#chinadebt

China

Alternative credit aggregates

- **China's elevated and rapidly rising leverage has been instrumental in supporting economic activity, but it is also a source of medium-term systemic vulnerability.**
- **Seemingly at odds with the widely held perception that credit growth has reaccelerated in China in 2016, standard measures of credit, such as the People's Bank of China's Total Social Financing, have not picked up in recent quarters.**
- **We have created five alternative credit aggregates that take into account the opaque process of shadow credit creation and the changing dynamics of government financing. We chose one to be the Barclays Alternative Credit Aggregate, which balances comprehensiveness and straightforwardness.**
- **The Barclays Alternative Credit Aggregate, which began to diverge from TSF in mid-2015, is currently growing at a rate of 19-20% versus 12.4% growth of TSF.**
- **China's top leaders have pledged to bring leverage down over the medium term. However, there is inherent tension between the government's rhetoric and its growth target, especially given decreasing credit efficiency. Whether or not credit growth does moderate is something we think is worth monitoring.**
- **In the near term, a stabilisation in growth suggests there may not be a need for a continued elevated pace of credit creation, while recent housing market cooling measures are also likely to lead to a slower mortgage loan growth.**

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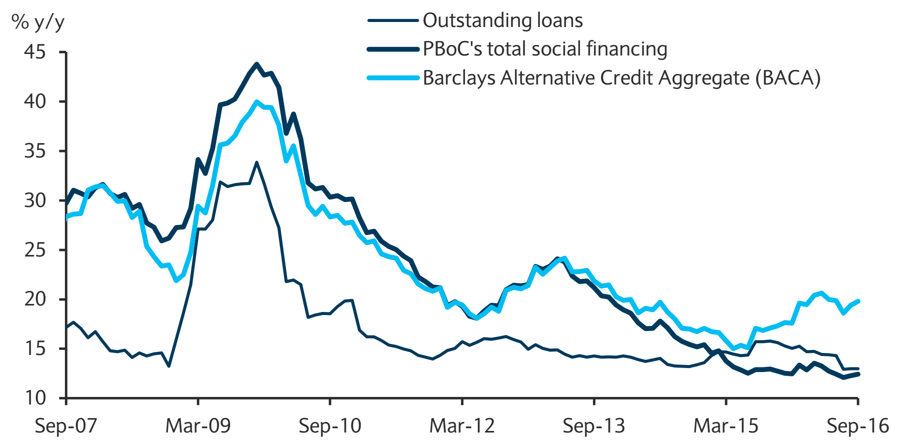
FIGURE 1

Barclays Alternative Credit Aggregate is growing at a faster pace than official data



Source: Wind, Barclays Research

China's debt level and fast credit expansion top the list of market concerns

China's mounting debt load and fast credit growth continue to be major concerns for markets. According to the Bank for International Settlements (BIS), compared to other countries that historically were hit by a financial crisis, China's rapid credit expansion should be a cause of great concern (Figure 2). Specifically, the BIS looked at China's credit-to-GDP gap, defined as the difference between the debt/GDP ratio and its long run trend, and calculated that it rose to 30.1 in the first quarter of 2016. For the BIS, a level above 10 signals that a crisis is likely to occur within the next three years, and China's credit gap is at the top of the 43 economies assessed by the BIS.

Official data have become less accurate in tracking total credit creation

To better monitor and evaluate the risks posed to China, it is crucial first to understand the true underlying pace of credit growth. What is striking is that China's official credit aggregates do not signal an acceleration of credit growth, which seems at odds with recent activity data (Figure 3). For example, when monthly investment growth rebounded in Q4 2015 and again in the current quarter, led by strong public infrastructure investment, the growth rate of official monthly credit statistics, such as bank loan growth and total social financing (TSF), has been moderate or declining. This suggests that official financing data have become less accurate in tracking total credit creation and predicting economic activity.

We explore the missing channels and construct an "Alternative Credit Aggregate

There is an obvious symmetry between the long-standing market scepticism over China's official GDP data and the current questioning of the country's credit data. For the former, the market has long suspected that the official GDP data overstate China's true economic activity. For the latter, the official data are suspected to understate China's true credit growth. Last year, we introduced the Barclays Alternative Activity Indicator which we found deviated from the China's official headline GDP numbers with a gap ranging from 50-150bp (see *China: Alternative activity indicator update,* 19 January 2016 and *China: Alternative activity indicators,* 17 September 2015). In this note, we construct a "Barclays Alternative Credit Aggregate" which currently is growing c.700bp faster than the PBoC's TSF.

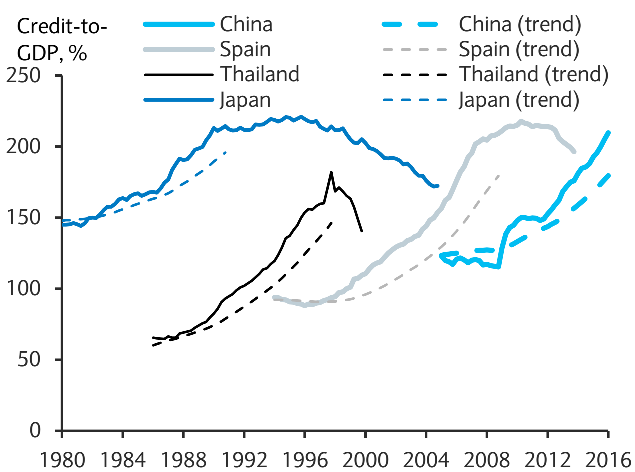
Background on total social financing (TSF)

TSF was launched in 2011 in response to financial disintermediation…

In early 2011, the PBoC launched a new data series, total social financing (TSF), as a comprehensive indicator to monitor the economy's total fundraising. Its development was in response to the rapidly growing shadow banking and direct financing amid increasing financial disintermediation and regulatory arbitrage. As a result of these changes in China's financial landscape, it was thought that traditional indicators such as bank loans or deposits no longer captured the full picture of financing/investment and money supply/demand.

FIGURE 2

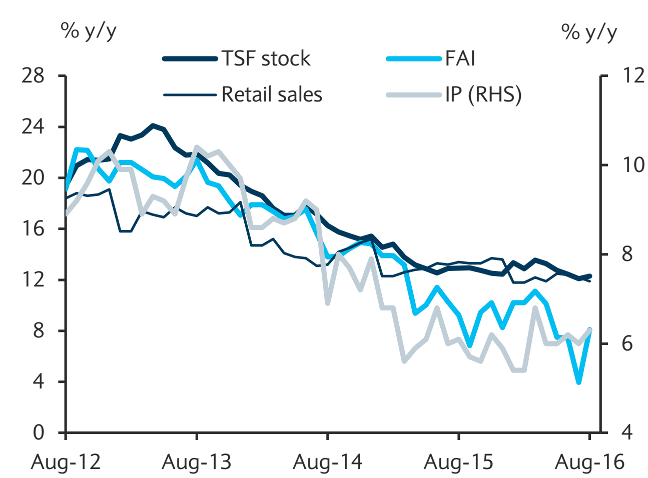
China's credit-to-GDP gap has been rising



Source: BIS, Barclays Research

FIGURE 3

TSF and economic activity indicators



Source: CEIC, Wind, Barclays Research

…it has become a macro control tool and a TSF growth target of 13% was set for 2016

Over time, TSF developed into a macro control tool, together with broad money (M2). "To maintain a reasonable growth in the money credit and TSF" is now a phrase written in the annual government work report since 2011. In March 2016, the government for the first time set an explicit target for TSF growth of 13%, slightly higher than actual growth of 12.4% in 2015, in addition to its 13% M2 growth target (up from a target of 12% in 2015).

By design, it measures the domestic financial sector's support for the real economy

Defined by the PBoC to measure the domestic *financial sector's (non-government) support to the real economy,* the TSF statistics include bank loans, corporate bonds, three traditional shadow banking activities, as well as equity financing since its release in 2011(Appendix). The shadow credit includes loans by trust companies, inter-corporate entrusted loans, and undiscounted bankers' acceptance bills. The TSF by design excluded: 1) government bonds, but has included the local government financing vehicle (LGFV) loans and bonds; and 2) external debt, such as foreign direct investment and other foreign borrowings.

Two key missing parts of TSF

We examine the two important but missing financing sources

Against this backdrop, we highlight two important financing sources that have been growing rapidly of late, but are either missing or are under-reported in the TSF. First are central and local government (CG and LG) bonds. Second is the shadow credit that is originated by banks via off-balance-sheet wealth management products (WMPs) or intermediated between banks and non-bank financial institutions (NBFIs).

1. Government bonds

Significant underestimation due to the TSF's exclusion of government bonds …

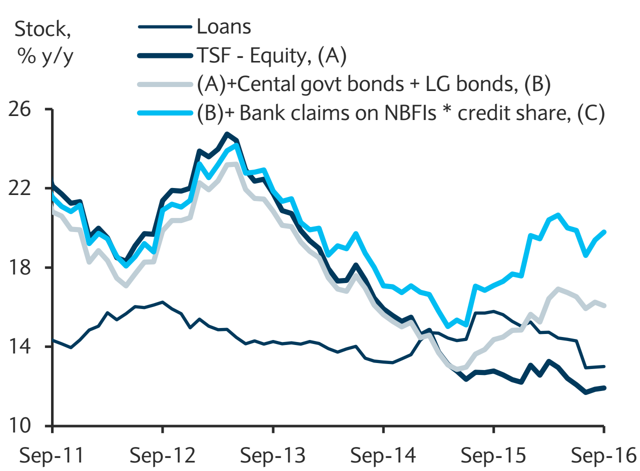
In the past, the pace of China's government bond issuance was relatively steady and small. As of May 2015, the total stock of government bonds was CNY11.0trn (CNY9.8trn CG bonds and CNY1.2trn LG bonds) compared to CNY130trn for TSF. This is consistent with the de-facto prudent Chinese central government fiscal policy at that time. The annual fiscal deficit between 2011 and 2014 was running in the range of 1.5-2.4% of GDP. Moreover, local governments were only allowed to issue bonds subject to quota from 2009.

…after the LG debt-for-bond swap program in May 2015…

However, after early 2015, China's fiscal picture changed. In March of that year, the Ministry of Finance (MoF) unveiled a program to swap high-cost, short-tenor LG debt for low-cost, longer-duration bonds. The result was that trillions worth of LG bonds were issued, starting in May 2015. In our view, this contributes to a backtracking on a fiscal (budget) reform and LG debt management exercise announced in Q4 2014, as the central government felt the

FIGURE 4

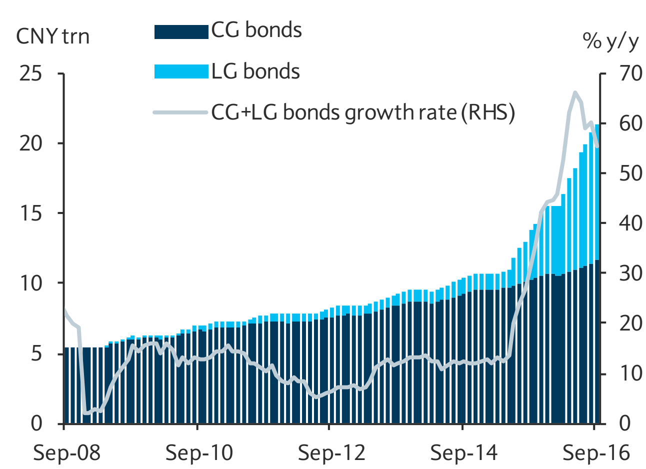
High frequency measures of broad credit growth, variants



Source: CEIC, Wind, Barclays Research

FIGURE 5

Government bond issuance has risen rapidly since mid 2015



Source: Wind, Barclays Research

need to alleviate the huge local debt burden and to implement proactive fiscal policy to support economic growth.

…which has led to a surge in LG bonds outstanding…

As of September 2016, local government bonds outstanding had surged to CNY9.7trn, and central government bonds increased to CNY11.7trn. Figure 5 shows the rise in LG bonds and an increasing pace of CG bond issuance[1]. The LG bonds include a total of CNY3.2trn of "swapped" LG bonds in 2015 and CNY3.8trn swapped so far in 2016, as well as "within budget" LG bond issues. The annual quota set by the MoF increased to CNY600bn in 2015 from CNY400bn in 2014.

…but without a significant decline in bank loans

It is worth noting that, despite the jump in "swapped" LG bonds (around two-thirds purchased by banks, and the rest by NBFIs), banks' loan growth (including corporate and household) only posted a modest decline (Figure 4). Banks' claim data show a similar picture: the claims on government surged after May 2015 while the claims on non-financial corporates were flat during the period (Figure 6). This suggests that the "LG debt-for-bond swap program" has added new credit to the system.

With Finance Minister Lou indicating a plan to expand the program to a total of around CNY15trn over three years (2015-2017) and talks by vice-finance minister "to consider further increase the budget deficit to more than the current 3% in 2017"[2], we expect increased government bond issuance will continue to add to total credit creation.

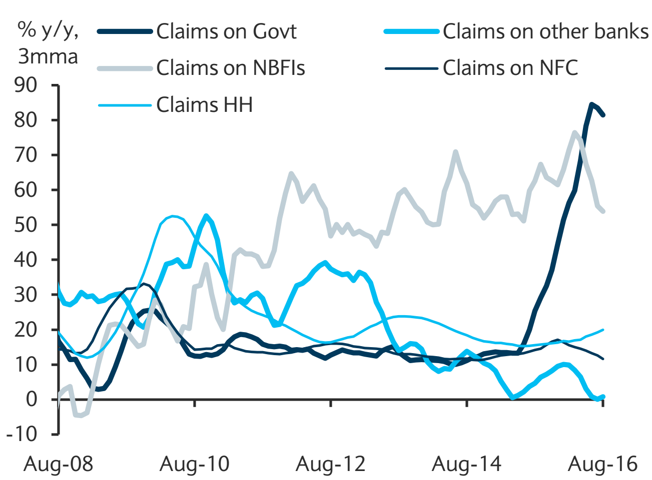
2. Non-traditional shadow credit channelled by banks and NBFIs

Another source of underestimation comes from shadow bank lending

While there is no universal definition of shadow banking, for organisations like the FSB and IMF, the term refers to credit intermediations that involve entities and activities outside the regular banking system. However, contrary to the standard shadow-banking definition, in China's case, many shadow banking activities have been channelled by or around the banks themselves, are increasingly complex in form, and have rising leverage and interconnectedness across institutions and markets (Figure 7).

FIGURE 6

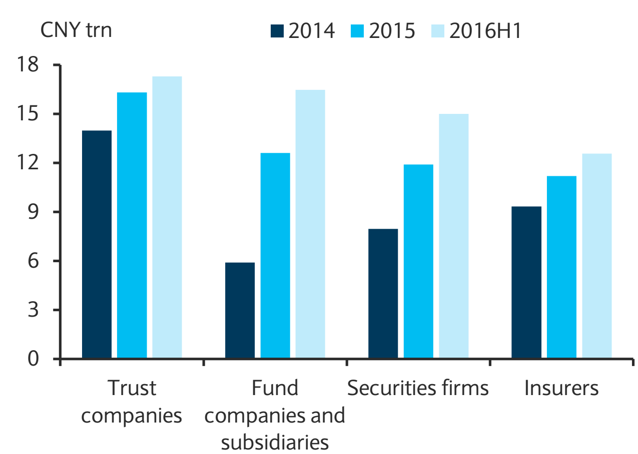
Banks claims on government and NBFIs rose rapidly (3mma)



Source: CEIC, Wind, Barclays Research

FIGURE 7

Assets managed by non-bank financial institutions



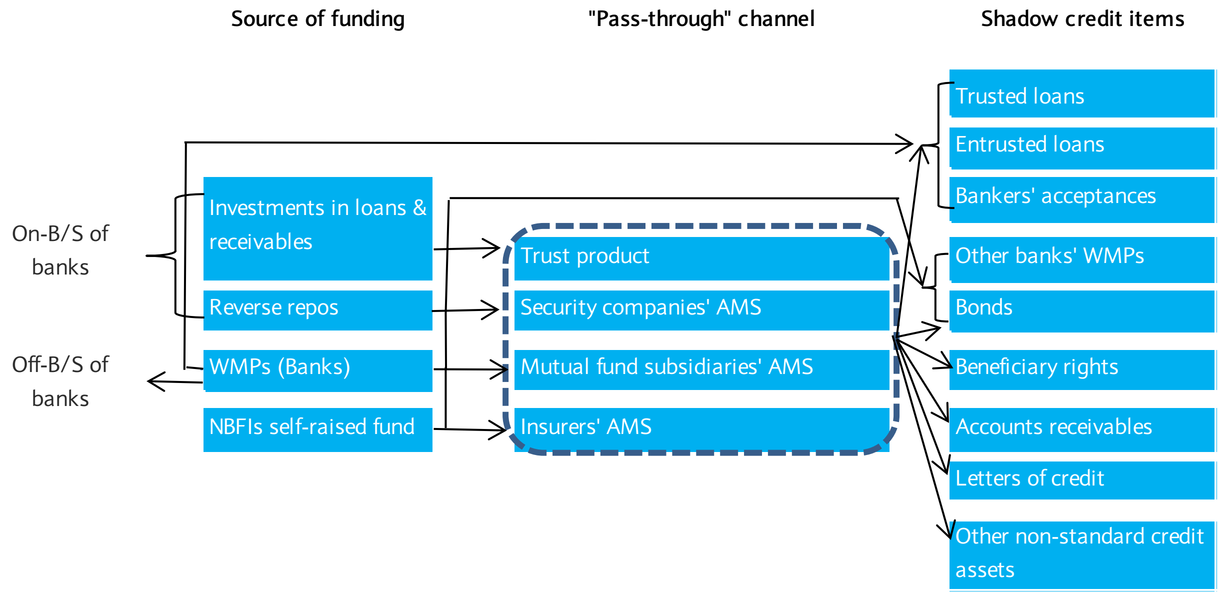
Source: China Trustee Association, AMAC, Barclays Research

[1] An increasing pace of central government bond issuance since Q2 2015, rising to 12.7%y/y YTD, from 10.6% y/y in H2 2015, and 9.3% in H2 2014. This contributed to a jump in central government actual fiscal deficit to 3.4% of GDP (by our estimates), from 1.8% in 2014, and exceeding the 2015 budget deficit of 2.3%.

[2] This would cover more than half of the CNY24trn LG debt accumulated as of end 2014, based on the National Audit Office's latest auditing results.

FIGURE 8

An overview of various non-traditional shadow credit creation channels



Note: AMS is short for Asset Management Schemes. Source: Moody's, Barclays Research

Shadow credit channeled between banks and NBFIs have gained popularity

In fact, since 2009, Chinese banks have been rapidly increasing unconventional credit creation to boost profit margins, circumvent capital restrictions, and/or to meet regulatory and loan requirements. Since 2013, some new forms of shadow credit channelled between banks and NBFIs have gained popularity. Such fast-rising activities between banks and NBFIs can been seen in the banks' claims on NBFIs. The latter has been growing at c.60% y/y on average in the past two years and c.70% in H1 2016 (Figure 6).

We tackle the topic by starting from the source of shadow credit financing…

We summarise the shadow credit flows in Figure 8, starting from the source of funding, with an emphasis on the new form of indirect "pass-through" channels between banks and NBFIs, and then to the various form of credit assets. This construct is designed to capture the three major sources of financing for shadow credit. 1) Banks' on-balance-sheet accounts: investments in loans and receivables (2015: CNY10.5trn by listed banks as estimated by the Moody's), and reverse repos [3](2015: CNY5trn, according to the PBoC). 2) banks' off-balance-sheet accounts: issuance of non-principal protected WMPs (2015: CNY17trn, based on the CBRC data). 3) NBFI's self-raised funds (2015: ~CNY21trn by our own estimates, Figure 7).

…then moving to the various forms of credit creation channels…

Taking into account both on- and off-balance sheet funding, banks could then either: 1) directly provide loans/credit to potential borrowers in the form of traditional shadow credit (trusted loans, entrusted loans, and bankers' acceptance), bonds and other banks' WMPs; or 2) indirectly provide loans/credit to potential borrowers via NBFIs' "pass-through" channels, where banks provide liquidity and NBFIs channel funds (often) to designated borrowers. In the latter case, the ultimate credit assets include traditional shadow credit as well as other non-standard credit assets, eg, beneficiary rights, accounts receivables, etc. We elaborate on some typical forms of bank-originated shadow credit creation in Box 1.

…and finally the credit destinations

Despite the different channels and forms, the direct and indirect shadow credit created by banks and NBFIs eventually flows to similar borrowers and projects, including LGFVs, PPP programs, real estate developers, and to companies, including SOEs in the excess capacity industries. Therefore, these flows should also be included any measure of total credit creation.

[3] Reverse repos refer to banks' financial assets held under repo agreements.

As noted earlier, when the PBoC introduced its TSF data series, it included certain components of so-called shadow banking, namely trusted loans, entrusted loans, and bankers' acceptance. However, we believe that the components of shadow banking captured in the TSF currently are inadequate as more and more shadow banking takes place via new channels and in non-traditional forms, eg, non-standard credit assets, including various types of beneficiary rights, letters of credit, accounts receivables etc.

Five methods to calculate total credit

Based on the above, we have present five methods for calculating total credit[4]. Methods 1 and 2 take a top-down approach, adding two different proxies of shadow credit and government bonds to the non-equity components of the TSF. Methods 3 and 4 employ a bottom-up approach, by either adding the various sources of credit creation or adding the final credit assets. Method 5 uses banks claims on government, households, NBFIs and non-financial corporate to cover all on-balance-sheet credit, and use traditional shadow credit in the TSF to proxy off-balance-sheet credit.

Figure 9 details the various methodologies, including respective categories, size, and data frequency for the five methods. These exercises, though cumbersome, allow us to better understand and estimate the missing shadow credit channels to gain a complete picture.

FIGURE 9

Alternative credit aggregates – broad credit estimations by different methods

Categories	2015 CNY trn	TSF	Method (1)	Method (2)	Method (3)	Method (4)	Method (5)	Frequency
Bank loans	96	Y	✓	✓	✓	✓		M
Trust loans	5	Y	✓	✓	✓	✓	✓	M
Entrusted loans	11	Y	✓	✓	✓	✓	✓	M
Undiscounted bankers' acceptance	6	Y	✓	✓	✓	✓	✓	M
Corporate bonds	15	Y	✓	✓		✓		M
Government bonds	16	N	✓	✓		✓		M
Banks' claims on NBFIs' * credit share^^^	14	N	✓					M
WMP	24	N		✓				A
Policy banks bonds	11	N				✓		M
Government supported bonds	1	N				✓		M
ABS	1	N				✓		M
Interbank deposits	5	N				✓		M
Bonds held by banks	23	Y			✓			M
Credit funded by banks' 'pass-through' channels^^	10	Y			✓			Q
Credit funded by NBFIs' self-raised capital^^	21	Y			✓			Q
Banks' total claims^	134	Partially					✓	M
Equity	5	Y						M
Broad credit (2015 CNY trn)			**162**	**172**	**172**	**166**	**156**	

Note: ^^^ Credit share is estimated based on security houses SPV investment portfolio, with ratio standing at c.78% in 2015.
^^Credit funded by banks 'pass-through' channels and NBFIs' self-raised capital exclude trust loans/entrust loans/undiscounted bankers' acceptance. These forms of credit include non-standard credit asset, and government/corporate bonds, etc..
^ Banks' total claims include four categories, that is, banks' claim on government, on households, on NBFIs, and on NFCs (non-financial corporates),
M = monthly, Q = quarterly, A = annually.
Source: AMAC, China bond, Wind, Barclays Research

[4] Note that our broad credit estimates don't include shadow credit forms such as informal lending, microcredit, pawn shop loans, and P2P lending, which are growing rapidly but are currently relatively small in absolute size. According to Moody's Quarterly China Shadow Banking Monitor, this part was around CNY10trn.

Pros and cons of the five methods

- Method 1 uses commercial banks' claims on NBFIs discounted by a certain credit share as a proxy for shadow credit. The credit share is estimated based on security houses' SPV investment portfolios, with ratio standing at c.78% in 2015. This method is relatively straightforward, and easy to replicate as the data are available on a monthly basis. Two notable shortcomings of this method are: (1) claims on NBFIs include part of trust loans and entrusted loans, which are already counted in TSF; (2) credit creation via NBFIs' self-funded capital is not fully captured.

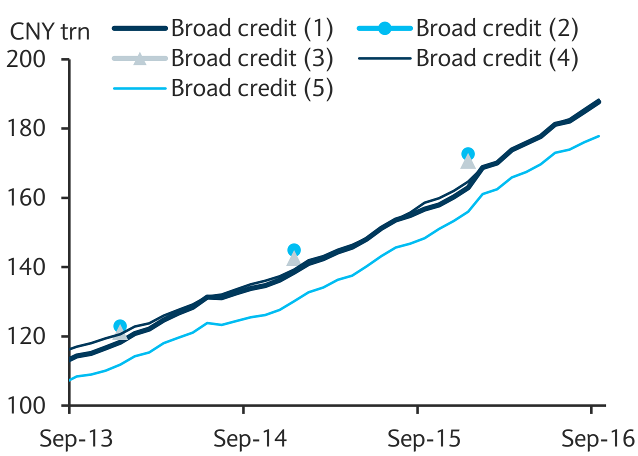
- Method 2 uses the total size of WMPs to capture the shadow credit that is not covered by TSF. However, looking into the details of the WMPs, we think this method suffers from significant double-counting issues. Specifically, the WMPs also partially cover trust loans and entrusted loans. In addition, WMPs do not capture the shadow credit provided via NBFIs' self-funded capital. The data are only available on a yearly basis before 2015.

- Method 3 is based on which entity creates the credit. In addition to traditional credit creation by commercial banks (loans and bond purchases), this method provides an exhaustive picture of total credit via two mutually exclusive shadow credit channels: 1) credit creation via commercial banks' use of trusts and asset management schemes as 'pass-through' channels; and 2) credit creation via NBFIs' self-funded capital. The shortcoming is that the data are only available on a quarterly basis.

- Method 4 is based on final credit assets, covering the non-equity part of TSF, a wide array of bonds (issued by government, corporate, policy banks, and other government-supported entities), ABS, and interbank deposits. The data are available monthly. The key shortcoming of this method is that it still misses certain non-standard credit assets (such as various types of beneficiary rights, letters of credit, and accounts receivables), which are sizeable and could exceed CNY20trn, according to our ballpark estimation.

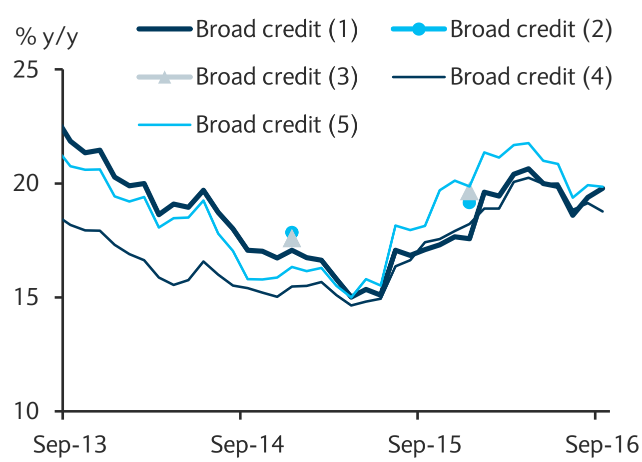
- Method 5 is to add total bank claims to three traditional on-balance sheet lending items in the TSF. Banks' claims on corporates and households are captured by the TSF, while claims on NBFIs are only partially captured by TSF, and claims on government are excluded from TSF. The method assumes adding the total claims paint a complete picture of the economy-wide financing. In our view, limitations of this method include: 1) missing non-bank holdings of corporate bonds, and 2) including some assets created by NBFIs which flow into stock markets.

FIGURE 10
Broad credit level



Source: AMAC, Chinabond, Wind, Barclays Research

FIGURE 11
Broad credit growth



Source: AMAC, Chinabond, Wind, Barclays Research

All five methods paint a similar picture

From a stock perspective, broad credit is 20-30% higher than what is counted in the official TSF data. Relative to GDP, our five measures put China's credit-to-GDP ratio currently in a range from 260% to 275% of GDP as of September 2016 (Figure 10).

From a growth rate perspective, the speed of credit expansion is alarming. Our methods put the current pace of credit growth in China in a range between 19% and 20%, well above the reported official TSF growth of 12.4% and new loan growth of 13.0% in September (Figure 11).

We introduce Barclays Alternative Credit Aggregate

Our preferred measure is method 1, which we believe strikes a balance between comprehensiveness, with a manageable overlap, and being straightforward to calculate on a regular basis. We intend to report this data series on a monthly basis, calling it the **Barclays Alternative Credit Aggregate,** while continuing to calculate the other methods for reference.

Moreover, using a bottom-up approach, we made ballpark estimations of the size of "shadow credit" based on the above discussions, which reached around CNY63trn as of September 2016. This is calculated by adding the ultimate forms of credit, ie, trust loans (September: CNY5.9trn), entrusted loans (CNY12.5trn), bankers' acceptances (CNY3.8trn), corporate bonds (CNY17.3trn), and other non-standard credit assets[5] (CNY23.5trn).

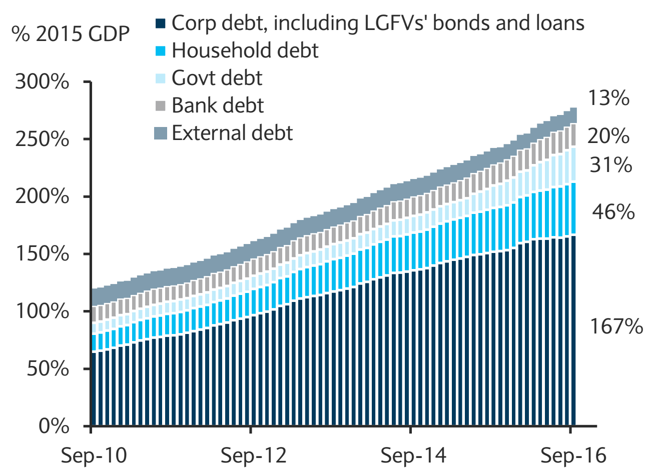
Crisis may not be imminent, but monitor the risks

China's debt crisis does not appear to be imminent. China's debt is largely domestically owned. Hence, unless there is bank run or capital flight by local residents, the typical EM-style financial crisis, like the Asia Financial Crisis, is less likely. The heavy state involvement, with the majority of loans coming from state-controlled banks to state-owned enterprises, the strengthening state control and sizable state assets suggest that the Chinese government still has the capacity to manage the pace of NPL recognition and debt restructuring in the banking system.

On the other hand, the current pace of credit expansion, more than twice the rate of nominal GDP growth, is clearly unsustainable (Figure 13). The interconnectedness between the corporate sector and the banks points to systemic risks in the economy, especially as

FIGURE 12

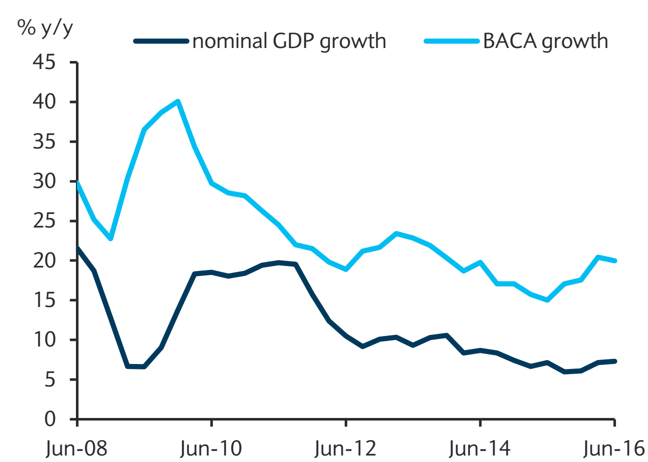
Total credit to GDP by sectors



Source: Bloomberg, CEIC, Barclays Research

FIGURE 13

Nominal GDP and credit growth



Source: CEIC, Barclays Research

5 A term defined by the CBRC as a debt instrument that is not traded in the interbank bond market, or stock exchange. Therefore, it includes instruments such as trust loans, various types of beneficiary rights, bills of exchange, letters of credit, and accounts receivables.

the economy is forecast to slow further. Such perceived "implicit guarantees" by the state have resulted in excessive risk-taking across asset classes (equity, bond and property), across economic agents (corporate, local governments and households), and across financial intermediaries[6]. With rising central government's contingent liability, the sovereign risks are increasing. Moody's downgraded its outlook on Chinese government debt to negative from stable in March 2016, questioning China's surging debt burden and the government's ability to enact reforms.

[6] From banks to non-bank financial institutions including securities firms, trust companies and asset management companies, from large banks to smaller provincial and city commercial banks.

APPENDIX

FIGURE 14

The PBoC's Total Social Financing and breakdown

RMB bn	Sep-16	Aug-16	Jul-16	Jun-16	May-16	Apr-16	Mar-16	Feb-16	Jan-16	Dec-15	Nov-15	Oct-15	Sep-15
New CNY Loans to the Real Economy	1263	797	455	1314	937	564	1318	811	2537	832	887	557	1042
Foreign Currency Loans	-49	7	-40	-27	-52	-71	1	-57	-173	-131	-114	-132	-234
Traditional Off-Balance Sheet Lending	28	179	-314	-19	-338	-81	257	-175	405	544	-194	-251	98
Entrusted Loans	145	143	177	172	157	169	166	165	217	353	91	139	242
Trust Loans	106	74	21	81	12	27	73	31	55	37	-30	-20	-16
Bank Acceptance Bills	-223	-38	-512	-272	-507	-278	17	-371	133	154	-254	-370	-128
Corporate Bonds	294	331	219	236	-18	243	719	132	458	356	335	304	352
Equity Financing	137	108	114	116	107	95	56	81	147	153	57	12	35
Others	48	49	54	63	48	37	54	33	51	60	51	39	36
Total Social Financing	1720	1470	488	1684	684	787	2404	824	3425	1815	1022	530	1329
% Share													
New CNY Loans to the Real Economy	73.4	54.2	93.3	78.1	137.1	71.7	54.8	98.3	74.1	45.9	86.8	105.1	78.4
Foreign Currency Loans	-2.8	0.5	-8.2	-1.6	-7.7	-9.0	0.0	-6.9	-5.0	-7.2	-11.2	-24.8	-17.6
Traditional Off-Balance Sheet Lending	1.6	12.2	-64.3	-1.1	-49.4	-10.3	10.7	-21.2	11.8	30.0	-18.9	-47.3	7.4
Entrusted Loans	8.4	9.7	36.4	10.2	22.9	21.5	6.9	20.0	6.3	19.4	8.9	26.2	18.2
Trust Loans	6.1	5.0	4.3	4.8	1.8	3.4	3.0	3.7	1.6	2.0	-2.9	-3.8	-1.2
Bank Acceptance Bills	-13.0	-2.6	-105.0	-16.2	-74.1	-35.3	0.7	-44.9	3.9	8.5	-24.9	-69.7	-9.6
Corporate Bonds	17.1	22.5	44.9	14.0	-2.7	30.8	29.9	16.0	13.4	19.6	32.7	57.3	26.5
Equity Financing	8.0	7.3	23.3	6.9	15.7	12.1	2.3	9.8	4.3	8.4	5.6	2.3	2.6
Others	2.8	3.3	11.1	3.7	7.0	4.7	2.3	3.9	1.5	3.3	5.0	7.4	2.7
Total Social Financing	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: Haver, and Barclays Research

Box 1: Banks' on- and off- balance sheet shadow credit activities

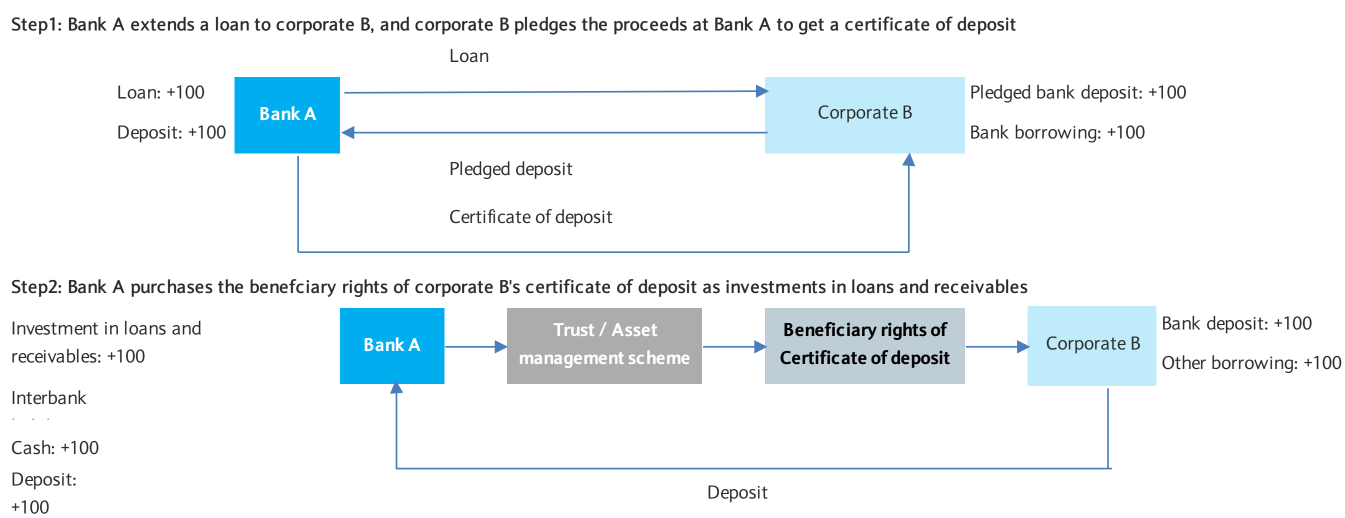
The funding for shadow banking activities mainly originates from: 1) banks' on-balance-sheet accounts, eg, investments in loans and receivables, and reverse repos; 2) banks' off-balance-sheet accounts, ie, issuance of WMPs; and 3) NBFIs' self raised funds.

We detail below two main sources of bank-originated shadow credit creation. First, banks' investments in loans and receivables comprise of trusts, asset management schemes (AMS) provided by NBFIs, other banks' WMPs, and bonds. Part of trust and AMS is the shadow credit intermediated between banks, and NBFIs via "pass-through" channels. Trusts and AMS can invest in many kinds of assets, such as bonds, traditional shadow credit, and other credit asset which ultimately flow into different projects/entities, including local government projects. Banks' investments in loans and receivables have gained increasing popularity in the past year, as banks have shifted their business models from traditional loans to the investment business. These investment products are particularly attractive to small- to medium-sized banks, as they offer high yields but low provision costs and low capital consumption. According to Moody's estimation, of the 26 listed banks, such investments jumped to CNY10.5trn at end-2015 from CNY2.5trn at end-2012, or 8.4% of their total assets. About 68% of these investments were in trusts and NBFIs' AMS, 13% in WMPs and 19% in bonds issued by governments, financial institutions and corporates. Figure 15 and Figure 16 plot some examples of typical transactions involved in banks' investments in loans and receivables

Second, WMPs have been widely used by banks to avoid capital restrictions since 2009 because a majority of underlying assets of WMPs and proceeds from sales of WMPs are considered off-balance sheet assets and liabilities (CNY20trn out of CNY26trn of WMPs are off-balance sheet as of June 2016), while they can generate significant spread income and fees. Similarly, banks' WMPs can invest in AMS and trust products via the "pass-through" channel, with funds ultimately flowing into a variety of assets, including bonds, traditional shadow credit , and other credit asset. Perceived as a close substitute for bank deposits, WMPs offer attractive returns. Despite a declining trend, the average rate of return on a 1y maturity WMP was c.3.9% in July, well above the 1.5% 1y benchmark deposit rate (Figure 17). Some smaller commercial banks are still offering ~4% returns for WMPs to attract funds. While 75% of banks' WMPs in 2015 were non-principal protected according to their contracts, most investors tend to believe the advertised positive returns are guaranteed by the issuing bank. A majority of WMP funding has gone into financially stressed areas, such as real estate and infrastructure projects (Figure 18).

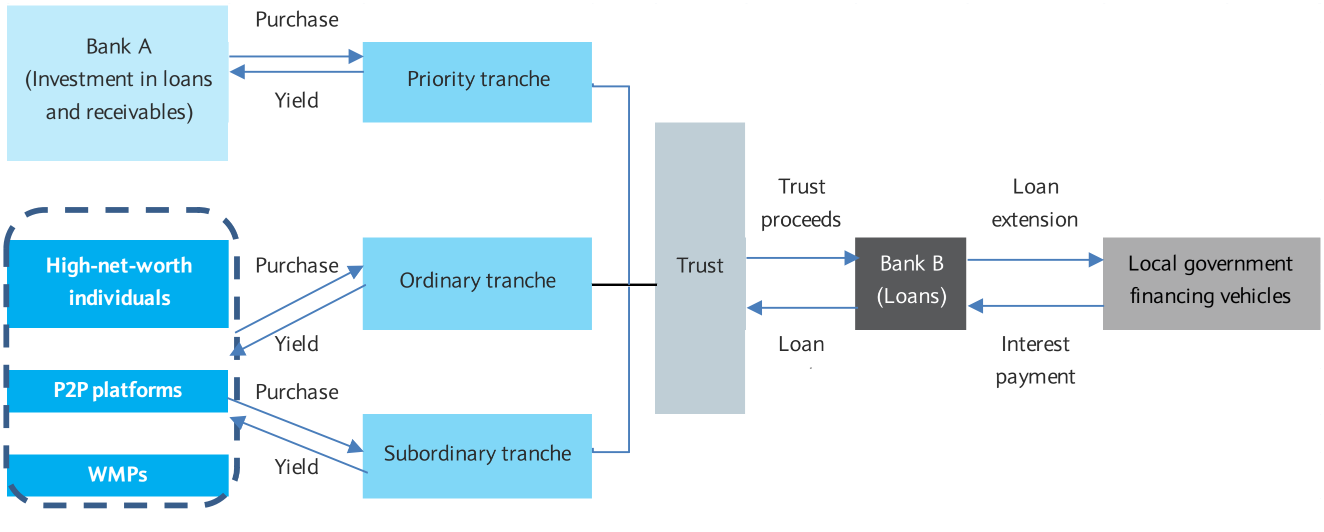
FIGURE 15

Investments in loans and receivables: Typical forms (I)



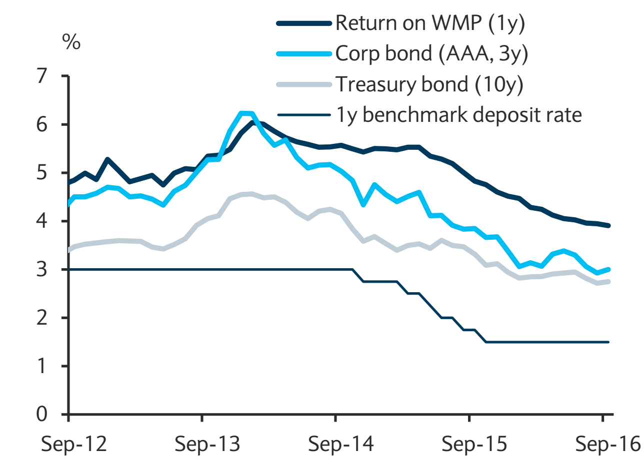
Source: Moody's –Investments in Loans and Receivables Increase System Risks, 22 June 2016

FIGURE 16
Investments in loans and receivables: Typical forms (II)



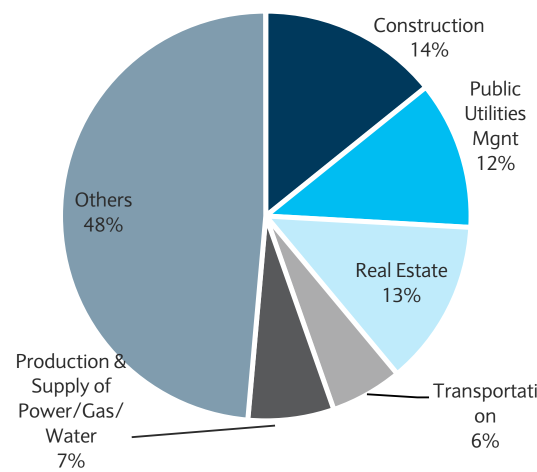
Source: Moody's –Investments in Loans and Receivables Increase System Risks, 22 June 2016

FIGURE 17
WMP yield vs benchmark interests rate and bond yields



Source: Wind, Barclays Research

FIGURE 18
WMPs' flows to the real economy



Note: data are as of December 2015. Other sectors include agriculture, mining, chemical, crude oil & gas, ferrous metals and wholesale, etc
Source: China Banking Association, Barclays Research

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