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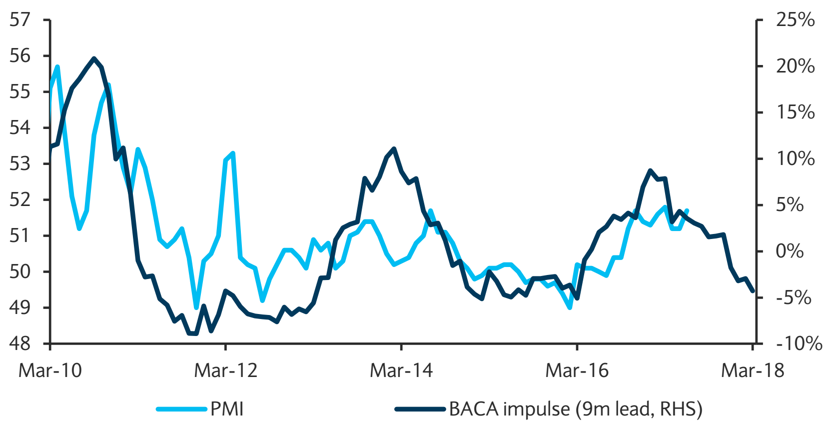
China

Another turn in the credit cycle

This report replaces the version published 12 Jul 17 at 21:00 GMT to update for June data in several places and some edits to text. There are no changes to our conclusions.

- The turn in China's credit cycle has revived concerns about broader China risks. We look at credit trends and drivers, explore relationships between credit measures and economic indicators, and examine the implications for China's economy.
- We show that China's credit cycles tend to be closely linked to monetary policy and the housing cycle. The current credit downturn appears to be relatively mild, reflecting less aggressive monetary tightening (ie, relative to 2010-12), and less synchronised credit-house price cycle (ie, relative to 2013-15), in our view.
- We estimate that shadow credit added +0.6pp to the change in credit growth in the current downcycle, in contrast to the general perception. The biggest drag on credit was corporate bond financing, while growth in mortgages and trust loans was strong.
- The credit impulse, a popular indicator used by investors to gauge credit's impact on economic activity, has fallen sharply in recent months (Figure 1). We find the credit impulse is more useful in forecasting "old economy"-focused indicators. Our analysis suggests it leads electricity output, PMI, and property investment by roughly 6m/9m/12m, respectively, which is longer than in the past two cycles.
- Given that our BACA^{R} credit impulse fell below zero in March 2017, the PMI and electricity output could move into contractionary territory in Q4 17-Q1 18. Downside surprises in the PMI and other activity indicators could trigger renewed China-related growth fears, which have weighed heavily on risk assets in the past.

FIGURE 1
Credit impulse and NBS manufacturing PMI



Source: Bloomberg, CEIC, Wind, Barclays Research

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How rapidly is credit slowing?

Current credit downturn appears to be relatively mild

Some four to five quarters away from the end of the current credit cycle

China has experienced three credit cycles over the past decade: Q4 08-Q2 12; Q2 12-Q2 15; and the current cycle, which began in Q3 15 (Figure 2). The past two cycles have lasted 13-14 quarters. During the upcycle, credit growth accelerates over 4-5 quarters, while the typical downcycle has lasted longer, at 9-10 quarters. If the past decade serves as a guide, given that we are five quarters into the current downcycle, credit growth could continue to trend lower before bottoming in Q2-Q3 2018.

The pace and magnitude of the current credit deceleration has been moderate

The current cycle appears to be slightly milder than the 2012-15 cycle, and both are less dramatic than the 2008-12 one, which followed the global financial crisis. Credit growth declined to the trough of c.14% in 2015 from a peak of 24% in 2013, while it tumbled by more than half, to c.18%y/y in 2012, from 40% in 2009. So far, the pace and magnitude of the credit slowdown has been moderate. Our adjusted Barclays Alternative Credit Aggregate ($\mathrm{BACA}^{\mathrm{R}}$) decelerated to c.14%y/y this June from a peak of c.18% in April 2016.

The official TSF underestimates the size of China's broad credit

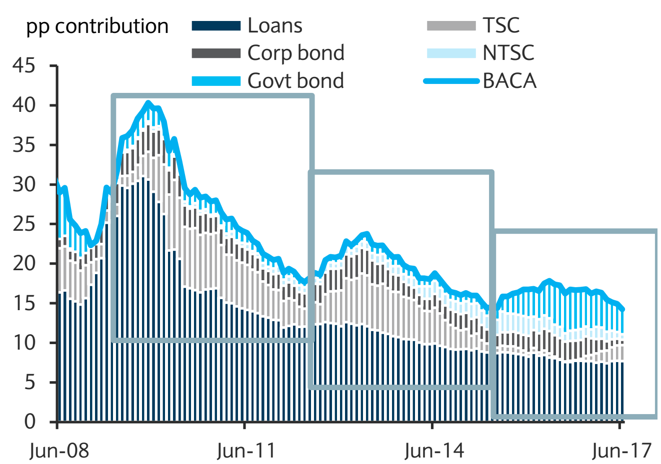
The slowdown in total social financing (TSF), the official measure of the financial sector's provision of credit to the real economy, has been even more moderate, falling 110bp from the recent peak of 13.6% in 2016 to a trough of 12.5% in March 2017. We believe TSF underestimates the expansion of credit in China's economy during the current cycle, as it failed to capture the reacceleration in credit growth during 2015-16.

$BACA^{R}$ includes two more credit components than the TSF and better measures shadow credit flowing into the real economy than BACA

In contrast, the Barclays Alternative Credit Aggregate (BACA) includes two components of credit that have seen large swings in this credit cycle but are not captured by TSF (see *China: Alternative credit aggregates*, 18 October 2016). The first is government bond financing, which captures the sizable local-government bond-swap program launched by the Ministry of Finance in Q2 15. The second is what we call "non-traditional" shadow credit (NTSC)[1], which captures shadow credit flows channelled between banks and non-bank financial institutions (NBFIs). In this report, we introduce $\mathrm{BACA}^{\mathrm{R}}$, to better measure shadow credit flowing into the real economy, which grew at a slower rate of 2pp than BACA in the past year. Details of the credit categories under TSF and BACA, the estimation of BACA and $\mathrm{BACA}^{\mathrm{R}}$, and shadow credit channels are discussed in Appendix I.

FIGURE 2

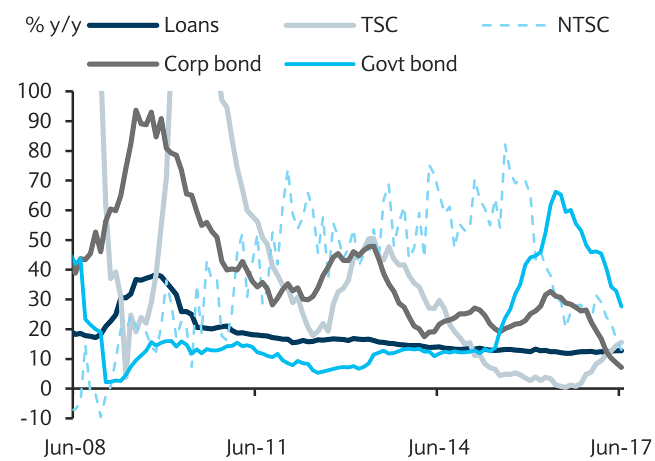
Credit cycles and $\mathbf{BACA}^{\mathbf{R}}$ breakdown



Source: CEIC, Wind, Barclays Research

FIGURE 3

$\mathbf{BACA}^{\mathbf{R}}$ subcomponent growth rates



Source: CEIC, Wind, Barclays Research

[1] The NTSC complements TSC, "traditional" shadow credit, which is included in the PBOC's TSF statistics, and comprises undiscounted bankers' acceptance bills, trust loans and entrusted loans.

Considerable variation across the different credit components

We estimate that shadow credit added +0.6pp to the change in credit growth in the current downcycle

Developments across credit components have been uneven in this cycle (Figure 2-Figure 4). Even though non-traditional shadow credit (NTSC) was hit hard by the government's financial deleveraging push, the biggest drag on credit growth came from corporate bonds, which contributed -2.1pp to the 3.6pp decline in $BACA^R$ growth in the current downcycle over April 2016 to June 2017. Government bonds and corporate loans both dragged 1.6pp. NTSC subtracted just 0.9pp, given its relatively small size. On the other hand, "traditional" shadow credit (TSC) contributed +1.5pp, while household loans added +1.1pp. Our estimates suggest that shadow credit in total (TSC+NTSC) added +0.6pp to the change in credit growth in this downcycle, which we think is in contrast to the general perception.

Four components drove the slowdown …

Specifically, growth in NTSC, which we estimate at c.CNY10trn in June 2017, has tumbled to 13% y/y in June from its peak of 82% in July 2015. Growth in corporate bond financing (CNY18trn) slowed to 7% y/y from 33% in April 2016, and growth in government bond financing (CNY25trn) decelerated to 28% y/y from 66% in May 2016. Growth in corporate loans (CNY79trn) eased to 8% y/y, from 12% in January 2016.

… partly offset by a rebound in trust loans and strong growth in mortgage loans

TSC, which based on our estimate of CNY26trn is more than twice as large as NTSC, has rebounded steadily, rising by 16% y/y in June from a bottom of 1% in 2016, after a three-year decline (Figure 3). Household loans (CNY37trn), the bulk being mortgages, have risen strongly and accounted for nearly half of the new loans in 2016. HH loans still increased by +100% this February before slowing after more cooling measures in March (Figure 5).

What's driving the downcycle

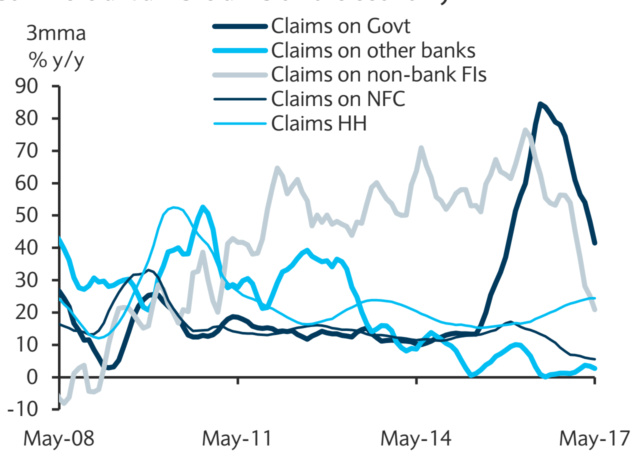
Credit, monetary policy and the housing cycle

The credit cycle originates from monetary policy

China's credit cycles have been closely linked to monetary policy cycle and the housing cycle (Figure 6 and Figure 7)[2]. Credit decelerations tend to be triggered or reinforced by a shift in monetary policy towards tightening, via reduced credit availability, withdrawal of liquidity and higher interest rates, and/or the tightening mortgage lending requirements. For example, the 2010-12 downcycle saw 11 hikes in the RRR and 5 hikes in the benchmark interest rates, and the 2013-15 downturn started after the PBoC engineered a severe interbank liquidity squeeze in June 2013 (Figure 6).

FIGURE 4

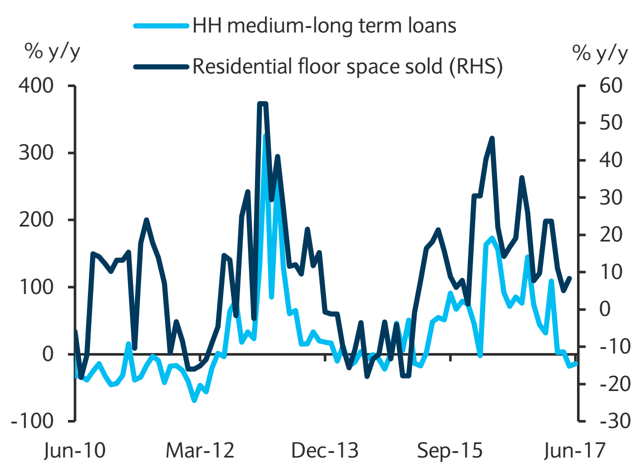
Commercial banks' claims on the economy



Source: Wind, Barclays Research

FIGURE 5

Household loans and housing sales

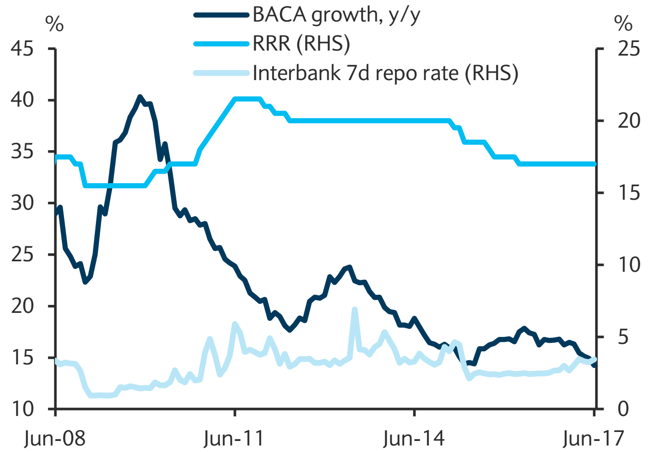


Source: CEIC, Wind, Barclays Research

[2] The BIS ("Characterising the financial cycle: don't lose sight of the medium term!, June 2012) defined financial cycle and elaborated the typical co-movement of medium-term cycles in credit and property prices.

FIGURE 6

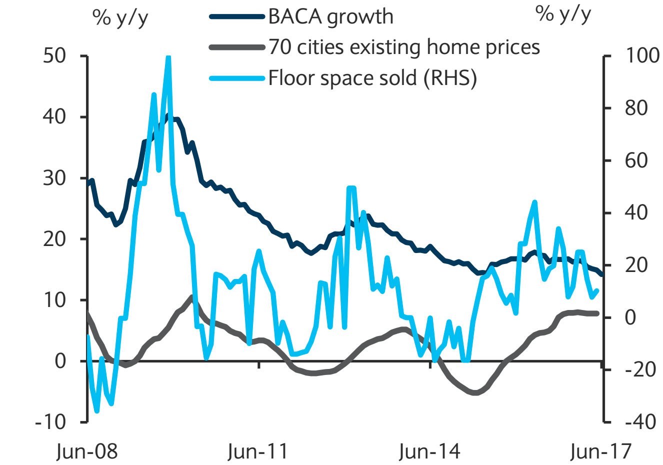
Credit cycle and the monetary policy cycle



Source: CEIC, Wind, Barclays Research

FIGURE 7

Credit cycle and the housing cycle



Source: CEIC, Wind, Barclays Research

Credit and house price cycles tend to be synchronised

The credit and housing cycles tend to be highly synchronised in China (Figure 7). The troughs of house price cycles tend to coincide with troughs in the credit cycle. Typically, a credit boom and strong home sales combine to boost house prices. This is often accompanied by a pick-up in construction and economic activity, as well as a rise in inflation. Policy tightening is then triggered to either contain the asset bubble or inflation, leading to a housing market downturn, which in turn slows the demand for credit and reinforces the credit downturn.

Behind the milder downcycle

The current cycle differs from the past two

The current relatively mild credit downcycle, in our view, reflects both less aggressive monetary tightening and a less synchronised credit-house price cycle compared with the past two cycles.

First, the overall monetary policy stance has remained neutral, though with a tightening bias, since mid-2016. Unlike in 2010-11, when CPI inflation rose to 6.5% y/y, inflation has remained subdued at below 2% this time. The PBoC has guided interbank rates higher while keeping benchmark lending and deposit rates unchanged, which have bigger and more immediate impacts on corporate and mortgage loan demand than interbank rates.

Second, the housing market has held up well despite the policy tightening. In particular, house prices show strong resilience compared with the past two cycles. Average house prices continued to rise strongly more than four quarters after the peak in credit growth, though the pace has stabilised. In 2013-15, the growth in house prices peaked about two quarters after credit growth peaked, and prices started to fall after about four quarters.

Policy tightening reduced credit supply

Financial deleveraging efforts since Q2 16 have led the credit deceleration in the past year

We think both intended and unintended consequences of the government's "financial deleveraging" efforts that were already underway in 2016, as well as the tapering of fiscal stimulus implemented since 2015 were the main drivers of the credit deceleration in the current cycle. The PBoC's monetary and regulatory tightening[3], which began in mid-2016, have raised bond yields and led to sell-offs in the bond market over the past year, impairing

[3] Monetary tightening: In August 16, the PBoC started to tighten interbank liquidity and guide interbank rates higher. It raised interest rates on liquidity-management tools including OMOs, the SLF and the MLF in Feb-March 17. Regulatory tightening: In November 16, the PBoC announced to include "off-B/S" WMPs in its macroprudential assessment framework, effective Q1 17, tightening its supervision of the interbank and shadow banking businesses.

fundraising via corporate bond issuance. Policy tightening also slowed the expansion of banks' balance sheets and restrained shadow credit creation. In addition, a tapering of fiscal stimulus slowed the pace of local government bond financing.[4]

The government has stepped up regulations since March

Since March 2017, the government has further tightened regulations covering the shadow banking sector, real estate, local-government financing and public/private partnership (PPPs). Specifically, the bank regulator announced eight guidelines focusing on shadow banking businesses: 1) banks' and NBFIs' "pass-through" channels; 2) interbank operations; and 3) banks' wealth-management products (WMPs). In addition, the Ministry of Finance (Circular 50) imposed more restrictions on local-government financing vehicles (LGFVs) and PPP financing, which could slow corporate and government bond financing. The stricter regulations on guaranteed loans (CBRC, circular 52), as well as PBoC and CBRC guidelines designed to rein in funding to the real estate sector, could also drag loan growth.

FIGURE 8

Potential impact of regulatory tightening on credit components

$BACA^R$ component	Relevant regulation
Corporate bonds	MoF circular 50, CBRC circular 6
Loans	CBRC circular 4, 52
Traditional shadow credit	CBRC circular 4, 5, 6, 7, 45, 46, 53
Non-traditional shadow credit	CBRC circular 4, 5, 6, 7, 45, 46, 53
Government bonds	MoF circular 50, CBRC circular 6

Note: See Appendix II for details of the tightening measures. Source: CBRC, PBoC, MoF, Barclays Research

Credit demand has been strong

Mortgage loans and shadow credit demand were strong

Credit demand, on the other hand, has held up, so far, as evidenced by rising effective lending rates amid reduced credit availability. In fact, demand from both households and corporate has been strong. China's booming housing market and strong home sales led to a strong increase in mortgage loans that only started to slow recently. Corporate loan growth has slowed modestly in the past year and posted upside surprises in April-June 2017. Trust loans have rebounded strongly. Our checks suggest that companies in the real estate and 'overcapacity' sectors have shifted to trust loans as their alternative source for financing given more restricted access to bank loans (due to PBoC "window guidance") and bond financing.

Outlook for credit growth – watch policy and the housing market

We think the outlook will be determined by policy tightening and housing market developments. We expect the ongoing regulatory tightening to further slow credit growth, although the pace and extent will depend on policy implementation and coordination (see Figure 8). We expect the housing market to slow but to remain resilient. Reflecting this, and in view of the government's 6.5% growth target and the need to ensure stability ahead of the 19th Party Congress this autumn, we expect $BACA^R$ growth to ease to c.12% by mid-2018 from c.14% in June 2017.

[4] The pace of net government bond issuance has slowed to 50% y/y (CNY7.1trn) in 2016 from 300% (CNY4.7trn) in 2015. The local-government debt swaps quota for 2017 was reduced to CNY3trn, compared with CNY3.2trn in 2015, and CNY4.9trn in 2016.

Credit dynamics and the economy

The empirical literature on the link between credit growth and GDP is mixed, while Biggs etc claim that the credit impulse is a more accurate variable to track

What is the impact of slowing credit growth on a country's economic outlook? The literature suggests that the relationship is not as straightforward as it might appear. While the theoretical foundation for a link between credit growth and economic activity is well established, the two-way causality between credit and GDP[5] has given rise to mixed results in empirical analysis (IMF, 2015). Meanwhile, Biggs etc (2010, 2013) argue that changes in a flow variable such as GDP should be compared with changes in the flow of credit (credit impulse), rather than changes in the stock of credit (credit growth)[6]. Empirically, they found a strong correlation between credit impulse and economic growth, particularly in recovery periods. In their original work, the relationship is coincident rather than leading.

Given this, we constructed a credit impulse measure for China[7], and examined the relationships between the credit impulses of various credit measures (ie, loans, TSF, BACA) and economic indicators, including investment and its components, PMI, and GDP growth. The $\mathrm{BACA^R}$ impulse rose strongly between July 2015 and April 2016 against the backdrop of stepped-up credit loosening, before falling sharply to below zero in March 2017, and stood at -4% in June. Indeed, the plunge in China's credit impulse has received wide attention in recent months, raising concerns about the impact of a withdrawal of China's credit stimulus on growth recovery, commodity demand, and the global reflation cycle.

Credit impulse a useful leading indicator for the "old economy"

Credit impulse moves in tandem with SOE investment, but has a weak correlation with private investment

The $\mathrm{BACA^R}$ credit impulse shows highly synchronised movement with SOE investment, particularly in the current cycle[8] (Figure 9), which accounted for c.36% of total fixed asset investment (FAI) in January-May 2017, mainly in heavy and resource-intensive industries. The correlation between credit impulse and private investment, which accounted for c.61% of total FAI and contributed 4-5pp to FAI growth of 9.2% in Q1, is weak (Figure 10). We think this reflects the fact that China's policy-driven credit stimulus tends to benefits SOEs more, and the government often deploys SOEs to stimulate the economy, eg PPP projects.

Credit impulse leads the "old economy"-focused indicators…

Overall, we find that the credit impulse provides useful information about the direction of the economy, particularly the credit-intensive "old economy". The $\mathrm{BACA^R}$ credit impulse appears to track some of the widely-watched indicators well, in particular the manufacturing PMI, the Li Keqiang index[9], electricity output, and rail freight turnover (Figure 1, Figures 11-14).

…with longer and varying lags

The lead-lag relationships tend to vary across indicators and across cycles, suggesting different drivers, causal relationships, and transmission mechanisms at play. Our results suggest that the $\mathrm{BACA^R}$ credit impulse leads the "old economy" focused indicators by 6-9 months in the current downcycle, in particular, electricity output by 6m and PMI by 9m, compared with roughly 3 months in 2013-15, and no lead in 2009-11 (Figures 1, 11 and 12).

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[5] While credit expansion allows for faster investment and consumption growth, economic growth also fosters credit growth.

[6] See Biggs, Mayer, and Pick, "Credit and Economic Recovery: Demystifying Phoenix Miracles", 2010; Biggs, Mayer, "Bring credit back into the monetary policy framework", 2013. They show that GDP growth is a function of the change in the stock of credit, or credit growth, and the change in the flow of credit, or credit impulse, although the coefficient of the latter is much larger than that of the former.

[7] The credit impulse is calculated as the difference between the change in credit stock between month t and month t-12 (scaled by nominal GDP over period t-12 to t), and the change in credit stock between month t-12 and month t-24 (scaled by nominal GDP over period t-24 to t-12), i.e.

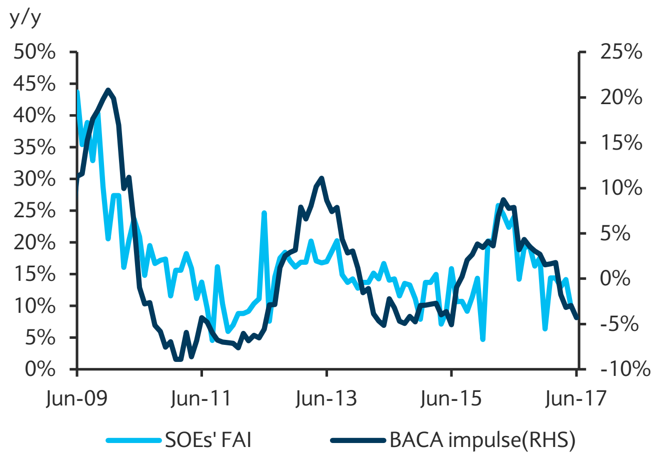
$$\text{credit impulse} = \frac{\text{Credit stock}_t - \text{Credit stock}_{t-12}}{\text{GDP}_{t-12,t}} - \frac{\text{Credit stock}_{t-12} - \text{Credit stock}_{t-24}}{\text{GDP}_{t-24,t-12}}$$

[8] SOEs' FAI refers to investment made by: 1) state-owned corporate; and 2) administrative and public institutions. We note that the government has since late 2016 taken steps to contain SOE debt and discourage SOE investment, especially in overcapacity industries, on concerns of rising corporate leverage.

[9] In our view, the Li Keqiang index – a weighted average of bank loans (40%), electricity usage (40%), and rail freight turnover (20%) – is good at tracking China's "old economy" and commodity demand, which staged a strong rebound in 2016. We note that the bottoming of the Li Keqiang index in Q4 2 also coincided with troughs for China's PPI inflation and industrial profits.

FIGURE 9

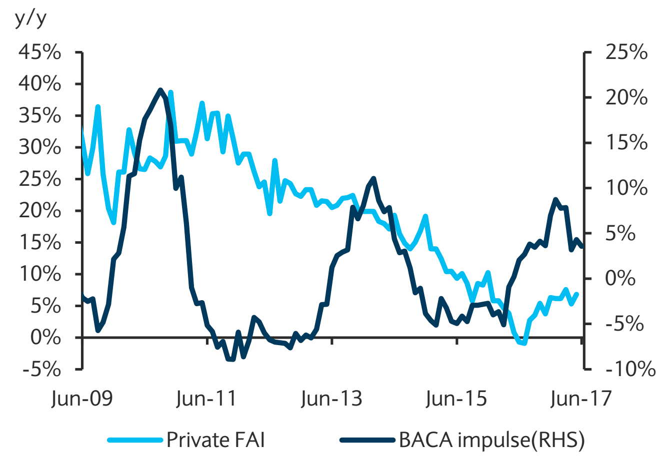
Credit impulse and SOEs' FAI



Note: SOEs' FAI refers to investment made by 1) state-owned corporates, and 2) administrative and public institutions. Source: CEIC, Wind, Barclays Research

FIGURE 10

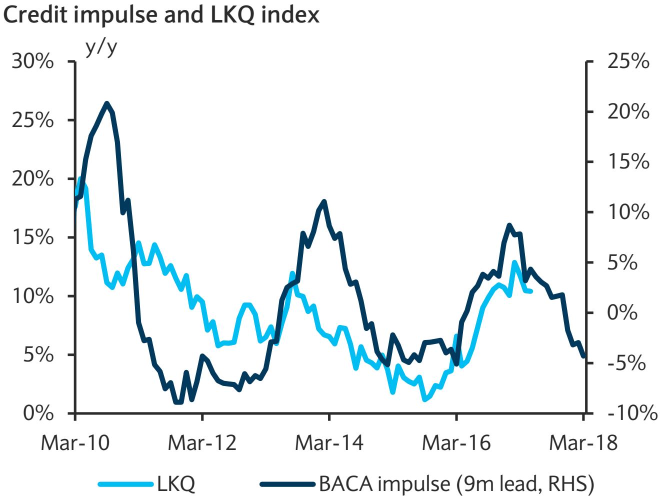
Credit impulse and private FAI



Note: Private FAI refers to non-SOEs' and non-foreign corporates' investment. Source: CEIC, Wind, Barclays Research

FIGURE 11

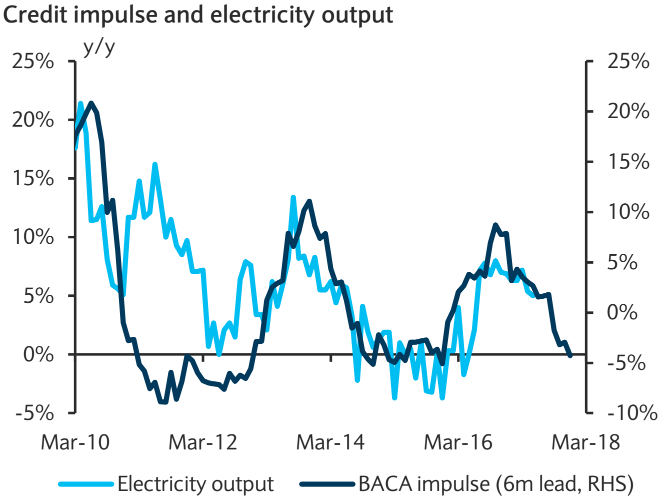
Credit impulse and LKQ index



Source: CEIC, Wind, Barclays Research

FIGURE 12

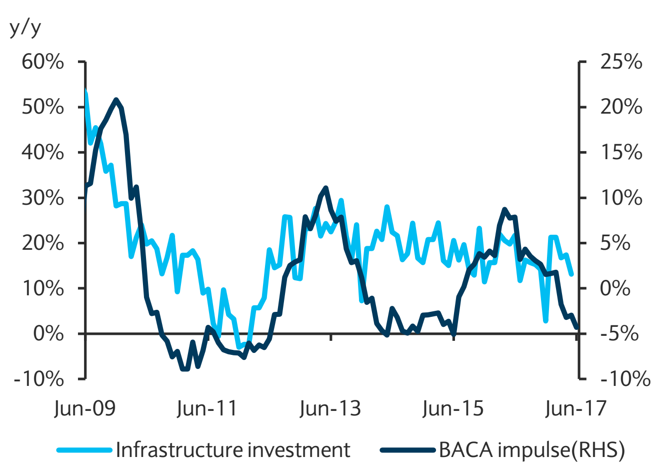
Credit impulse and electricity output



Source: CEIC, Wind, Barclays Research

FIGURE 13

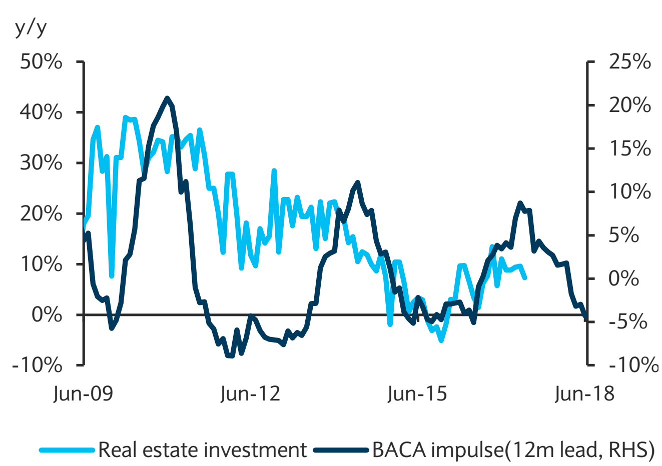
Credit impulse and infrastructure investment



Source: CEIC, Wind, Barclays Research

FIGURE 14

Credit impulse and real estate investment



Source: CEIC, Wind, Barclays Research

Its correlation with the real estate sector has weakened…

A plot of the credit impulse and real estate investment suggests a weakened correlation in the current cycle, compared with the 2013-15 downcycle, when the housing market experienced a significant downturn. This is consistent with earlier observation of less synchronised credit-house price movements. Alternatively, the current downcycle is ongoing and the housing market is showing signs of slowdown, it could be that the impact has occurred after a longer lag. We identify a 9-12m lead between the credit impulse and housing investment for the current cycle, compared with the 3-6m in the past (Figure 14).

…and so has the correlation with real GDP growth

The correlation of the BACA^{R} credit impulse with GDP growth is also weaker than in the past two cycles (Figure 15). We think this in part reflects a change in China's growth composition towards less credit-intensive services and consumption.

Behind the weaker correlations

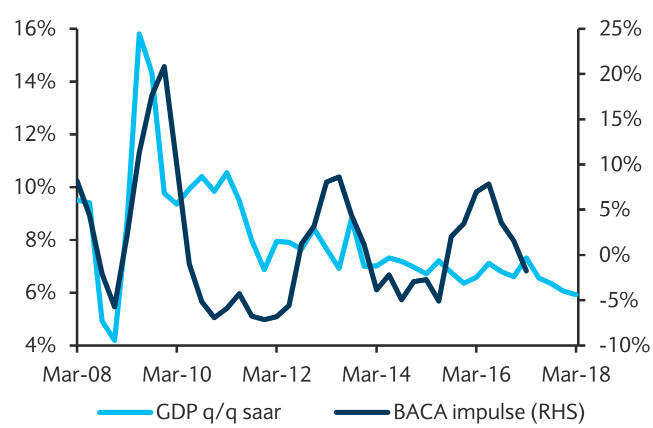
Private consumption has remained strong

China's growth now relies less on "old economy" activities. The contribution of consumption to GDP growth exceeds that of investment (65% vs 42% in 2016, and 77% vs 18% in Q1 17). We think consumption will continue to be a more stable driver to support economic growth, as it is less affected by the credit cycle. We expect consumption growth to remain solid in 2017-2018, albeit moderating from 2016 levels, as a result of: 1) rapid growth in online retail sales; 2) the wealth effect on home prices; and 3) strong property-related sales due to a lagged impact from buoyant home sales.

More diversified growth drivers

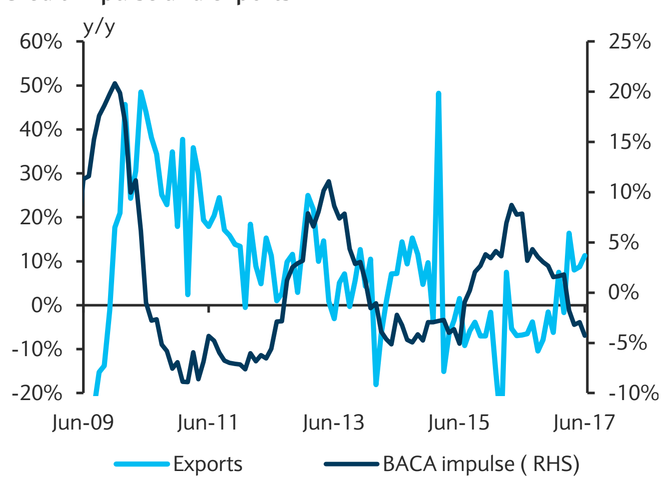
The current credit-economic downcycle also differs from the past two in that it has more diversified and less synchronised growth drivers, including rebounding external demand, recovering private investment and a more resilient housing market. First, Chinese exports, after contracting for most of 2014-15, have rebounded strongly in recent months. We expect net exports to make a positive addition to GDP growth in 2017, after subtracting 0.5pp from growth in 2016. Second, private investment, which is less credit-intensive, has been on a recovering trend after a five-year downturn. The private sector, where it is more difficult to get access to credit, tends to rely more on self-financing. Strong profit growth and a falling debt service burden have improved cash flows and supported investment and activity. Third, resilient housing market contributes to a gradual slowdown.

FIGURE 15
Credit impulse and GDP growth



Source: CEIC, Wind, Barclays Research

FIGURE 16
Credit impulse and exports



Source: Bloomberg, CEIC, Wind, Barclays Research

Implications and growth outlook

PMI could fall to below 50 in Q4 17

The BACA[R] credit impulse fell into negative territory in March 2017. The previous negative print was in Q2 15, and the NBS manufacturing PMI was below 50 2-3 quarters later (Q4 15 – Q1 16). If this relationship still holds, our analysis suggests that the NBS PMI could decline to below 50 in Q4 17 after being in expansionary territory for more than a year. In the past two credit cycles, when PMI fell below 50 in Q2 15-Q1 16 (PMI average: 49.7) and Q3 08-Q4 18 (average: 45.4), this corresponded with GDP growth of 6.4-6.8% q/q saar, and 4.2-4.9% q/q saar, respectively.

"Old economy"-focused indicators likely to slow further

For those looking more at China's "old economy" and commodity demand, we think the fading credit impulse suggests a further slowdown in the Li Keqiang index, electricity output and freight turnover in the coming months. In particular, based on the historical relationship between the credit impulse and electricity output/Li Keqiang index, we estimate that electricity output growth could decelerate to around 0% (May: 5% y/y) by Q1 18 while the Li Keqiang index could fall to levels last seen in Q4 2015.

Fears over China risks could be reignited

The slowdown in the credit impulse could potentially be a concern from a market perspective. Investors have focused on developed market political developments for the bulk of the past year; however, there are early signs of a renewed focus on China risks. This is partly captured in our *Global Macro Survey*, 19 June 2017, which showed an increase in China/EM growth fears for the first time since mid-2015. Figure 17 shows that this applies to both equity and broader risk asset investors. The proportion of investors stating that weaker China growth would be the biggest risk to markets over the next year peaked at almost 60% in September 2015, following the surprise devaluation of the Renminbi in August that year. However, aside from responding to policy shifts, sentiment towards China has historically correlated with downside surprises in China data (see Figure 18).

Given the downside risks to activity indicators implied by the current credit cycle, we think this could in turn weigh on risk assets. Figures 19 and 20 show the market turmoil during

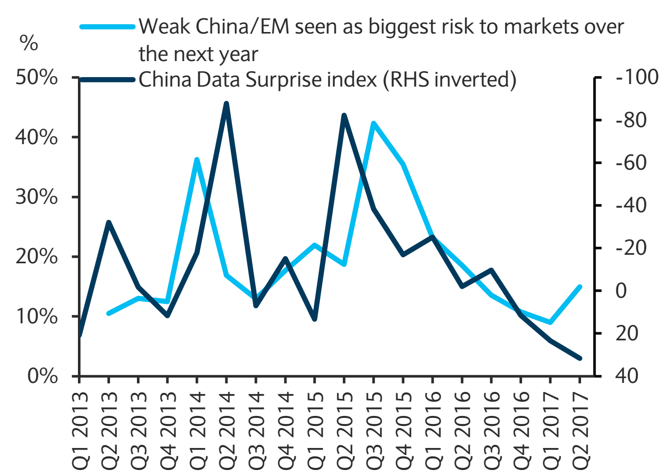
FIGURE 17

China as a threat to global markets has steadily declined since its peak in 2015

Source: Barclays Global Macro Survey, Barclays Research

FIGURE 18

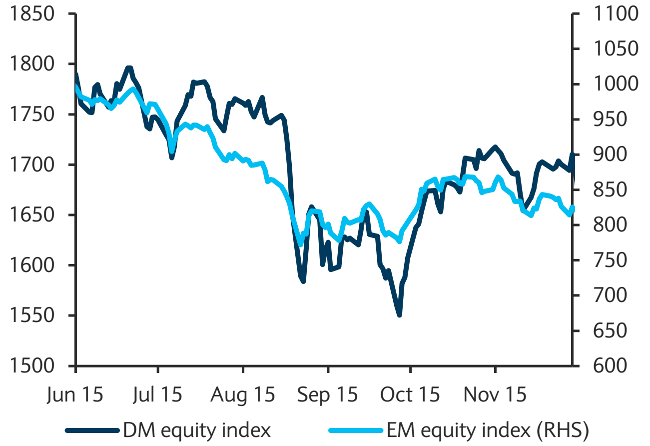
China growth fears tend to escalate as data surprises to the downside



Source: Bloomberg, Barclays Global Macro Survey, Barclays Research

FIGURE 19

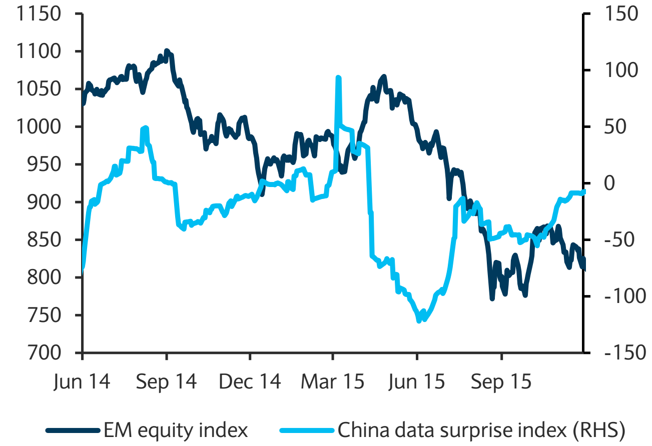
DM equity selloff was triggered mainly by the currency devaluation…



Source: Bloomberg, Barclays Research

FIGURE 20

…but EM equity selloff had started earlier in response to China data disappointments



Source: Bloomberg, Barclays Research

the summer of 2015. Although the global selloff was predominantly driven by the currency devaluation, the EM equity selloff was already underway as a result of weaker activity. The general underperformance relative to developed markets that had already been in place for some time, however, the outright selloff in EM equities, began just as China data started to surprise lower. In our view, this highlights the potential market risks over the coming months, even if there are offsetting factors that support the overall economy.

Policy fine-tuning has already started

We note that the authorities' financial deleveraging thrust is targeted at speculative money flows that boost financial asset prices but do not support the real economy. The extent of any further credit slowdown will also depend on policy implementation and coordination. In this respect, we believe the government will be careful to avoid the risk of over-tightening or mismanagement ahead of the leadership transition. In fact, in view of aggressive regulatory tightening announced by CBRC in March-April 2017, the PBoC emphasised policy coordination among financial regulators in May. We think since late May, the central bank has softened the tightening bias in its monetary policy stance that was adopted in August 2016. It has ensured sufficient liquidity and did not follow the Fed in raising rates in June.

A manageable slowdown with housing market still key to watch

Overall, we maintain our view that both real GDP growth and PPI inflation peaked in Q1 17 (see *China: Drivers of China's PPI inflation,* 13 March 2017), along with the turn in the credit cycle. Our analysis nonetheless suggests that the impact of a decelerating credit impulse on the overall economy would be gradual and manageable. We maintain our 2017 and 2018 growth forecasts at 6.7% and 6.3%, respectively. Our forecasts already factor in sequential moderation, with q/q saar GDP growth slowing to 6.1% in Q4 17 from 7.3% in Q1 17.

The housing market continues to pose the single biggest risk to China's growth outlook, in our view. We expect growth in home sales, housing starts and real estate investment to moderate further in the coming quarters, but at a manageable pace. We believe the housing market will remain supported due to elevated house prices, still-decent housing demand, as well as low inventory levels compared with past downcycles. Should the housing market slow faster and sharper than we currently expect, we believe the government would reverse some of the housing-specific tightening measures. The central bank also has room to shift to an easing bias given the soft headline inflation.

APPENDIX 1

Measuring China's broad credit

The increasing complexity in China's financial system has made it difficult to estimate the true size and growth rate of credit. China's official measure of credit, TSF, includes bank loans, corporate bonds, and three of what we term "traditional" shadow banking activities – loans by trust companies, inter-corporate entrusted loans, and undiscounted bankers' acceptance bills. While bank lending remains the largest component (CNY108trn as of 2016), the three types of "traditional" shadow credit (TSC) have expanded rapidly (end-2016: CNY23trn, end-2010: CNY7bn). Corporate bond financing has also grown in importance (end-2016: CNY18trn, end-2010: CNY4trn).

In *China: Alternative credit aggregates,* 18 October 2016, we introduced the Barclays Alternative Credit Aggregates (BACA), which added two important financing sources that are missing in the TSF. The first is central government and local government bonds. The second is what we call "non-traditional" shadow credit (NTSC), involving credit flows that are channelled between banks and NBFIs (Figure 22 and Figure 23). We used five methods to estimate the NTSC. Balancing convenience to update and over- and under-estimation, we choose commercial banks' claims on NBFIs discounted by a certain credit factor, estimated based on security houses SPV investment portfolio (data available on annual frequency, and the ratio was c80% in 2016), as proxy for NTSC.

In this report, to examine the relationship between credit and economic activities, we introduced $\mathrm{BACA}^{\mathrm{R}}$ to better capture shadow credit that has flown into the real economy. We fine-tuned our estimates for NTSC, and adjusted the credit factor to be the share of non-standard credit assets (eg beneficiary rights, accounts receivables) managed by major NBFIs (data available on annual frequency); that ratio was c.37% in 2016. The caveat is that, compared with some overestimation of shadow credit flows by the BACA measure, the $\mathrm{BACA}^{\mathrm{R}}$ could underestimate the size of the shadow credit universe. Figure 21 lists the components of TSF and $\mathrm{BACA}^{\mathrm{R}}$.

Meanwhile, we note that shadow bank lending is mostly to sectors that are unable to borrow directly from banks owing to tighter restrictions, including real estate, LGFVs, and "overcapacity industries" such as steel and cement. According to a China Banking Association report, as of June 2016, proceeds of CNY16trn out of CNY26trn of WMPs sold had flowed to various sectors of the real economy, including construction (14%), real estate (13%), public utilities management (12%), the production and supply of power, gas, and water (7%), and transportation (6%).

FIGURE 21

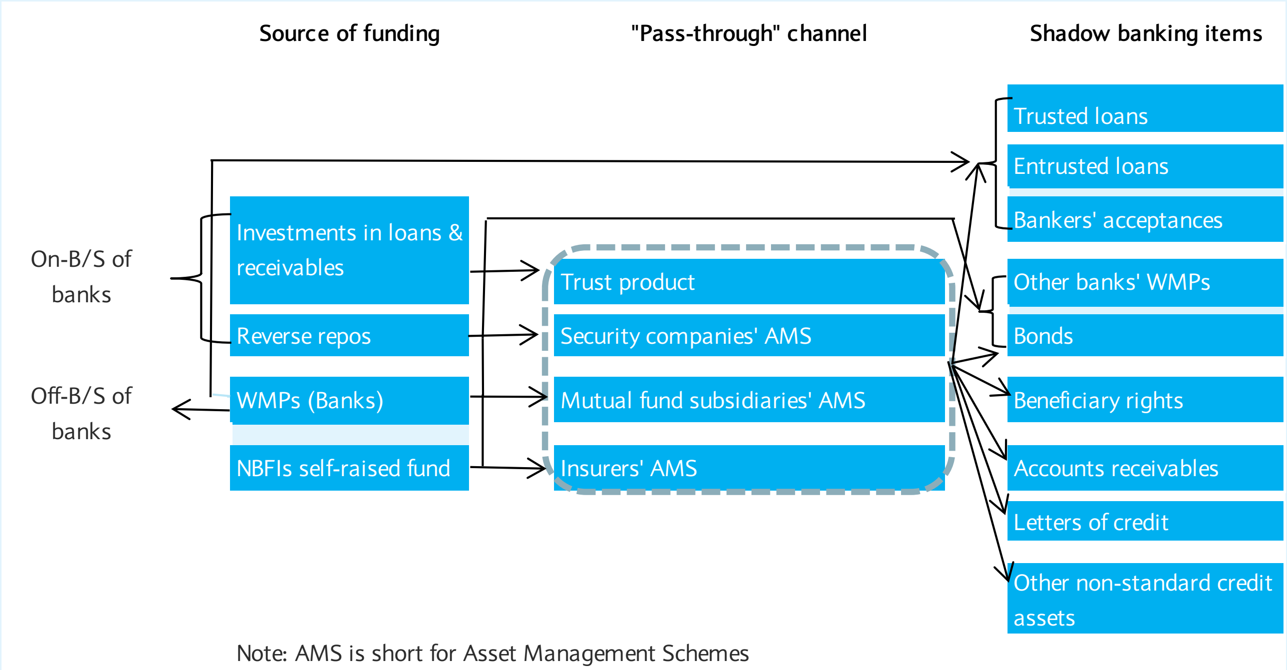
TSF and $\mathrm{BACA}^{\mathrm{R}}$ comparison

Categories	2016 CNY trn	TSF	$\mathrm{BACA}^{\mathrm{R}}$	Change in 2016	2010 CNY trn
Bank loans	108	✓	✓	108	48
-Corporate loans	74	✓	✓	74	37
-Household loans	33	✓	✓	33	11
-Mortgage loans	19	✓	✓	19	6
Traditional shadow credit (TSC)	23	✓	✓	23	7
-Trust loans	6	✓	✓	6	2
-Entrusted loans	13	✓	✓	13	2
-Undiscounted bankers' acceptance bills	4	✓	✓	4	4
Corporate bonds	18	✓	✓	18	4
Government bonds	23		✓	23	7
Non-traditional shadow credit (NTSC) CBs' claims on NBFIs*credit share	10		✓	10	1
Equity	6	✓		6	2
Total		156	183	TSF: +CNY18trn; $\mathrm{BACA}^{\mathrm{R}}$: +CNY26trn	66

Source: CEIC, Wind, Barclays Research

FIGURE 22

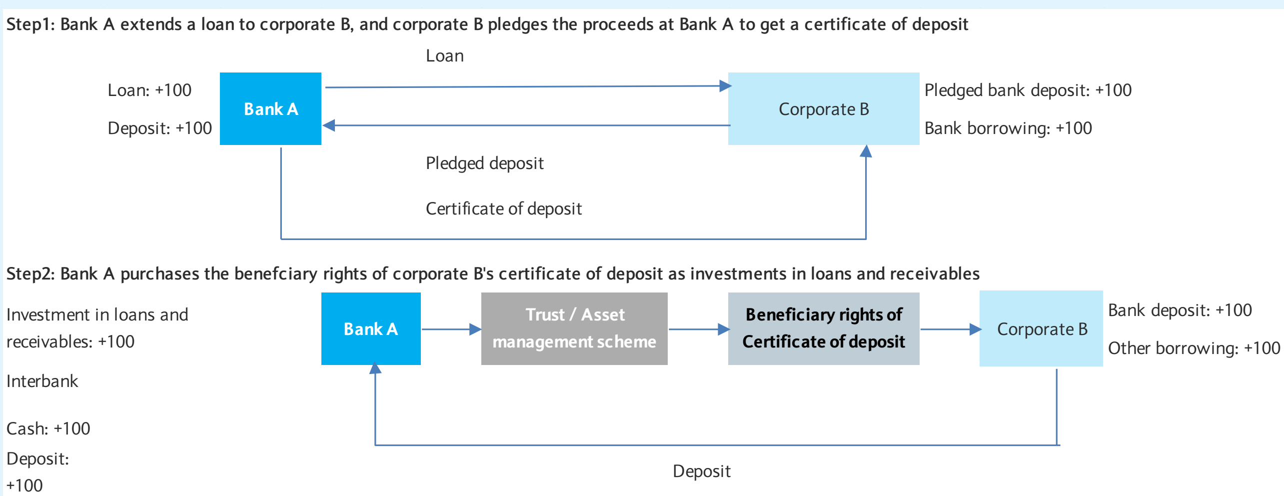
An overview of various non-traditional shadow credit creation channels



Source: Moody's, Barclays Research

FIGURE 23

Investments in loans and receivables: Typical forms (I)



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

APPENDIX 2

Summary of recent tightening measures

FIGURE 24

Date	Regulations	Regulatory body/Circular
26-Apr-17	The MoF asked provincial authorities to start self-examining their financing practices and to rectify all irregularities by the end of July, with progress to be tracked by MoF local supervisors.	MoF 50
25-Apr-17	President Xi highlighted at a meeting of the Communist Party Politburo that "maintaining financial stability is strategically important to the country's economic and social development."	Central government
21-Apr-17	The CBRC instructed trust companies to rein in funding to the real estate sector, intensifying a campaign to curb risks in both the property market and shadow finance industry. Trusts are one of the few financing channels that are still viable for property firms, and the CBRC's requirements may further limit access to this channel.	CBRC
13-Apr-17	The CBRC will check whether banks' interbank liabilities exceed one-third of their total liabilities by including certificate of deposits (CDs) in its calculation of a bank's interbank liabilities balance, and whether the total interbank lending balance (including CDs) is more than 50% of a bank's Tier 1 capital.	CBRC
12-Apr-17	The CBRC circulated a notice requiring the strengthening of controls over off-balance-sheet businesses, wealth management products, shareholder management and other weak links in the regulatory system.	CBRC 7
10-Apr-17	The CBRC issued a guideline to reduce systemic financial risks. The document identified 10 major risks facing the banking system with an emphasis on credit risk, liquidity risk, risk of bond market volatility, risk of a property market crash, local government bond default risk, risk of cross-selling of financial products and risk of WMPs. Lenders are required to step up their risk control efforts.	CBRC 6
07-Apr-17	The CBRC said it would sort out "chaos" in equity investments, senior management, regulations and rules, products, employees' behaviour and illegal financial activities, according to a notice circulated to banks.	CBRC 5
07-Apr-17	The CBRC published guidance on improving banks' services to the real economy, which mainly focuses on supervising loans and other credit to serve the real economy, setting up a system of information collection and risk sharing, cracking down on any evasion of the repayment of bank loans.	CBRC 4
11-Apr-17	The CBRC circulated a notice to crack down the improper banking practices in innovation, transactions, incentives, charges/fees. The regulator ordered self examinations by banks on areas, including mechanism, rules, procedures, personnel, and businesses, to be carried out by 15 July.	CBRC 53
06-Apr-17	The CBRC sent a notice to its local branches urging them to identify risks associated with cross-guarantees, in a bid to curb the spread of financial risk posed by chains of companies offering their own credit to support less-creditworthy peers.	CBRC 52
28-Mar-17	A document issued by the CBRC was circulated to banks, to clean up irregularities in the sector and intensify the crackdown on financial speculation that exploits systemic loopholes. The guidelines ordered banks to undertake "self-inspections" or "top-down inspections"' into financial arbitrage activities.	CBRC 46
28-Mar-17	The CBRC circulated a notice to tackle banking activities that are in violation of laws, regulations and rules. The regulator required banks to undertake "self examinations" and "top-down inspections" of any violations and potential risks by 12 June.	CBRC 45
22-Mar-17	Effective 7 April, lower-rated corporate bonds (newly issued corporate bonds rated below AAA or bonds sold to the public rated below AA) can no longer be used as collateral for repurchase agreements, as the government stepped up efforts to guard against systemic risks in the financial markets.	CSDC
17-Mar-17	The CSRC released a guideline to public fund managers and trustees that specifies the requirements regarding institutional customised funds.	CSRC
16-Mar-17	The PBoC raised a range of short-term (OMOs and SLF), and medium-term (MLF) policy rates following the Fed's rate hike in March.	PBoC
03-Feb-17	The PBoC raised interest rates on OMOs, SLF and MLF, sending a strong tightening signal to the market.	PBoC
01-Jan-17	From Q1 17 onwards, the PBoC will include off-balance-sheet WMPs in its calculation of "broad credit", which is an indicator the central bank uses to evaluate the credit exposure of individual banks under its MPA framework.	PBoC

Source: Bloomberg, Reuters, Xinhua, Barclays Research

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