad news is that the Chinese banks are distributing these WMPs directly to retail investors who may have little understanding of this type of product and are seeking the rent from the information asymmetry.

In 2007 trust funds totalled RMB 950bn in size and now have reached RMB 7.5tn – increasing almost eight times their size in five years. Before 2005, China virtually had no trust fund products, despite the wave of international trust companies (the most well know was Guangdong International Trust Investment Company, which borrowed money from foreign banks and went bankrupt in 1999) and stated-own trust companies in the earlier age of China's economic reform prior to 2000. The trust sector blossomed when the central bank used loan quotas to manage the credit environment, prompting banks to remove developers and local government from their lending lists. Those that lost access to bank loans turned to trust funds for funding. Meanwhile, the central bank kept the deposit interest rate excessively low when inflation was heated, causing deposits to be withdrawn from banks. Banks use WMPs, which offer higher yields, to retain depositors, but may not be providing proper disclosure of the risks. Unlike bank lending that be rolled over in the event of NPLs, trust fund products have a maturity date, typically 2-3 years in duration. And trust funds usually have a thin capital base.

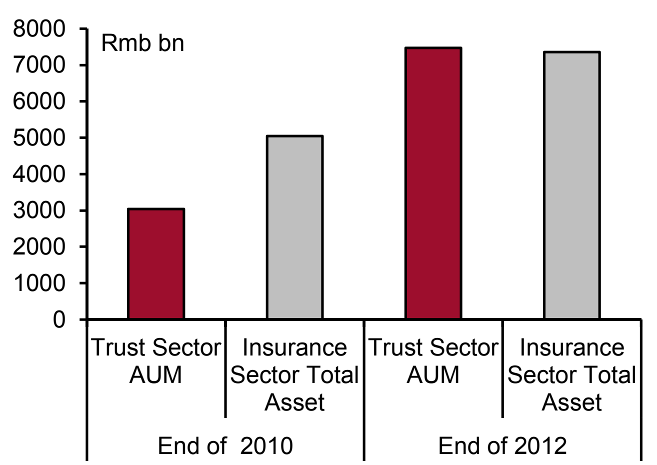
The first wave of trust funds will reach maturity around the middle of this year. Most trust funds are used to fund property projects after banks were instructed by the central bank to discontinue lending to developers in mid-2010. With the property sector seeing improved transaction volume and pricing, we expect most trust funds to be able to make the repayments. However, we believe there are likely to be some defaults or restructuring. The delayed payment of RMB1bn by CITIC Industrial Trust is an example, but we expect that to be an isolate case that Beijing could fund to stem the damage, as it did in October 2011, when the debt chain at Wenzhou broke down. The second wave of trust fund repayments is due to arrive in late 2014 to 2015. Most of this batch comprises lending to local government projects. Judging from the health of local governments' balance sheets and the anecdotal evidence we have seen, we would not be surprised to see a large-scale default.

The roadmap to systemic risk?

The trust sector has just surpassed the insurance sector as the second largest financial sub-sector in China. Yet, regulations and surveillance have not been properly set up, in our view. Irregularities in both fund raising and lending seem frequent and systematic. Should a fund run into repayment trouble, the obvious question is: Who would pay the bill?

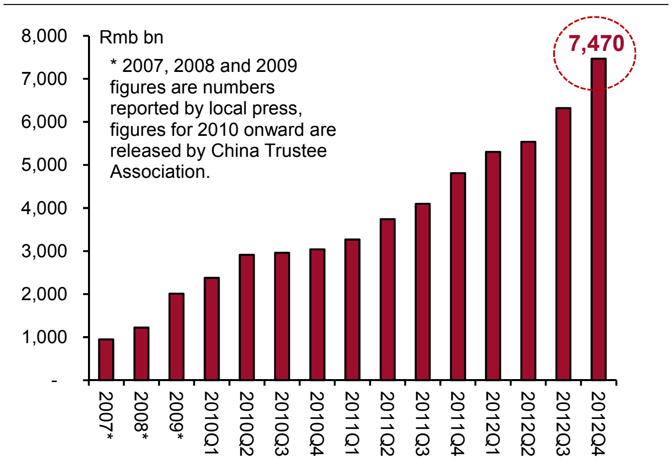
Either the government would have to pay the bill, or the banks (which helped the trusts raise funds, perhaps causing a false sense of guaranteed return) would have to pay the bill, assuming that Beijing would not let retail investors take a deep haircut to avoid risking social unrest. The government's behavior after the 2009 lending to local government investment vehicles provides a good benchmark, in our view. The 2009 action, to us, was a purely fiscal action while banks have been used as a temporary funding source. When that lending turned sour, the government obliged banks to carry the costs (it did help to restructure the lending to longer durations and with more collateral). If that were the case that time, we suspect it would be the same this time.

Exhibit 7: Trust sector has overtaken the insurance sector as the No. 2 financial sub-sector in China



Source: China Trustee Association, Credit Suisse

Exhibit 8: … after the surge seen in recent quarters



Source: China Trustee Association, Credit Suisse

Should infrastructure-investment-focused trust funds run into default and banks be forced into bail out, banks' equity bases would be damaged, leading to a credit contraction. The pace of such a credit contraction might be more severe than the market's current expectation, as inflation is projected to surpass 4% yoy by the end of 2013, and we see the upside risk for inflation to reach above 5% by end of 2014. The returns on existing trust funds, corporate bonds, and WMP would all look less appealing to depositors. It is our view that the possibility of a series of defaults among the trust funds, leading to a sharp slowdown in bank lending, would trigger a sharp correction in the property sector. That could lead to a chain reaction, possibly also bursting the local government debt bubble and the shadow banking bubble.

More than just trust funds

China's potential shadow banking problems go beyond the trust funds. Three major factors, in our view, have attributed to the surge in shadow banking. First, a lending-quota-based macro management system has forced banks to move lending activities from on balance sheet to off balance sheet. Second, excessively low interest rates prompted the exit of deposits, so banks have to use alternative investment instruments to retain their revenue-generating base. Third, pressure for profits has made banks go after higher-margin products, perhaps without proper assessment of their long-term risks.

Banks are evolving into asset management companies. On top of being the pro-active middleman connecting retail money and trust funds, the funding pool concept is spreading quickly in the industry.

Banks are selling customers "funding pool" WMPs, usually with a verbal commitment on investment return, yet without disclosing what securities they will buy later. And funds raised through different WMPs are then pooled together. Typically, the money put into the funding pool will mature in 3-6 months, but the residual of the pool allows banks to buy corporate bonds and other securities with maturities of 3-10 years. The duration mis-match is obvious, the risk mismatch is obvious, underlying risks are not properly disclosed, regulation is absent. The banks' WMP products together are estimated to be about RMB 7.6tn, according to the CBRC.

Investment management run by brokers is another booming area. The current size of broker-related asset management is about RMB 2tn, but it is growing at a pace of RMB 10bn per day. Brokerage houses act as banks' vehicles to securitize debt from local governments and property developers, putting these instruments onto their books as assets under their management.

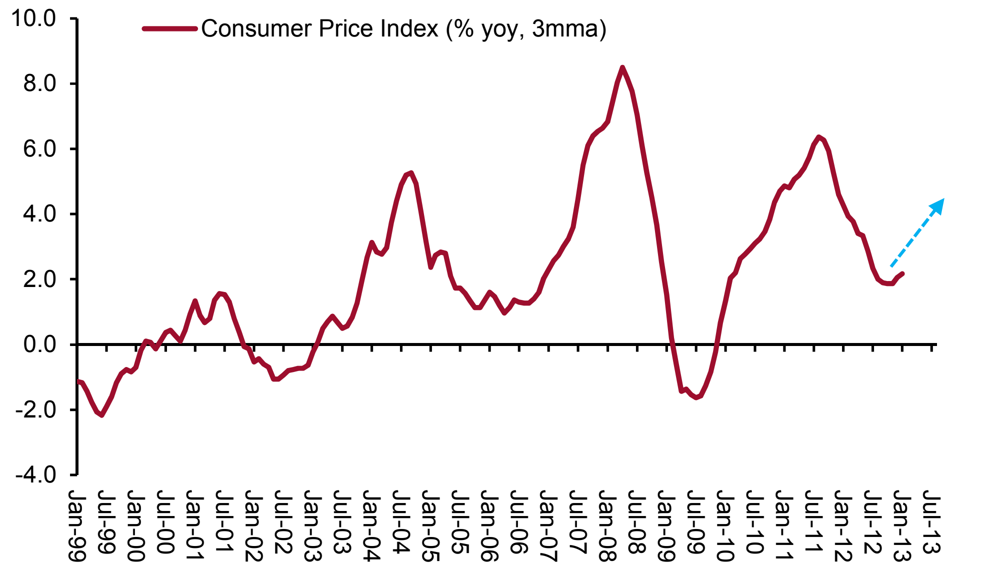
Insurance companies are entering into this field as well. After a round of deregulation, insurance companies are allowed to buy riskier assets like trust products. We expect RMB 500bn-RMB 700bn of insurance funds to filter into shadow banking directly or indirectly.

Why doesn't Beijing stop shadow banking activities? We believe the entire push behind shadow banking is deeply rooted in the government's desire for growth. Shadow banking activities have increased because China needs growth, and the banking sector has to a significant degree failed in its role of financial intermediary. Indeed, some government bodies have put out some restrictions on certain types of shadow banking operations, but the core issue has not been addressed. Private investment has disappeared in China, as manufacturing production becomes unprofitable due to surging salaries and severe over-capacity. Without the re-engagement of private investment, we believe the government will have no choice but to rely on infrastructure projects. It may ban one type of financial instrument, but it still has to deliver liquidity to local governments through alternative channels.

Road to the great credit contraction?

China's shadow banking sector has certain characteristics: (1) a complicated structure and poor transparency, with undisclosed or improperly disclosed risks, (2) many interrelated products, regardless of their point of origin, (3) excessive deleverage on property and collateral value of land, (4) sensitivity to interest rate movements and property prices, (5) lack of regulation externally and risk management internally, and (6) critical dependence on a continued influx of capital and potential exposure to excess risk if liquidity becomes a problem.

Exhibit 9: Headline inflation is on the rise



Source: NBS, Credit Suisse

A key catalyst that we think could turn the shadow banking sector upside down is the incoming pick-up in inflation and potential for an eventual interest rate hike. The food cycle, especially the pork cycle, has already started moving upward. By the end of 2013, we project inflation will reach 4%, from its current 2.0%. The PBoC's window of monetary easing is closed. Judging from the rise in rents and salaries, there is a good chance that the CPI could move towards 5%, forcing the central bank to tighten in 2014. Should markets anticipate that, then the fund influx to the bond market and WMPs could dissipate, especially if alternative investment options, e.g., property and stocks, are appealing. Most shadow banking entities run on a thin equity base, so if one or two projects default, the capital base would likely be wiped out. The market would then be much more concerned about credit risk among shadow banking entities, as the funding drain and duration mismatch would be likely to be exposed.

Given their deep involvement, banks might well be asked to take on the responsibility of repayment. Should that happen, it would weaken banks' balance sheets, causing credit to start to contract, not only in shadow banking, but also in formal banking. That might trigger a simultaneous bursting of the bubbles in the property sector, local government debt, and shadow banking, in our view.

A frequently heard counter-argument to our cautious assessment on shadow banking is that of collateral value. Trust fund products and local-government-related corporate bonds point to the underlying collateral – land, with a 50% discount to NAV. We would not expect a greater than 50% fall in land values (it is possible though), but emphasize the importance of liquidity. Lehman held quality assets but went under when liquidity dried up. AIG's assets are sold at a profit today, but it could not survive without the bailout from the US government. In our opinion, if the credit market were to dry up and the property market were to see a correction, we would see limited demand for land if the entire country were attempting to sell land.

Government bailout?

Assuming no action to curb the booming shadow banking activities, we see the potential for a crisis somewhere around 2015-2017 that involves deleveraging in local government debt, the property market and shadow banking. This may be an unpleasant event with lots of cross-casualties, but would probably not be 'the end of the world'. Although local governments' deficit to GDP ratio reached 8.5% in 2011, the central government's fiscal condition looks healthy, with a deficit to GDP ratio at 1.1% and debt to GDP ratio at 15.2% as of the end of 2011.

Exhibit 10: Government-related debt projections

RMB tn	2010	2012 Projection	*Projection Assumption
National Government Debt	6.8	8.0	2011 outstanding debt plus 2012 deficit
Local Government Debt	10.7	18.5	Based on average growth rate of the previous 5 yr period (31.4%)
Policy Financial Bond Outstanding	5.2	8.0	Based on average growth rate of the previous 5 yr period (21.5%)
Ministry of Railways Debt	1.9	2.8	Assume Q4 debt increase by the same amount as Q3
Total	24.6	37.3	
% GDP	61.3	71.8	

Source: National Audit Office, Ministry of Finance, Ministry of Railways, CEIC, Credit Suisse estimates

The tangible liability is harder to estimate, when we include debt owned by local governments, the ministry of railways and policy banks. The latest year for which we can find all the debt figures is 2010 – when the total size of government debt stood at RMB24.6 tn, or 61.3% of GDP. Based on currently available data, we project the total debt reached RMB 37.3tn, or 71.8% of GDP, at the end of 2012. Details are listed in Exhibit 10. That does not include RMB 80tn of SOE assets controlled by the state, or potential liabilities for pensions and health care. In our judgment, Beijing does have the fiscal strength to bail out the financial system one more time. Of course, the cost of bailing out during a crisis could be substantially higher than it might appear on paper, but China also has many SOEs where the asset values have substantially risen over the past decade.

Will the government take pre-emptive steps to stem a potential crisis? We hope so, but think it unlikely. Before a crisis strikes, politicians would face a dilemma. If they are successful, then there would be no crisis (hence no reward); if they fail, then they would likely face criticism. We believe it might take a crisis for the top leaders to agree on a large sum bailout plan.

Once the funding of a bailout plan is agreed upon, we believe the rest would be likely to be relatively easy. The prescription for handling a financial crisis is readily available – fiscal bailout, QE and stimulus. In our view, Beijing arguably has the best execution ability among all the large economies. At the end of the day, we would anticipate a V-shaped recovery, though the initial dip could be much steeper than China has experienced in 2008.

More about shadow banking

Aggregating the sizes of major shadow banking activities, the trust funds, the bank wealth management products, the broker-asset management products, local governments' shadow financing activities through LGFV bonds, and underground lending, we estimate the total reached RMB 22.8tn, or 44% of GDP in 2012 (Exhibit 4).

Not all shadow banking activities are exposed to excess risks. Not all of the funding funneled through shadow banking is to local governments or the property sector. Because of the nature of off-balance sheet operations and the relatively weak regulatory environment, a detailed breakdown of the direction of lending is impossible. We have used official or semi-official data (e.g., published by the state media) regarding the size of each kind of shadow banking, but would not be surprised if the actual size turns out to be bigger.

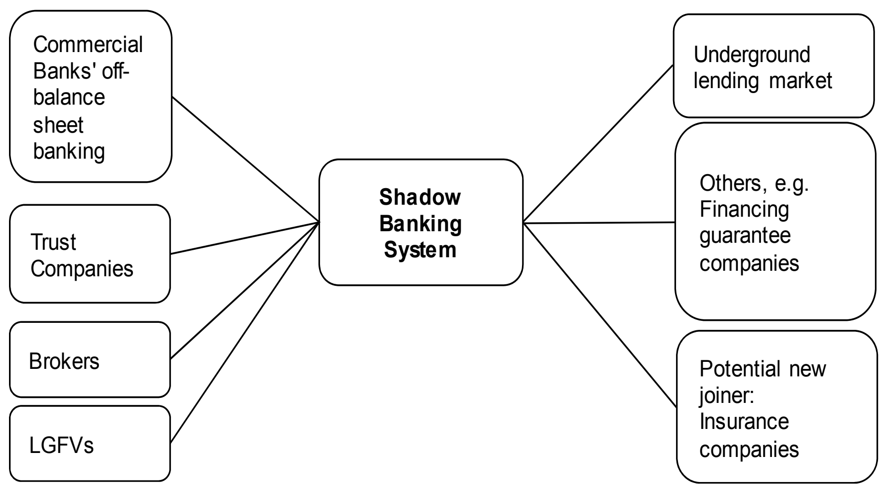
In the second half of this report, we look at the different forms of shadow banking activities in further detail.

China's Shadow Banking – At a glance

The surge in shadow banking activities fueled our concern about credit overheating in China. **There is no official definition of shadow banking, but aggregating the sizes of major shadow banking activities, the trust funds, the bank wealth management products, the broker-asset management products, local governments' shadow financing activities through LGFV bonds, and underground lending, we estimate the total reached RMB 22.8tn, or 44% of GDP in 2012.** Because of the nature of off-balance sheet operations and the relatively weak regulatory climate, a detailed breakdown of the direction of lending is impossible. We used official or semi-official data (e.g., published by the state media) regarding the size of each kind of shadow banking activity, but would not be surprised if the actual size turns out to be bigger.

In this section, we provide a brief overview of these shadow banking activities in China. First we will give some overviews on recent trends. Then we will go through the key areas of shadow-banking-related operations, starting with the trust fund activities, followed by LGFVs' corporate bond issuance, the bank wealth management products, and finally recent developments such as broker asset management operations.

Exhibit 11: Players in the shadow banking system



Source: Credit Suisse

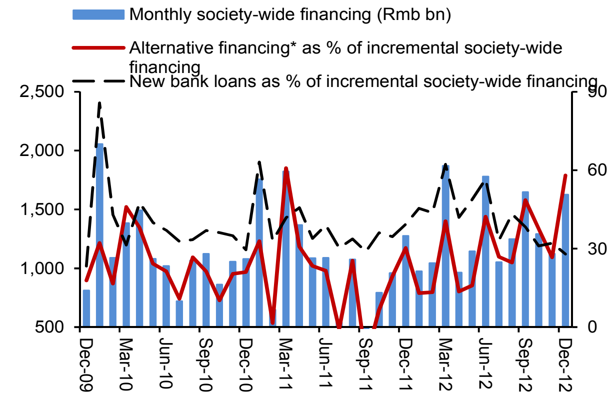
Recent trends in shadow banking activities

Conventional bank loans did not have a particularly exciting year in 2012; new bank loans came in at the expected RMB 8.2tn, but total credit growth in China was strong. The total social financing grew RMB 15.8tn in 2012, 23% higher than the growth seen in 2011. The driver behind this was the surge in alternative financing activities.

Trust loans, entrusted loans, and banker's acceptance bills are the off-balance sheet shadow banking items in the PBoC's total social financing account. Contrary to loans, these items are not subject to the constraints imposed by either the loan-deposit ratio or loan quotas. Corporate bond issuance is also included in the total social financing. As opposed to the conventional bank loan channel, we call these four items alternative financing activities. Exhibit 12 shows the upward trend of alternative financing activities in 2012, while the conventional bank loan channel's role seemed to have decayed. Overall, new credit raised through alternative financing activities reached RMB 5.9tn in 2012, growing by 50.9% from RMB 3.9tn in 2011. Exhibit 13 shows a sharp increase in the total credit in China from the beginning of 2009. Over the course of 2012 in particular, the gap between loans and total credit widened. Off-balance sheet activities and corporate bond markets have been furthering their role in providing credit to the economy.

To provide further detail, new trust loans totalled only RMB 203bn in 2011, which was 1.6% of the new credit to the economy; this amount surged to RMB 1.3tn in 2012, forming 8.2% of the new credit. Associated with this jump is that the trust sector has overtaken the insurance sector to be the second largest financial sector in China.

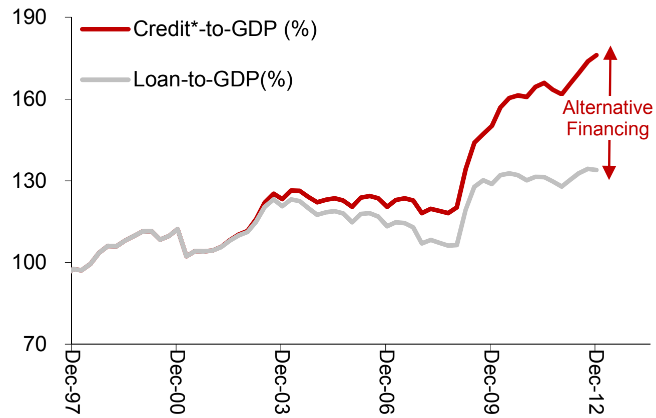
Exhibit 12: Alternative financing activities show upward trend over the course of 2012



* Alternative financing including: Trust loan, Entrusted loan, Corporate bond financing and Banker's acceptance bill .

Source: PBoC, Credit Suisse

Exhibit 13: … becoming the key driver of the credit boom



Note: * Total outstanding credit is based on PBoC's total social financing record

Source: China Trustee Association, Credit Suisse

Corporate bond financing also increased significantly, with the amount of increase reaching RMB 2.3tn in 2012, from RMB 1.4tn in 2011. **Behind the increase was the local government and infrastructure-investment-related bond new issuance hitting RMB 800bn, up from RMB 290bn in 2011.** Clearly, local governments are increasing their use of the corporate bond market as their funding source of choice for public spending projects. The link between the corporate bond market and shadow banking activities has strengthened over this time through the implicit local government guarantee of corporate bonds and the deepening involvement by commercial banks and trust funds.

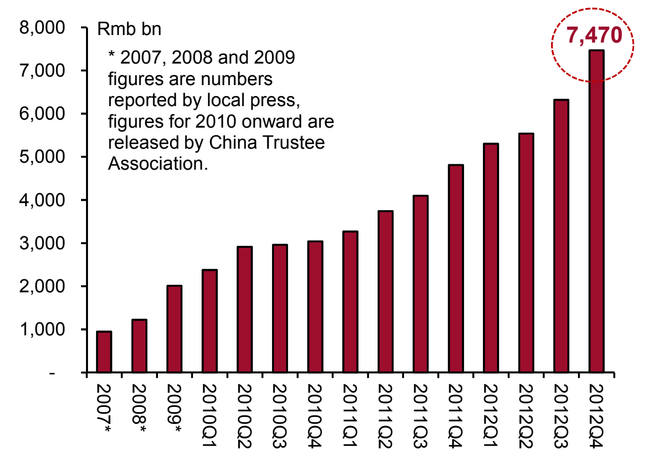
Underground lending became a source of major concern in 2011, as the government started to tighten credit conditions in an effort to cool down the housing market and the global headwinds hitting the Chinese economy. According to the official media (CCTV), in the first seven months in 2012, on average there were 56 court cases related to underground lending per day in Wenzhou city, the city known for its manufacturing exports, housing market speculation and underground lending. Underground lending is one of the shadow banking activities in China. The market generally estimates the size of underground lending to be between RMB 3.5tn and RMB 4tn. We believe it is at the higher end of this range.

As of the end of 2012, outstanding shadow banking credit from the PBoC's total social financing (trust loans, entrusted loans, banker acceptance bills) amounted to RMB 14.5tn. **That is to say, at the narrowest scale, shadow banking credit reached 28% of GDP. On top of this are the wider "grey areas" such as underground lending that are harder to monitor and regulate, and possibly higher risk.** Aggregating the sizes of major shadow banking activities, the trust funds, the bank wealth management products, the broker-asset management products, local governments' shadow financing activities through LGFV bonds, and underground lending, we estimate the total reached RMB 22.8tn, that is 44% of GDP in 2012.

Trust sector – Now larger than the insurance sector

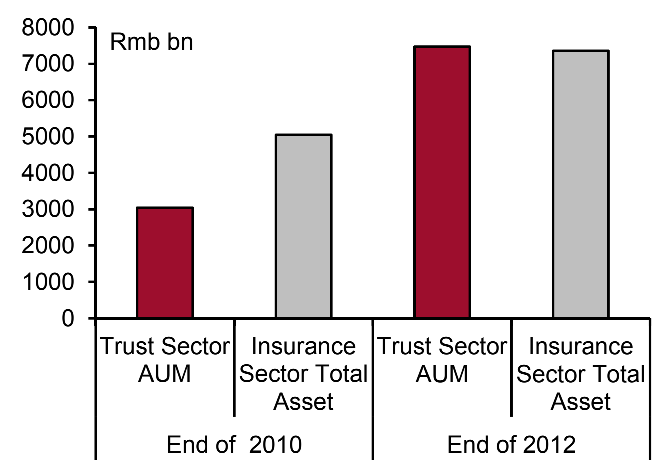
The trust sector had overtaken the insurance sector as the second largest financial subsector in China by November 2012. By the end of 2012, the assets under management (AUM) of the trust sector hit RMB 7.5tn. Exhibit 16 shows the setup of the trust sector. Trust companies are the organic unit of the trust sector, they design trust plans, raise funds from investors, and allocate the capital into different asset classes. Trust companies can play both proactive and passive roles in the popular trust fund operations.

Exhibit 14: Trust sector's AUM jumped



Source: China Trustee Association, Local Press, Credit Suisse

Exhibit 15: … and overtook the insurance sector as the second largest financial sub-sector

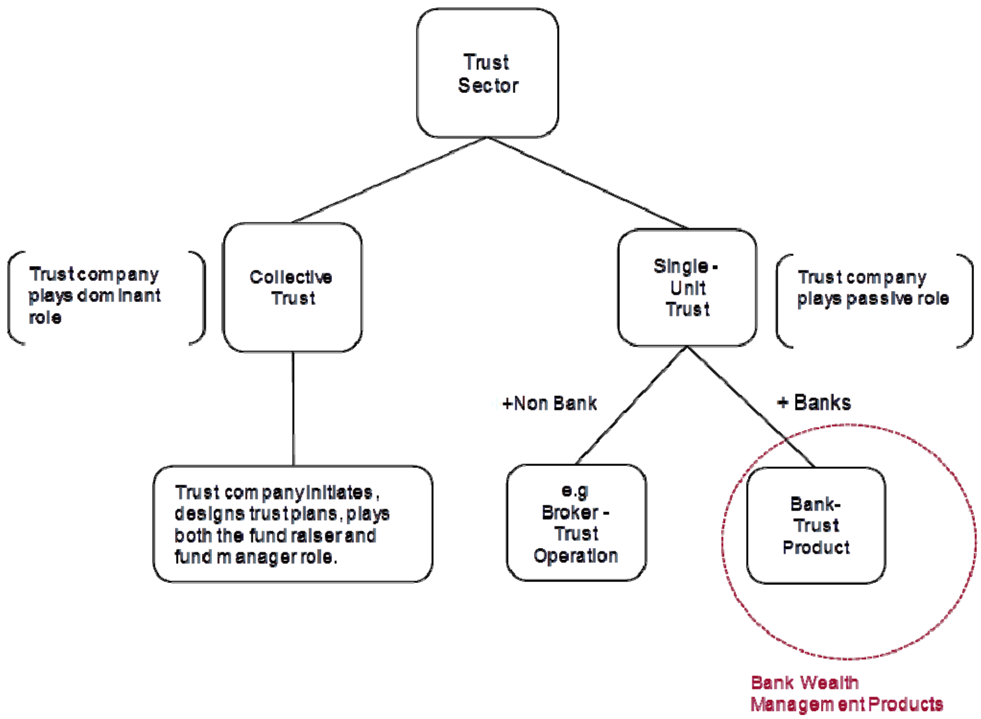


Source: China Trustee Association, WIND, Credit Suisse

Trust companies co-operate with commercial banks to initiate so-called "Bank-Trust" wealth management products. Usually in this type of operation, trust companies play the passive channel role. They design trust plans according to commercial banks' specifications, for example, commercial banks decide where the funds will be channeled to. Commercial banks raise funds under their brand and use trust companies to funnel capital to the counter party in the form of trust loans without touching the official loan quota shown on banks' balance sheets. It is not hard to see the shadow banking nature of this type of operation. Through this type of operation, commercial banks have turned their wealth management product window into a secondary loan department providing credit to counter parties that would otherwise not have been able to obtain credit, for example, real estate developers.

Regulators were also aware that such an operation could affect the quantitative credit quota they imposed on commercial banks: in August 2010, the CBRC imposed a quantitative ratio on loan type "Bank-Trust" wealth management products. Specifically, loan type "Bank-Trust" wealth management products cannot exceed 30% of the total assets under management of a "Bank-Trust" wealth management operation. Such measures did help to correct shadow banking activities of this specific type. In 2010 Q3, "Bank-Trust" products contributed 64% of the AUM of the trust sector, in 2012 Q4, their proportion declined to 27%.

Exhibit 16: The basic structure of the trust sector

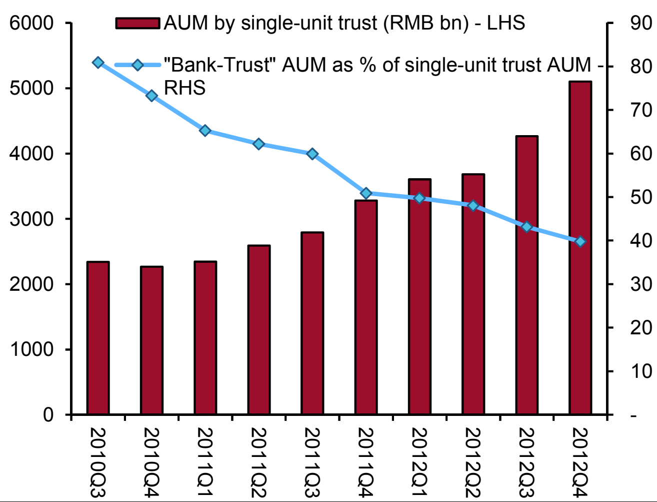


Source: Credit Suisse

But the trust sector continued to grow through other forms of operations, both in terms of other single-unit trusts and collective-trusts. Assets under single-unit trusts were RMB 2.3tn in 2010 Q3, and the amount reached RMB 5.1tn in 2012 Q4. Assets under collective-trusts were only at RMB 479bn in 2010cQ3, and the amount reached RMB 1.9tn in 2012cQ4.

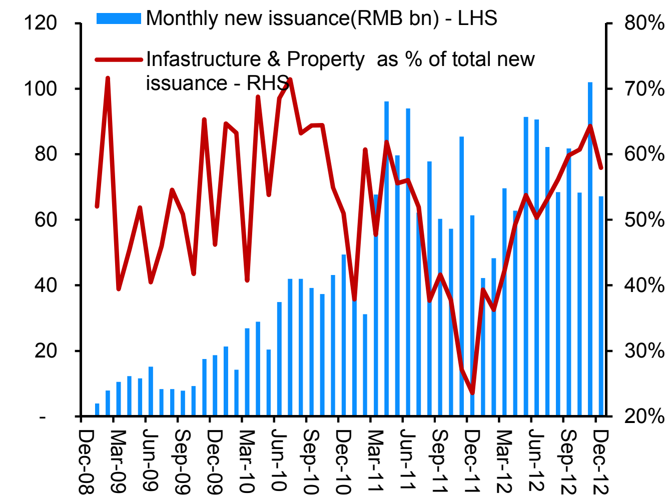
Single-unit trust refers to trust operations in which the principal that the trust company faces is a single entity, usually the principal determines the destination of the funding, while the trust company plays a passive role. "Bank-Trust" partnership is a single-unit trust in which the bank is the single dominant principal making use of the channel provided by the trust company. With the regulatory constraints, "Bank-Trust" products provide reasonable disclosure and their growth has been largely monitored. It was other operations that drove the AUM of single-unit trusts to double in just eight quarters. This type of operation usually offers little disclosure and there seem to be less regulation. Although the direct principals of single-unit trusts are said to be institutions and high net-worth individuals, the secondary source of funding is less certain. These uncertainties fuel the concern about the underlying risk, given the surge in size.

Exhibit 17: Other single-unit trusts pushed up the growth of trust sector after CBRC's regulation on "Bank-Trust" partnership



Source: China Trustee Association, Credit Suisse

Exhibit 18: Large proportion of funds raised by collective-trusts went to infrastructure investment and property sector



Source: Use – Trust, Credit Suisse

Trust companies play a proactive role in originating collective-trust products, in which they act as the trust plan designer, fund raiser and fund manager. The growth in the size of collective-trusts is more than four-fold from 2010 Q3. The AUM of collective-trusts has also taken up a much higher proportion of the total AUM of the trust sector, and in 2012 its share reached 25%, from 16% in 2010. This highlights that the trust companies have taken a more proactive role in the trust fund industry. They now are not only the channel, but also the originator of the trust operations. . Exhibit 18 shows that more than 60% of the funds raised by collective-trusts went into the infrastructure and property sector in recent months. And over the four-fold growth period, on average 50% of the funds were given to the infrastructure and property sector directly. We see the booming collective-trust operation as helping to provide funding to public investment projects and real estate sectors. Or from the other angle, we see the thirst for funding from public projects and real estate developers as boosting the growth in collective-trusts.

Market participants pay less attention to other asset classes held by the trust sector, but we believe they are worth highlighting as well. The short-term investment element may appear to be less relevant to shadow banking, but details of these types of products might point to the opposite. Short-term investment in equities is one of the popular vehicles of trust fund short term investment. But many products of this kind have the hidden element of "purchase and sell-back." Effectively, the counter party that needs to raise funding uses its holdings of securities as collateral to borrow from the trust company with a pre-agreed interest rate. Clearly, such an operation goes beyond a generic equity investment; it is more like providing loans to the counter party without going into the trust loan channel.

The involvement of commercial banks in trust funds also goes beyond the now monitored "Bank–Trust" products. It is common for trust companies' collective products to be sold to high street investors at commercial banks' branches. Although commercial banks are not contractually involved, information asymmetry may lead investors to hold the perception that commercial banks would be responsible for the products sold at their branches. Behind the surge of other types of single-unit trusts, we believe commercial banks' role is unclear, for example, the "funding pool" held by commercial banks could easily go into single-unit trusts subsequently funneled through various shadow banking activities. Little transparency in both the single-unit trust and banks' "funding pool" hinders our ability to provide an empirical description of this type of operation. But indeed, such a lack of transparency highlights the potential risk behind the booming single-unit trust. The **deep involvement of commercial banks leads us to believe that in the case of a default of trust funds, it is unlikely that banks could operate unscathed, and they would likely be forced to help stem the potential impact.**

It is not the first time that we have seen a rise in the trust sector; indeed, there have been several growing waves of trust companies since the opening and reforms in China. In 1988, there were more than 1,000 trust companies in China. But the number shrunk to around 80 in 2002 after rounds of regulatory changes. It is not true that Chinese trust companies or state-owned financing vehicles never run into insolvency. Indeed, a series of state-owned trust companies and local government financing companies in Guangdong went into insolvency after the Asian financial crisis hit China in 1998. Exhibit 19 gives a brief summary of the story. **Today's rise of trust fund products is not paralleled in history, especially in terms of variety and degree of complexity in the product structures, and in terms of the degree of exposure held by high street investors.** Today's social-political environment as well as macroeconomic environment are very different from that after Asian financial crisis. We believe the resolution of insolvency, if it were to happen to this wave of trust funds, would be very different and a lot more complicated than the story summarized below.

Exhibit 19: The insolvency of Guangdong local governments' trust companies in late 90s – A story that took place not such a " long long time ago"

When Asian financial crisis hit Guangdong in 1998, bad debt and cash-flow problems arose. Many local government trust companies and local government non-bank financial corporates went into insolvency and could not meet their repayment obligations.
Guangdong International Trust & Investment Corp.(GITTC), a state owned international financing and investment vehicle, filed for bankruptcy in 1999. GITTC mainly borrowed from foreign investors, and on average more than 65% of the haircut was taken by foreign creditors in the bankruptcy.
Other state-owned trust companies and financial corporates went into insolvency at that time and had borrowed from domestic investors as well.
It was reported by official sources that the amount of outstanding debt from various types of local government trust companies and agriculture financing platforms was around RMB 100 bn or 11% of Guangdong's GDP at that time (market sources reported the amount was at around RMB 200 bn or 22% of Guangdong's GDP).
The PBoC and Guangdong government provided funding to help the debt resolution programs that were under the charge of Wang Qishan, Vice-Governor of the province at that time.
With the relatively healthy fiscal conditions of Guangdong government, the funding support from the PBoC, and the principle pursuit of social stability, domestic creditors were generally not exposed to principal haircut in the debt resolution.

Source: People's Daily, " Integrating China: Towards the Coordinated Market Economy" by Peter Nolan, Credit Suisse

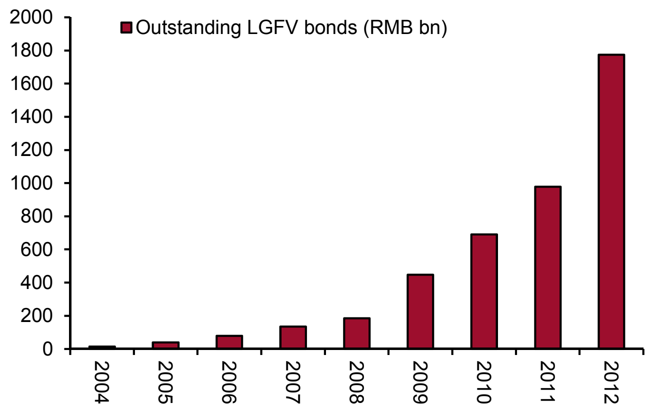
Corporate bond market − the key issue is local governments

The development of the corporate bond market per se could have been viewed as a positive development for China's capital market. **But the concern is with the infrastructure-related and local government financing vehicle (LGFV) bonds issued in the corporate bond market.** Their outstanding amount increased by RMB 800bn in 2012, as reflected in Exhibit 20, after the new issuance rose sharply in the second half (Exhibit 21).

Local governments in China cannot issue bonds, with the exception given to pilot programs run by Shanghai, Shenzhen, Guangdong and Zhejiang. But local government financing vehicles issue corporate bonds for their financing needs. With the purpose of raising funds to support public spending projects, LGFVs are corporates created by local governments, and their accounting ratios are achieved, for example, by transferring local government revenue streams to meet the requirements for corporate bond issuance.

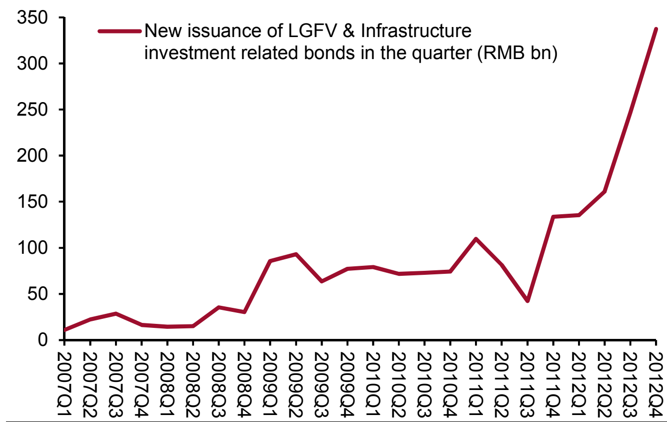
Policies that favour the corporate bond market were launched in the 2007/2008 era. And there was little LGFV bond issuance at the beginning. But soon, when funding needs from local governments became apparent after the RMB 4 trillion package in early 2009, new issuance of LGFV bonds jumped, and their outstanding amount doubled in 2009. Once again, more recently, as public spending and infrastructure projects were used to drive the stabilisation of the economy, issuance of LGFV bonds rose sharply as shown by the almost vertical line at the right end of Exhibit 21. And their outstanding amount almost doubled once more, hitting RMB 1.8tn, forming around 25% of total corporate bond financing.

Exhibit 20: Outstanding LGFV bonds doubled again last year



Source: WIND, Credit Suisse

Exhibit 21: … with new issuance rising sharply



Source: WIND, Credit Suisse

LGFVs' financial ratios are often made to meet the requirements necessary to access the corporate bond market. We believe there is regulatory uncertainty regarding some of the methods LFGVs employ to boost their financial ratios in order to raise more funds, for example, by transferring large amounts of local government land to an LGFV to increase the asset base. These methods have negatively affected the credibility of LGFV bonds. A key distinction between infrastructure projects and usual industrial projects is that the capital expenditure for the former is much higher and it takes much longer to generate returns. Therefore, local governments have to use their own fiscal capacity to subsidise LGFVs in order to meet their credit obligations.

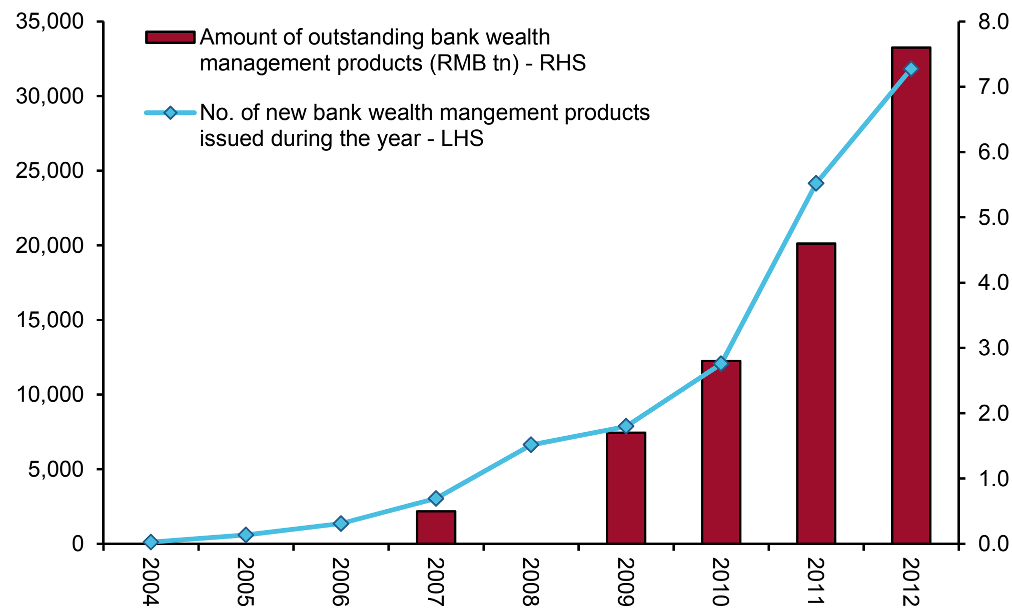
Effectively, we view these as implicit local government guarantee bonds, and although they are classified as corporates, they become local governments' shadow financing source. Yet there is little information available to investors regarding local governments' financial conditions, and there is no explicit guarantee from local governments. So LGFV bonds are often issued with a higher yield, and investors' ratings on LGFV bonds are often lower than the agency rating, reflecting the uncertainty on the part of investors. Subsequently, many LGFV bonds with lower ratings stay on commercial banks' balance sheets rather than being diversified out. In this sense, we might say that LGFV bonds became a direct bank-local government credit channel on top of the loan channel. Systematic risk concerns then formed. Other shadow banking activities, for example, trust funds and banks' funding pools, are also substantially exposed to the LGFV bonds by taking them into their asset pools.

We believe the growth of the bond market is a positive development for China's financial sector. But without a formal and properly regulated municipal bond market, the current implicit local government guarantee corporate bond situation leaves plenty of uncertainties. The strong relationship between other players in the shadow banking system and LGFV bonds further complicates the matter and adds to concerns about the potential systematic risks.

Commercial bank wealth management products

The debate about commercial bank wealth management products was intensified by the comment from Xiao Gang, currently the CEO of the Bank of China. In a piece published in the *China Daily* (on 12 October 2012), he described the commercial bank wealth management product as a "Ponzi Scheme". Exhibit 23 gives a snapshot of bank wealth management operations.

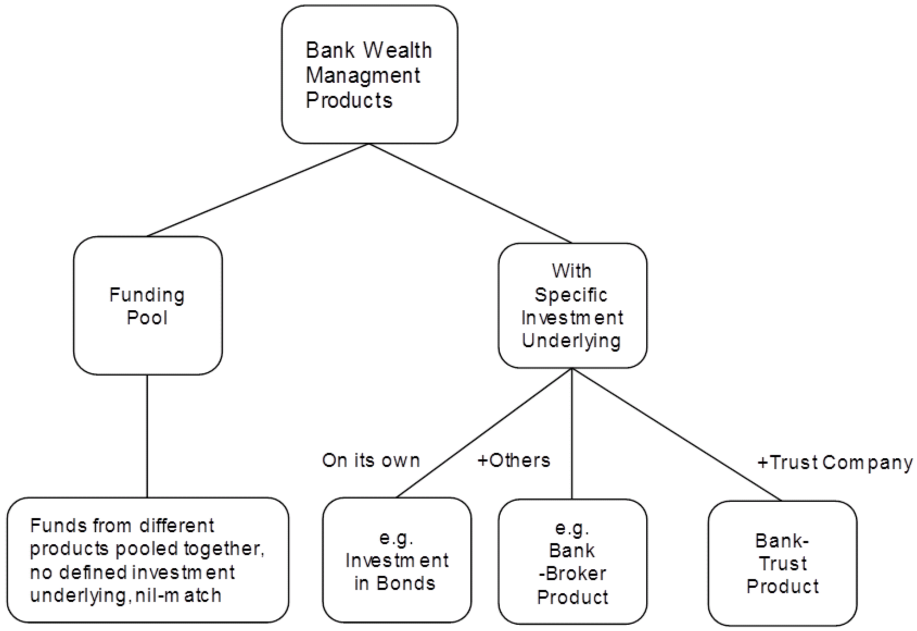
Exhibit 22: Commercial banks' wealth management products have boomed



Source: CBRC, WIND, Credit Suisse

Commercial banks initiate wealth management products independently as well as jointly with other financial intermediates. The now regulated "Bank-Trust" partnership described above is one type of wealth management product, and the currently booming "Bank–Broker" partnership also belongs to this type. In most of the joint wealth management product operations, commercial banks are not only the fund raiser, but also the underlying initiator. Commercial banks often play the dominant role in determining the destination of the funding rather than assigning the fund manager role to their partners. These partnerships are often used to facilitate the shadow banking activities. "Bank-Trust" products were typically associated with trust loans before the quantitative constraint; "Broker-Trust" products are often associated with the transfer of discounted banker's acceptance bills from commercial banks' balance sheets to off-balance sheet to free up the quota constraints.

Exhibit 23: Bank Wealth Management products – a snapshot



Source: Credit Suisse

Commercial banks also initiate "Funding Pool". Banks issued different commercial products with specified maturities and expected yields without specifying details of the underlying investments. Funding raised by different wealth management products is then subsequently pooled together in a "centralized" fashion with little transparency on the investment management details of this pool. The generic problem of this type is that there is no match between the liability, i.e., the wealth management products sold and held by investors, and the asset, i.e., investments in the pool. Described by Xiao, in this type of "Funding Pool", commercial banks issued new wealth management products to pay off the repayment due to investors holding the expiring wealth management products. If the funding flow from new investors suddenly stopped, then the investment would probably collapse, prorogating the systematic risk to the economy. Besides the mis-match issue, we believe the assets held in the pool are also a cause of concern. There is little disclosure on the assets invested by the funding pool, and the funding pool can be used to conduct all types of shadow banking activities to provide credit to counter parties that would have otherwise been ineligible to obtain loans through normal channels.

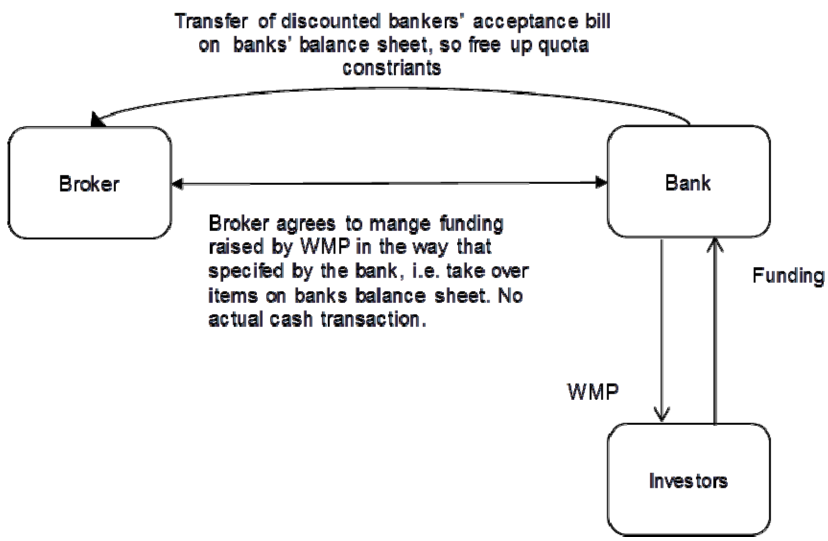
The total size of outstanding banks' wealth management products was RMB 7.6tn by the end of 2012, according to the CBRC. But in 2007, the amount was RMB 500bn, that is fifteen-fold growth in five years. The lack of transparency brought challenges to the accounting of the total size, and different sources tend to adopt different definitions; for example, Fitch reported the total size at RMB 14tn. It may be an over-exaggeration to claim that all of the outstanding banks' wealth management products are exposed to excessive risk and that certain proportions of this total amount were also accounted for in the trust sector's AUM or other sectors' AUM.

The substantial growth in the size of the banks' wealth management products is apparent and the potential systematic risk is apparent to us. Moreover, these products are widely spread to high street individuals. If a credit or liquidity event hit, then the burden on commercial banks would be likely to be substantial and the subsequent impact on real economic activities through balance sheet, credit and liquidity channels should not be underestimated.

So all the big guys are in?

Asset management by brokers is currently the area that is seeing the highest growth. According to the China Securities Association, the size of securities companies' assets under management reached RMB 1.9tn by the end of 2012. What is notable is the growth rate; by the end of 2012 Q3, the size was only RMB 930bn. **The size doubled within a quarter, or in other words, the sector was growing at RMB 10bn per day.** We think the supportive policy in favour of broker asset management that was announced in October directly helped such a boom.

Exhibit 24: A simple form of shadow banking activity by broker asset management



Source: Credit Suisse

But details may show plenty of grey areas of broker asset development. It has been widely reported that broker asset management may again be used as a channel for shadow banking activities. Exhibit 24 gives an illustration for the simplest type of "Bank-Broker" shadow banking operation. Banks raise funds through their WMP windows and the brokers are assigned the fund manager role on paper. While cash stays with the banks, the discounted banker's acceptance bills on the banks' balance sheets are transferred to the fund managers' books. Such an operation would free up the banks' balance sheet, and brokers capture some, albeit low, channel fee.

Rather than being a conventional asset manager pursuing the goal of maximized return and minimized risk, in our view, brokers here are barely used as anything other than a channel for commercial banks to free up the imposed loan quota constraints. It was reported by the local press that currently 80% of broker asset management activities are channelling types of shadow banking activities. And not surprisingly, there have also been news reports regarding possible tightening of these type of shadow banking activities by brokers.

No matter the type of shadow banking activity, and regardless of which financial intermediates played the key role in facilitating the activities, the dramatic growth is the common feature among all of the operations. Regulators continued to respond to the dramatic growth by imposing new regulations, but soon, new types of operations were developed.

We believe it is not hard to predict that, given the dramatic growth in the broker wealth management product, regulators will launch some new measures toward some of the "grey areas." Policy in favor of asset management by the insurance sector was promoted recently, which probably means that bridges can be established for another big player to join the shadow banking activity. Given the structural factors behind issues such as the banking oligopoly, non-market-based interest-rate setting, government-oriented fixed asset investment driven growth, we also expect new types of operations to be developed under any new regulations.

Appendix: Explanations of often-quoted terms

Trust Loan:	1. Trustee (Trust company) according to trust plan to lend funding to third party in the form of loan. 2. This is an off-balance sheet item, i.e., it is not subject to the loan-deposit ratio that governs commercial banks .3. Collateral is usually specified in the trust plan.
Entrusted Loan:	1. Principal owner specifies the counter party and details of loan to provide the funding through a bank. 2. The bank acts a channel to complete the loan transaction.3. Entrusted loan is not subject to the loan-deposit ratio.4. Bank should play a passive role. 5. Leaves room for moral hazard problem, banks may take on an active middle man role.
Banker's Acceptance Bill:	1. A channel that banks use to provide short term finance. 2. Issuance bank will not touch explicit quota. 3. Bank that discounts the bill has to take the discounted bill on its balance sheet, occupying the quota. 4. This motivates the banks to transfer them to off-balance sheet. 5. Propagates the booming " Bank-Broker" shadow banking activities which facilitate the off-loading purpose.
Corporate Bond Issuance:	1. Development of corporate bond market per se is positive and is critical for the development of the capital markets in China. 3. The current issue with corporate bond is the bonds from the large amount of issuance from the local government financing vehicles. 4. These are implicit local government guarantee bonds. 5. Under the name of corporate, they become local government's shadow financing channel.
Underground Lending:	1. Black market of lending and borrowing without direct involvement of formal financial institutions. 2.Associated with very high interest rate. 3. Often involved Small and Medium size Enterprises. 3. Wenzhou is the place most known for underground lending, as economic headwinds hit the manufacturing hub, the debt chain broke down and parties involved in underlying lending went into insolvency. 4. It was reported by CCTV that, for the first 7 months in 2012, there was on average 56 related to underground lending court cases per day in Wenzhou city. 5. Wenzhou's issue fuelled a round of concern over the Chinese economy, also pushing some minor reforms to the local financial system.

Source: PBoC, Local Press, Credit Suisse

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Disclosure Appendix

Analyst Certification

I, Dong Tao and Weishen Deng, certify that (1) the views expressed in this report accurately reflect my personal views about all of the subject companies and securities and (2) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

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