BARCLAYS

Emerging Markets Research

14 December 2017

China: PBoC watching

The evolving policy framework

- We examine the PBoC's evolving policy framework, given its objectives of maintaining growth, price, currency and financial stability. We show that the PBoC is shifting towards a price-based framework amid improved transmission from policy rates to money markets to government bond yields and loan rates.
- As China's capital flow dynamics changed from "twin surpluses" to persistent outflows (Figure 1), we believe the PBoC has intentionally maintained a "structural liquidity deficit" to gain greater control over liquidity and to guide interest rates.
- While quantitative tools will remain central to the PBoC, price-based tools have risen in importance. We expect the PBoC to continue to use policy rates (OMO and MLF) regularly, promote the policy target rate (DR007) and market benchmark rate (Shibor); benchmark rates and banks' RRR will be used infrequently. A larger role for macroprudential tools will also provide the PBoC additional room for manoeuvre.
- With the PBoC emphasising a "two-pillar" policy framework to prevent systemic financial risks, we analyse the channels through which regulatory tightening has pushed up interest rates and exacerbated bond market volatility.
- Given this evolving policy framework, we noted a tightening bias from August 2016 and identify three types of tightening actions by the PBoC intended for financial deleveraging: 1) raising (effective) policy rates; 2) maintaining a "tight" liquidity situation; and 3) tolerating the impact from regulatory tightening. Looking into 2018, we expect the PBoC to hike OMO and MLF rates by 10bp amid the Fed rate hike cycle, likely in March, but keep benchmark rates unchanged.

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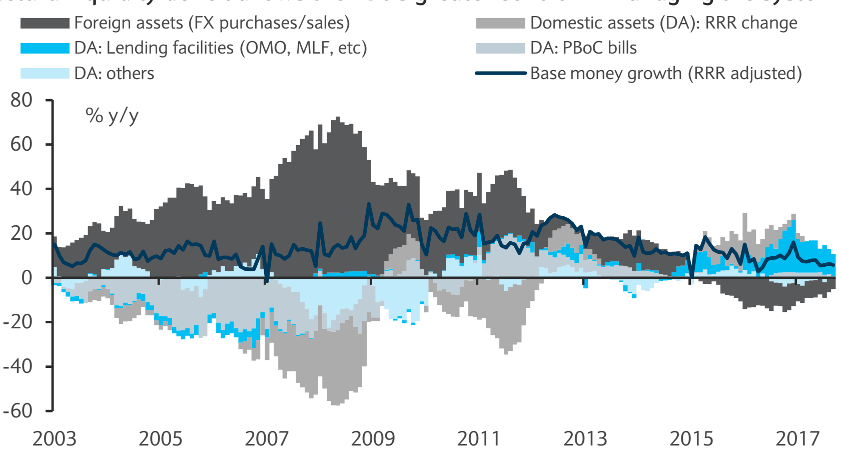
FIGURE 1

Structural liquidity deficit allows the PBoC greater control in managing the system



Source: Wind, Barclays Research

PBoC's multiple objectives and the "two-pillar" framework

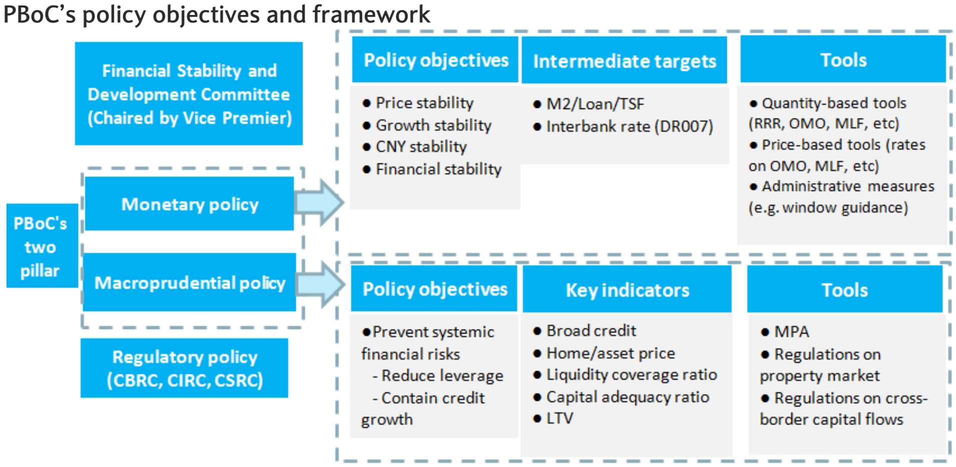
The PBoC has four main "stability" objectives

The People's Bank of China, a cabinet-level monetary authority under the State Council, has several objectives. We focus on the PBoC's four main "stability" objectives – price, growth, currency, and financial stability – to gauge its shifting priorities and monetary policy bias, noting its primary objective changes over time depending on its prevailing concerns.[1]

The PBoC policy is evolving into "two-pillar" framework: a more "price-based" monetary policy and strengthened macroprudential policy

The PBoC's monetary policy conduct has evolved in recent years, transitioning from a mostly quantitative model towards a more interest rate-based (or "price-based") framework. In addition, the PBoC upgraded its macroprudential policies in 2016, and led China's other financial regulators to strengthen their regulation of "risky activities". We see the elevated role of macroprudential policies as part of the PBoC's two-pillar policy framework, which provides the central bank additional room to manoeuvre when it needs to push for further deleveraging to prevent systemic financial instability, leaving monetary policy to achieve its economic objectives.

FIGURE 2
PBoC's policy objectives and framework



Source: PBoC, Barclays Research

FIGURE 3
PBoC's monetary policy tools and various interest rates

Quantitative tools		Interest rate tools and market rates	
Proactively controlled by PBoC	Liquidity instruments (OMO, SLF, MLF, PSL, etc)	Policy rates	Liquidity instruments rates (OMO, SLF, MLF, PSL, etc)
	RRR (last changed in Feb 2016)		Benchmark deposit/lending rate (last changed in Oct 2015)
	PBoC bills (rarely used now)		PBoC bill yields (rarely used now)
Passively influencing money management	PBoC FX purchases/sales	Money market	Interbank repo: DR, R Shibor Interbank NCD/WMP rate
	Fiscal deposits	Bond market	CGB/corporate bond yields
	Notes in circulation	Lending rates	Banks' acceptance bill rate Loan prime rate (LPR)
	Banks' reserves change (due to deposit change or other needs)		

Source: PBoC, Barclays Research

[1] For example, in 2014-15, the PBoC's top priority was to boost growth and prevent deflation. The central bank entered a monetary easing cycle, with ~200bp of cuts to benchmark interest rates and RRR levels. With growth and inflation largely in the PBoC's comfort zone, in 2016-2017 its priority shifted to financial stability; ie, controlling financial risks, reducing leverage and preventing asset bubbles. The PBoC has maintained a tight liquidity balance, guided interbank rates higher, and tolerated high and volatile market rates. Managing the CNY was the priority when depreciation pressures mounted in late 2015 and early 2017, which partly explains the PBoC's refraining from RRR cuts in 2016, and following the Fed in hiking policy rates in February-March 2017, in our view.

Rising importance of price-based monetary policy tools

A traditional quantity-based framework with exchange rate being a main anchor

China's monetary policy operations set money growth target, but the exchange rate had been the main nominal anchor, with benchmark rates playing a small role

The PBoC has traditionally operated a quantity-based monetary policy framework, with monetary aggregates – eg, growth in M2 and credit (including bank loans and, later, total social financing) – serving as 'intermediate targets'.[2]

Despite the money growth targeting, we think the exchange rate had been the main nominal anchor for China's monetary policy, given the inflexible exchange rate regime. Box 1 shows how China's exchange rate objective has affected the PBoC's monetary operations, base money creation, and choice of quantitative tools as the capital flow dynamics shifted from "twin surpluses" following China's entry into the WTO in 2001 to rising outflows recently. Although the PBoC primarily only used benchmark interest rates in the past, in general interest rates played a small role in achieving the intermediate targets.

"Structural liquidity deficit" and a reluctance to cut banks' RRRs

The changing capital flow dynamics has allowed for a "structural liquidity deficit"…

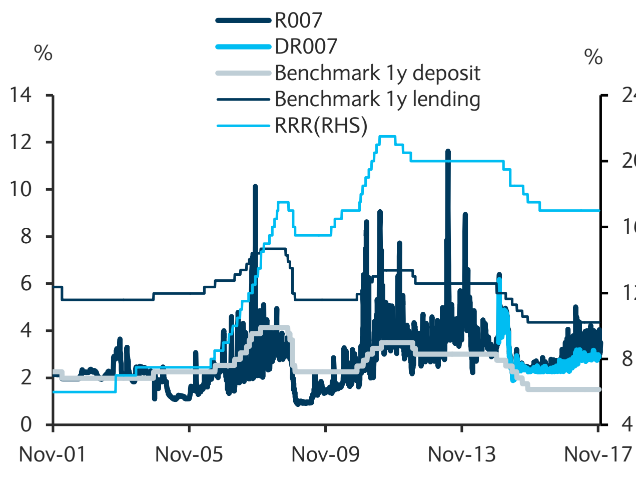
Moreover, as persistent capital outflows and FX sales resulted in liquidity shortages, we think the central bank began to tailor its liquidity management operations to maintain a "structural liquidity deficit." This describes a situation whereby the central bank artificially creates a liquidity deficit in the banking system so that it, always being a lender, will be in a stronger position when negotiating financing terms with commercial banks[3].

… which has enabled the PBoC to make use of more lending operations…

Indeed, the PBoC has been reluctant to use its most powerful quantitative tool – adjusting banks' universal reserve requirement ratios (RRR) since February 2016 – instead opting to use more frequent, sophisticated and sometimes confusing lending operations to replenish financial system liquidity (Figure 1, Figure 4 and Figure 5)[4]. Figure 1 shows that base money growth was mainly driven by RRR cuts during the 2015 easing cycle, but since 2016 the PBoC has mainly used open market operations (OMOs) and lending facilities, as policy shifted from easing to a neutral stance.

FIGURE 4

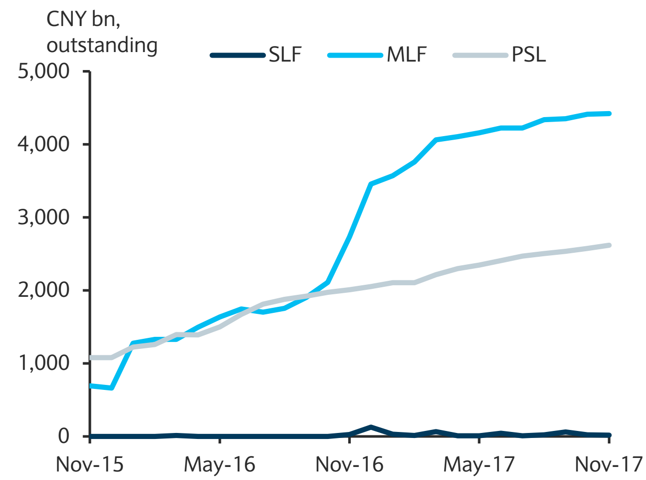
Less use of changes to RRRs and benchmark rates



Source: Wind, Barclays Research

FIGURE 5

Increasing use of targeted lending facilities



Source: Wind, Barclays Research

[2] The M2 growth target is usually set equal to the real GDP growth target + inflation target + 2-3% for financial deepening since 1998. A TSF target was introduced in 2016 and bank loan quotas reintroduced in 2007-2011.
[3] For more discussion on structural liquidity deficit, see Guofeng Sun, "Structural liquidity deficit and monetary policy framework", working paper, 2004.
[4] The last blanket RRR change occurred in February 2016. The PBoC also began to conduct repos or reverse repos in OMOs on a daily basis since February 2016 (previously only on Tuesday and Thursday).

…to gain greater control over system liquidity and guide interest rates

We believe the PBoC has intentionally maintained a structural liquidity deficit to gain greater control over interbank liquidity and guide market interest rates. First, a structural liquidity deficit allows a central bank to play a more proactive and dominant role in managing the quantity and price of interbank liquidity through the lending operations. Second, the high-frequency use of lending facilities gives the PBoC more flexibility to choose the timing and pace of policy rate adjustments (see below). Finally, unlike RRR changes, the "selective" feature of OMO and MLF operations gives the PBoC more power to "window guide" particular financial institutions to achieve more effective controls.

We think liquidity tools have played important role in price-based policy framework

In our view, while the PBoC is evolving towards a price-based monetary policy, quantitative tools and liquidity management will remain central to the implementation and transmission of monetary policy for some time. We expect the PBoC to continue to rely on liquidity management to guide an appropriate pace of money and credit growth for the real economy. Moreover, liquidity management also plays an increasingly important role in guiding market interest rates and improving the interest rate channel of policy transmission.

Transitioning towards a price-based monetary policy framework

Quantity-based M2 and credit have become increasingly less effective and interest rates are rising in importance

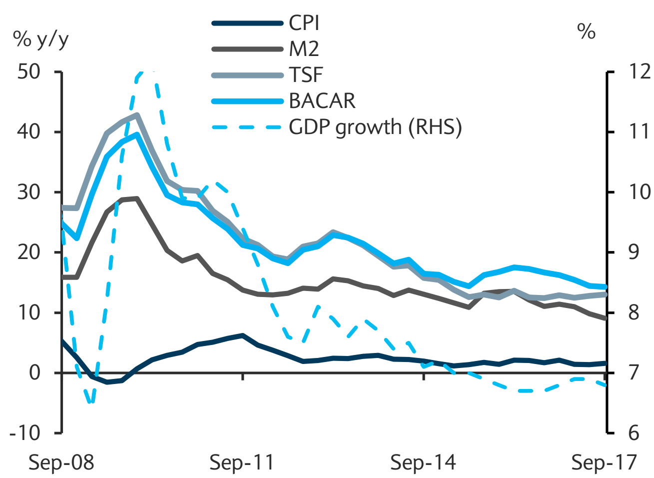
Financial liberalisation and innovation have increasingly called for a shift towards an interest rate-based monetary policy framework in China. The increasing depth and complexity of China's financial system has made monetary and credit aggregates increasingly less effective as intermediate targets (Figure 6 and Figure 7), similar to the experience in developed economies[5]. For example, the M2 growth target was set at c.12% in 2017, but its growth rate is c.9% YTD. Meanwhile, rising direct financing and the development of the bond market suggest a larger role of interest rates in resource allocation.

Significant progress has been made in fostering a price-based framework

The PBoC is fostering a price-based framework (Figure 3, and more details in Appendix 1) in which policy rates can be more efficiently and effectively transmitted to short-term interbank rates, and medium- to long-term bond yields and lending rates. The central bank has cultivated benchmark interest rates in the money market (eg, Shibor was introduced in 2007, repos). It removed the floor for lending rates in 2013 and the ceiling for deposit rates in 2015, and has guided financial institutions to improve their mechanisms for pricing credit

FIGURE 6

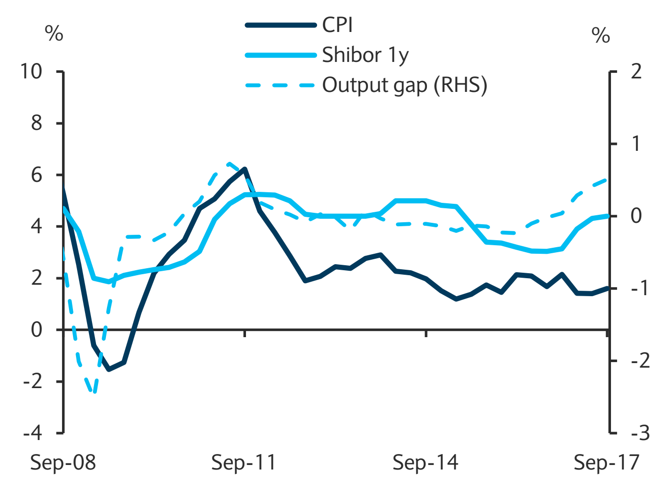
M2/TSF/BACAR, CPI and GDP growth



Source: Wind, Barclays Research

FIGURE 7

Shibor, CPI and output gap



Source: Wind, Barclays Research

[5] The rapid growth of wealth management products, shadow credit and off-balance-sheet lending, interbank businesses, and entrusted investments between banks and non-bank financial institutions have made M2 and bank loans less reliable indicators of total financing conditions, less controllable by the central bank, and less relevant in relation to economic targets such as growth and inflation. Money demand has become unstable and unpredictable.

risks. It has explored ways to build an interest rate corridor, and in our view, it has enhanced the role of interest rates versus monetary aggregates in its "intermediate targets" system.

OMO and MLF rates as PBoC's policy rates…

The central bank policy rates are transitioning from benchmark interest rates…

The importance of benchmark interest rates was reduced following interest rate liberalisation. The PBoC continues to publish benchmark lending and deposit rates to guide banks' pricing behaviour, although benchmark rates have not changed since October 2015[6]. Although there is room for the record-low benchmark lending rate to rise, we expect them to be used less frequently as the PBoC is mindful about their strong signalling effects to financial markets as well as their still significant impact on the economy.

… to OMO and MLF rates

The PBoC's monetary operation rates have increased in significance. We think the OMO (7d-63d) rates have now become the PBoC's short-term policy rates and MLF (3m-1y) rates the medium-term policy rates. We note that the PBoC's increasing and proactive use of OMOs and liquidity facilities has granted more power to interest rates associated with these tools.

Interest rate corridor continues to develop

Meanwhile, the PBoC continues to build and improve the interest rate corridor. In practice, the corridor, in our view, now anchors the interbank 7d repo rate (DR007) as the policy target rate (see below), with SLF and MLF rates serving as the ceiling and PBoC OMO 7d reverse repo rate as a de facto floor, and interest rates on banks' required and excess reserves being the theoretical floor (Figure 9)[7].

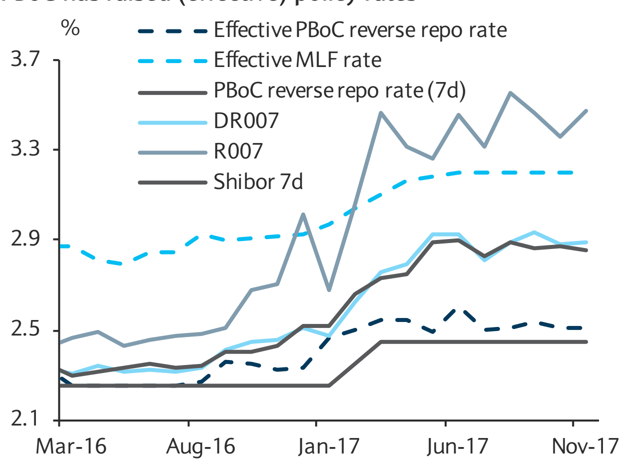
… with money market rates (DR007) as policy target rate

Interbank rates are represented by repo and Shibor

Interbank repo rates (represented by R007 and DR007) and Shibor rate are among the most closely watched interbank rates. DR007 (introduced in December 2014) requires that trading institutions are banks and collateral is risk-free treasury bonds, while R007 captures the repo rate of all institutions, covering all types of collateral. Unlike transaction-based R and DR, Shibor (launched in 2007, based on Libor) is calculated as the average of the uncollateralised wholesale interest rates quoted by 18 leading banks[8].

FIGURE 8

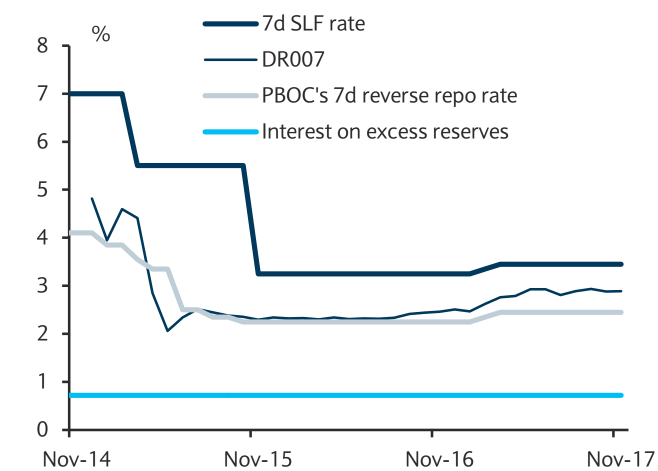
PBoC has raised (effective) policy rates



Source: Effective PBoC reverse repo (MLF) rates are weighted average OMO (MLF) rates across all tenors. Wind, Barclays Research

FIGURE 9

PBoC's interest rate corridor



Source: Wind, Barclays Research

[6] Notably, the PBoC also launched the loan prime rate (LPR) in 2013 in an attempt to foster a market rate that reflects the lending interest rate charged by nine select banks on loans to their best corporate borrowers.
[7] A PBoC research paper outlined the three-step roadmap to building an interest rate corridor: 1) set up a de facto rate corridor around an implicit policy rate without announcing the rate itself; 2) narrow the corridor so that the market gradually builds expectations that one short-term rate will become the policy rate and banks start to price from that rate; and 3) abolish benchmark lending and deposit rates and announce a new policy framework pegged to a short-term policy rate. Se Ma, Jun et al, "Interest rate corridor, rate stability, and cost of central banks", working paper 2015.
[8] These include six big state-owned banks, one policy bank, eight joint-stock banks, two city commercial banks, and one foreign bank.

FR007 and Shibor are most important reference rates for CNY IRS

In addition, FR007 (7d fixing repo rate published on 11:32am) and Shibor are the two major floating reference rates for CNY interest-rate swap (IRS) transactions (Figure 10). According to the PBoC's estimates, the notional principal of IRS with these two reference rates used as benchmarks accounted for 74% and 26% of the total respectively in Q3. Moreover, the PBoC emphasised the importance of Shibor as a "market benchmark rate" in its Q3 17 Monetary Policy Report. Both the issuance and trading of interbank negotiable certificates of deposit (NCDs) were priced based on Shibor. The correlation between the issuance interest rates of 3m NCDs and 3m Shibor rate is c.0.95 (Figure 11).

DR007 has become the policy target rate, in our view

We think the PBoC has settled on using DR007 as the "policy target rate". In its Q3 16 Monetary Policy Report, the central bank said for the first time that DR007 "plays an active role in cultivating the market reference interest rate, as it can reduce influence on interest rate pricing from counterparty credit risk and quality of collateral, and better reflect the liquidity of the banking system." Moreover, the PBoC has continued to mention the range of DR007 in its quarterly monetary policy reports (eg 2.75-3.00% Q2-Q3, and 2.6-2.9% in Q1), which we see as evidence of its guiding market expectations to focus on DR007 as the policy target rate.

Improving monetary policy transmissions via the interest rate channel

The interest rate transmission path has improved

With the development of money markets and interest rate reform, we have observed improved policy transmission via the interest rate channel.

Money market rates were more sensitive to benchmark rates than RRRs movements

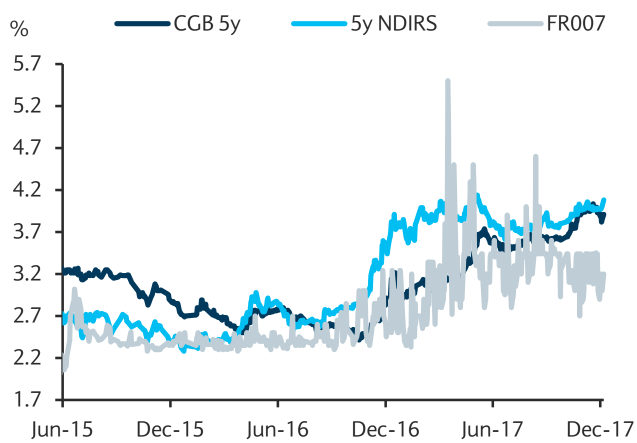
In the past, China's money market rates were driven by changes to benchmark interest rates and banks' RRRs (Figure 4). The reasoning is that banks would pass on higher funding costs (due to either higher deposit rates or reduced liquidity following an RRR hike) to lenders in the money markets. He and Wang (2011) found that China's money market rates were more sensitive to changes in benchmark deposit rates than changes in RRR levels.[9]

We find improved transmission to money market rates as policy rates transition to OMO/MLF rates…

As the PBoC's choice of policy rates appears to have gradually transitioned from benchmark rates to OMO/MLF rates, we found a larger pass-through from the OMO rate than the benchmark rate (not surprisingly). We ran a series of OLS regressions to test the sensitivity of money market rates (R007) to changes in various policy rates – ie, the 1y benchmark deposit rate and RRR during 2008-15, and the OMO 7d reverse repo rate during 2015-17.

FIGURE 10

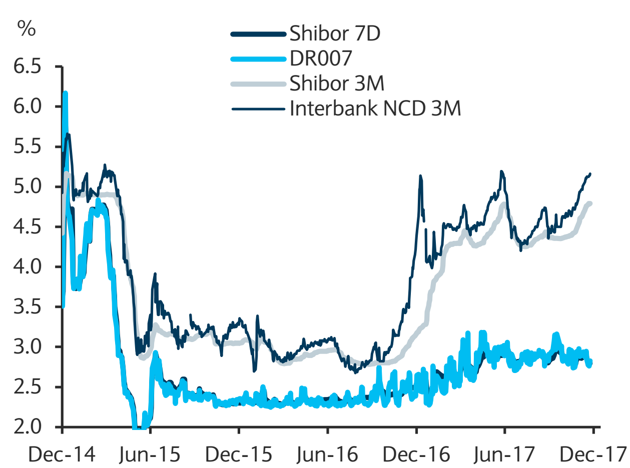
FR007 is a major floating reference rate for NDIRS/IRS



Source: Bloomberg, Barclays Research

FIGURE 11

Interbank NCD rates are referenced on Shibor rates

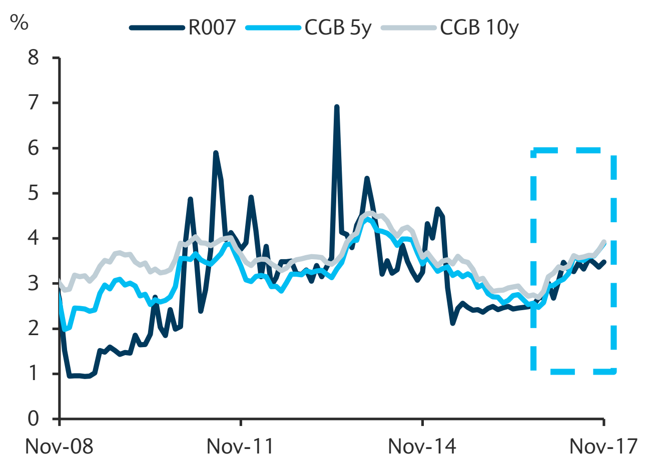


Source: Wind, Barclays Research

[9] See He and Wang (2011), and Porter and Xu (2013). In particular, He and Wang constructed a model of China's interbank market and concluded that during 2004-2010, raising the benchmark deposit rate was the most powerful instrument in influencing market rates and the RRR was the second-most powerful.

FIGURE 12

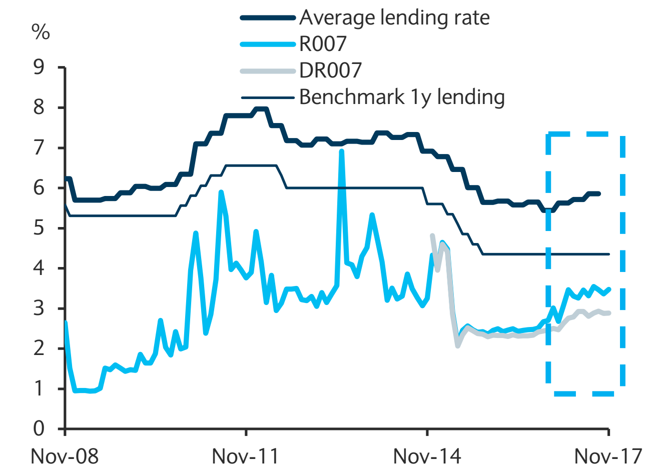
Rising interbank rates transmitted to bond yields…



Source: Wind, Barclays Research

FIGURE 13

… and the average lending rate



Source: Wind, Barclays Research

We find that a 1% rise in the OMO 7d repo rate, on average, resulted in a 0.8% increase in R007, compared with a 0.5% rise from changes in benchmark deposit rates[10].

… as well as improved transmission from money market rates to bond yields and lending rates

We also found evidence of improved transmission from money market rates to government bond yields and average lending rates (Figure 12-Figure 13). We estimate the elasticity of CGB bond yields to R007 during two sample periods (2008-13, and 2014-17). Our exercise shows that the sensitivity of the CGB 10y yield to R007 (100pp rise) increased significantly, to 0.6pp during 2014-17 from 0.2pp in 2008-13, while the sensitivity of the average lending rate to R007 (1% rise) rose to 0.9% in 2014-17 from 0.8% in 2008-13. In our view, this improving transmission efficiency from policy rates into money market rates, and then to government bond yields, likely reflects the rising importance of wholesale interbank funding in China relative to traditional deposits and other funding sources in recent years. Our finding echoed an article published in March 2017 - Zhong Xu (director of the PBoC's research bureau) find that the transmission from the OMO 7d repo and MLF rates to CGB bond yields and loan interest rates has improved recently[11].

Higher interest rates have gradually been transmitted to real economy

Consequently, the transmission from interbank rates to real economy funding costs has been increasing. On the one hand, the more expensive wholesale funding costs would be passed on by banks and NBFIs to real economy borrowers over time. On the other hand, the elevated bond yields increase bond financing costs and indirectly influence bank lending rates through banks' asset reallocation between loans and bond investments (Figure 14).

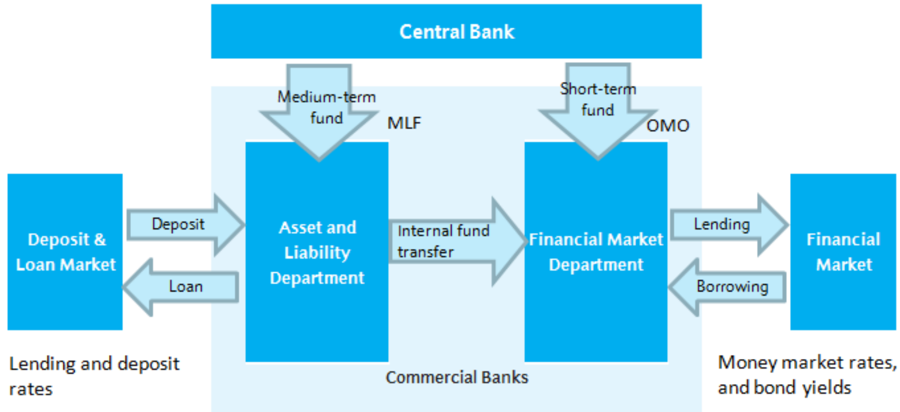
Based on the two-department decision-making mechanisms within China's commercial banks (the Asset and Liability, and Financial Market departments, Figure 14), Sun and Duan (2016) established a three-stage game theory model to analyse how medium-term policy interest rates affect the loan business, as well as the money and bond markets accordingly. They find that a central bank's medium-term policy rate (MLF) has a significant effect on loan rates. In addition, through the internal bank fund transfer, from the Asset and Liability department to the Financial Market department, the medium-term policy rate also influences money market rates and bond yields.

[10] Using linear and GARCH model, He and Wang estimated the elasticity of money market rates with respect to the benchmark rate was 0.58-0.65.

[11] Zhong Xu, "The practical experiences of China's prudent monetary policy and international frontier of monetary policy theories", 2017

FIGURE 14

Transmission from PBoC's policy rates to market interest rates



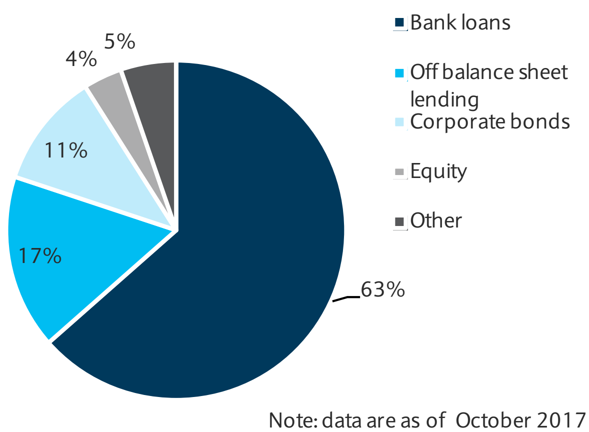
Source: Guofeng Sun and Zhiming Duan, "Study on transmission mechanism of medium-term policy rate", 2016, Barclays Research

According to the PBoC's quarterly monetary policy reports, banks' weighted average lending rate has gradually picked up since Q4 16 (Figure 16); it rose by 5bp, 26bp, 14bp, and 9bp on a q/q basis in Q4 16, Q1 17, Q2 17 and Q3 17, respectively. The rise in the average lending rate reflects a number of factors in addition to improved transmission: 1) the hike in short-term lending rate (ie, bills); 2) the rise in banks' loan rates (led by mortgage rates); and 3) the shifting of loan structure from short-term to long-term loans.

To try to capture real economy funding costs, we have constructed an effective lending rate that combines banks' lending rates, the trust loan lending rate, and corporate bond yields, based on their respective weights in the total social financing (Figure 15)[12]. As shown in Figure 16, although bond financing costs have escalated more visibly than banks' lending rates, given loans still account for 63% of TSF, the effective lending rate more closely follows the pattern of banks' average lending rate. The effective lending rate has seen a bigger rise than banks' average lending rate between Q3 16 and Q3 17 (76bp vs 54bp).

FIGURE 15

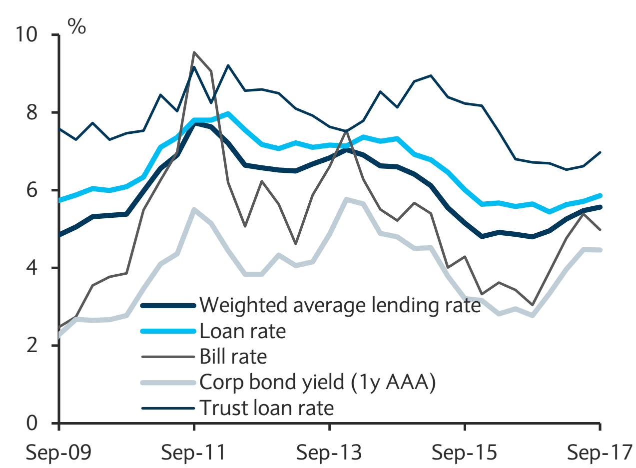
TSF stock breakdown



Source: Wind, Barclays Research

FIGURE 16

Effective lending rate



Source: Wind, Barclays Research

[12] In total, RMB loans, trust loans, discounted bills, and bond financing account for 82% of TSF. We do not factor in the remaining smaller parts, given the lack of appropriate data on their lending rates.

Box 1. Changing capital flow dynamics led to the development of new tools

Exchange rate an important nominal anchor

Despite money growth targeting, the exchange rate had been the main nominal anchor for China's monetary policy given the inflexible exchange rates, in our view. Base money was created mainly via the PBoC's foreign exchange purchases during the years (2001-2011) when China experienced persistent capital inflows via both the current and capital accounts (the so-called "twin surpluses")[13]. To prevent large RMB appreciation, the PBoC intervened heavily in FX markets. However, its purchases of foreign currencies led to large injections of CNY liquidity into the domestic market. To control runaway money and credit growth, the major task of the PBoC's monetary operations was to sterilise this accumulation of foreign assets[14]. The central bank relied on quantitative tools to absorb excessive liquidity in the banking system. In 2003, it launched PBoC bills (Figure 18), which improved its sterilisation efforts and enabled it to more effectively manage base money growth and the economy. It also hiked RRRs during tightening cycles and used open market operations (eg, repos).

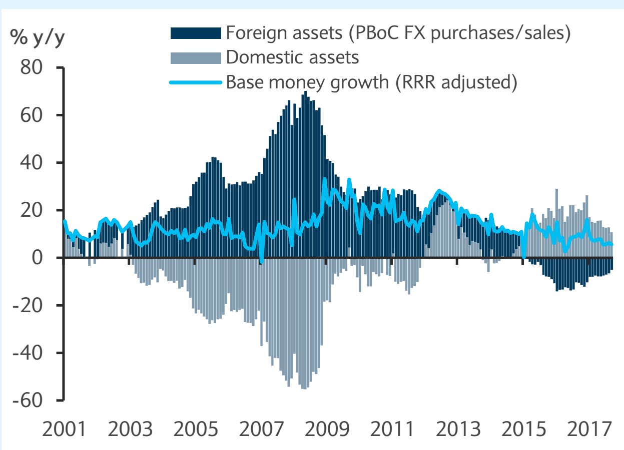
Rising capital outflows led to the development of new tools

The shift in capital flow dynamics to rising outflows changed that picture. Capital account outflows started in late 2011 amid the worsening European debt crisis, became more noticeable as the Fed started tapering in mid-2013, and became more persistent following the August 2015 change in the CNY fixing regime. With the PBoC's currency management changing direction to selling foreign currencies since 2015, the main task for its monetary operations has changed from passively absorbing excess liquidity to proactively replenishing domestic liquidity to offset capital outflows.

To improve its liquidity management and address liquidity shortages, the PBoC developed new quantitative tools to complement the traditional ones of RRRs (increases/cuts) and OMOs (reverse repos). These included a series of new liquidity lending facilities. In early 2013, it rolled out the Short-term liquidity operation (SLO, <7d, a complement to OMOs, now retired), and Standing lending facility (SLF, <3m) to meet large-scale demand for liquidity by banks. In 2014, it launched the Medium-term lending facility (MLF, 3m-1y) to provide medium-term funding to banks that comply with macroprudential requirements, and the Pledged supplementary lending (PSL, 3-5y) programme to provide stable and low-cost financing to policy banks for development projects such as shantytown redevelopments After restarting 14d/28d reverse repo operations in August-September 2016, the PBoC launched a 63d reverse repo in October 2017 (see Appendix 1).

FIGURE 17

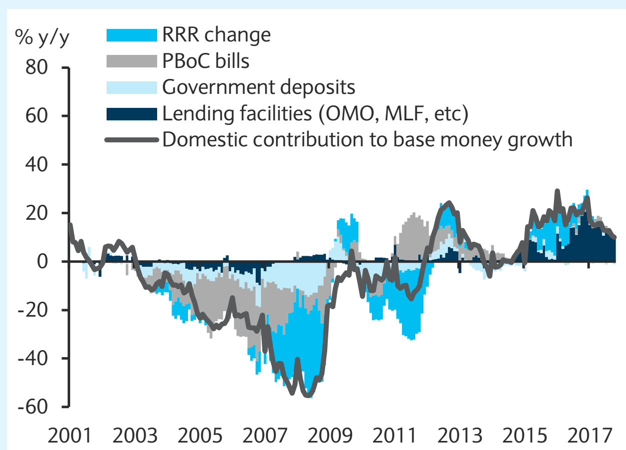
FX purchases used to drive China's base money growth



Source: Wind, Barclays Research

FIGURE 18

Changing capital flows dynamics led to more use of liquidity tools to drive base money growth



Source: Wind, Barclays Research

[13] China saw large trade surplus after joining the WTO and then large capital account inflows due to one-way appreciation expectations.

[14] To quantify the impact of RRR changes, we adjust base money for the RRR change using the St. Louis Fed's method. The adjustment captures the amount of reserve money absorbed or released by RRR hikes or cuts.

Box 2. Upgraded macroprudential policy and stepped-up micro regulation

Financial liberalisation, a period of stable funding costs following the liquidity squeeze in 2013, and "implicitly guaranteed returns" on investment products led banks and NBFIs to expand their interbank and off-balance-sheet businesses (see *China: Alternative credit aggregates*, 18 October 2016). However, the rapid expansion of interbank and off-balance-sheet financing has raised concerns over systemic financial risks, and resulted in calls to improve the regulation of banks and NBFIs.

In Q1 16, the PBoC launched its macroprudential assessment (MPA) framework (see Appendix 2 for more details). The framework was built upon the central bank's previous credit-growth management framework, including administrative measures and prudential regulations. We believe two modifications to the MPA have been particularly successful in curbing the expansion of increasingly risky interbank and off-balance-sheet activities. First, in October 2016, the PBoC announced it would include off-balance-sheet wealth management products (WMPs) in its broad credit assessment of banks (effective Q1 17); in August 2017, the central bank announced the inclusion of NCDs in its assessment of interbank liabilities (effective Q1 18).

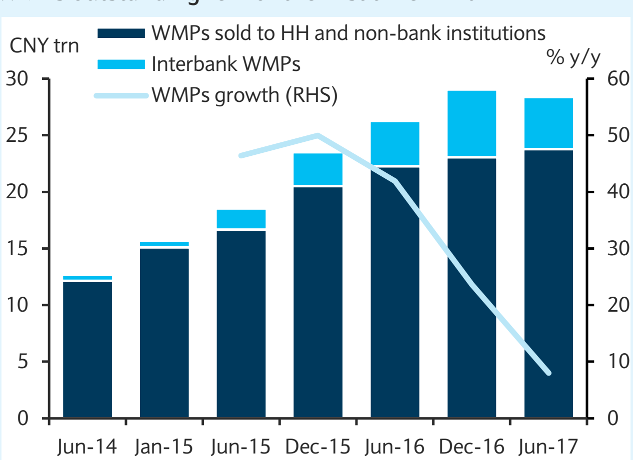
Apart from the PBoC, China's other financial regulatory bodies (mainly three commissions: China Banking Regulatory Commission (CBRC), China Securities Regulatory Commission (CSRC), and China Insurance Regulatory Commission (CIRC)) have also rolled out a series of policies that focus on banks' WMPs, interbank operations, as well as banks' and NBFIs' "pass-through" channels and entrusted investment.[15] Notably, in late March-April 2017, the CBRC proactively issued eight guidelines focusing on interbank and off-balance-sheet businesses (see details in Appendix 3). As a result, the WMPs outstanding declined notably in H1 17 (Figure 19).

The asset management business has expanded rapidly over the past several years (Figure 20). In response, the PBoC and other regulators jointly issued draft rules on asset management products (AMPs) in November 2017, specifying more detailed regulatory standards for: 1) banks' WMPs and other AMPs issued by NBFIs; 2) banks' and NBFIs' "pass-through channels" and entrusted investment; and 3) the permitted leverage ratio for each AMP. The new rules are expected to take effect in early 2018 at the soonest, with a grace period until 30 June 2019 (subject to potential change in the final rules).

Another key element of the PBoC's macro-prudential policy is capital flows management. The central bank currently uses two counter-cyclical tools to regulate cross-border flows: 1) a quota-based tool that supervises banks' FX positions and FX debt to prevent excessive accumulation of foreign debt/assets during periods of persistent capital outflow/inflow; and 2) a price-based tool to adjust reserve requirements for trading FX products, to prevent excessive risk-taking in FX trading.

FIGURE 19

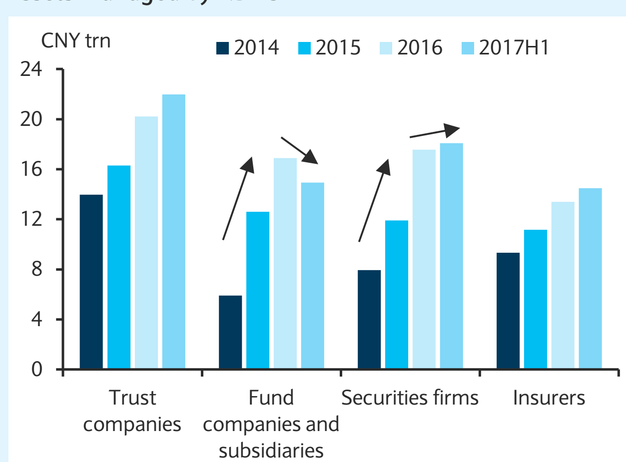
WMPs outstanding fell for the first time in 2017



Source: Wind, Barclays Research

FIGURE 20

Assets managed by NBFIs



Source: Wind, Barclays Research

[15] Banks entrust their own funds or WMP funds to NBFIs in the form of purchasing investment products. Sometimes banks use NBFIs as "pass-through" channels to move some of their assets off-balance sheet. For example, a bank can sell 'bad' loans to a nonbank, which can then package the loans as investments and resell them to the bank.

Upgraded macroprudential policy strengthens PBoC's toolkit

Macroprudential policy could be a more efficient tool for maintaining financial stability…

Box 2 summarised the upgrades in regulation as the PBoC and other financial regulators have stepped up financial risk management. We think macroprudential policies, which directly apply to financial institutions to manage leveraging and pro-cyclical behaviour, more serve the priority of maintaining financial stability. At the same time, monetary policy will continue to be used primarily for managing the macro economy and aggregate demand, with the policy priority leaning towards growth and price stability.

… and also gives the central bank additional room to maneuver

We believe the two-pillar framework will give the PBoC more flexibility in coordinating monetary and macro-prudential policy in different combinations (tightly and loosely), so as to achieve a balance between orderly deleveraging and growth stability. This is particularly important when facing a divergence in the cycles in the real economy and financial system. As Xiaohui Zhang, assistant governor of the PBoC, recently noted,[16] monetary policy and macro-prudential policy are not necessarily always synchronised, and sufficient and flexible coordination between the two can prove vital for effective regulation of the financial sector and economy.

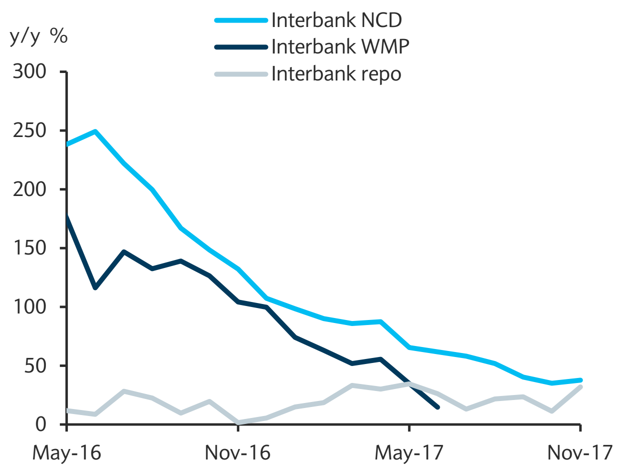
How regulatory policy has influenced liquidity and interest rates

China has developed an interbank system that channels money from large banks to medium-/small-sized banks and to NBFIs

China's financial sector has developed an interbank system that connects various institutions and channels money from banks to NBFIs (Figure 23). Typically, the first point in the chain is the large commercial and policy banks, which have regular access to low-cost funding from the PBoC via OMOs and other liquidity facilities (due to the low and steady interest rates of recent years). The large banks then channel this liquidity to medium and small banks, mainly through interbank repo lending, purchasing interbank WMPs and NCDs.[17] The money is then channelled (from medium/small banks, or directly from large banks) to NBFIs – eg, fund-management companies, securities firms, trust companies, insurers – through repo lending or banks' entrusted investment / "pass-through".

FIGURE 21

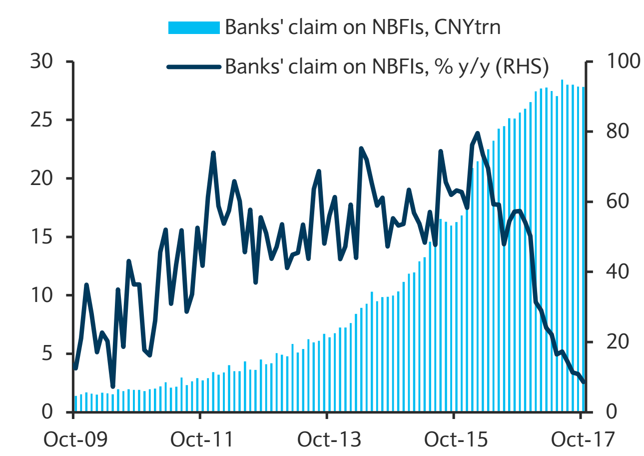
Interbank WMPs and NCDs are more restricted by regulation



Source: Wind, Barclays Research

FIGURE 22

Bank's claims on NBFIs slowed sharply



Source: Wind, Barclays Research

[16] Xiaohui Zhang, "The exploration of macro-prudential policy in China", *China Finance*, 2017.
[17] In addition to liquidity from the PBoC, large national banks have better and broader access to household deposits (including quasi-deposit WMP funds) through their branch networks. In contrast, regional and local small banks generally have more limited retail funding and have to rely more on interbank lending for business expansion.

Regulatory tightening has pushed up interbank interest rates

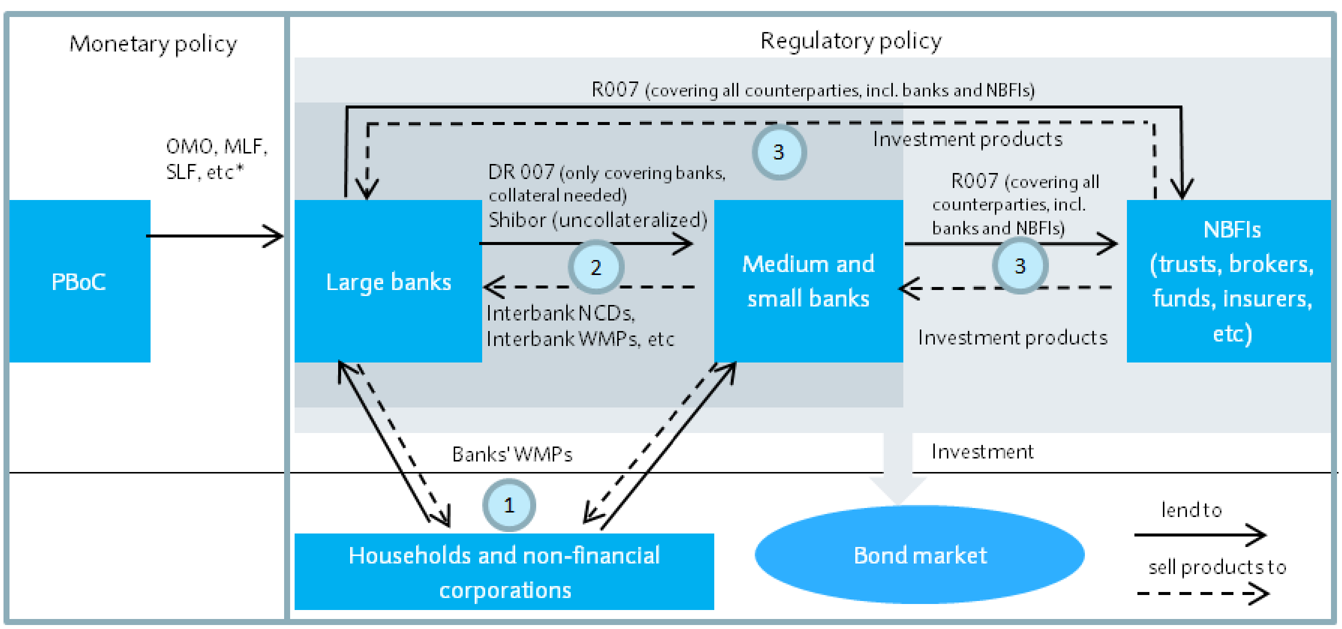
In our view, the regulatory tightening has mainly affected interest rates by limiting the sources of funding for financial institutions. This, in turn, has resulted in or exacerbated a tight liquidity environment and lifted interbank rates, mainly through three channels (Figure 21). First, the inclusion off-balance-sheet WMPs in the MPA framework has limited growth in banks' WMPs, an important source of funding for both large and medium/small banks. Second, stricter restrictions on interbank lending (in particular, interbank WMPs and NCDs) have reduced the liquidity that can be channelled from large banks to medium/small banks, as well as NBFIs. Indeed, the y/y growth in outstanding interbank WMPs and NCDs has been significantly slower over the past year (Figure 21). Third, the greater supervision of "pass-through" channels and entrusted investment between banks and NBFIs has made it more difficult for the latter to obtain interbank liquidity; this is reflected in the sharp slowdown in growth of banks' claims on NBFIs (Figure 22).

Regulatory tightening has also exacerbated bond market volatility

At the same time, restrictions on off-balance-sheet and interbank financing after the tightening of regulations have forced banks to adjust their balance sheets. In short, banks – medium- and small-sized banks in particular – are no longer able to continuously roll over (and issue more) WMPs and NCDs to finance balance sheet expansion. To meet the funding gap in repaying matured WMPs and NCDs, banks have had to shrink their balance sheets by selling off underlying assets (typically bonds are the most liquid assets) or redeeming entrusted investments, which, in turn, has forced NBFIs to sell off bonds and other securities investments (Figure 24). Each time the regulators announced more tightening measures (eg, end-October 2016 and end-March 2017), the market tended to interpret these as signals for further regulatory tightening (or more pressure on balance sheet adjustments), resulting in further bond market sell-offs and volatility (Figure 25).

FIGURE 23

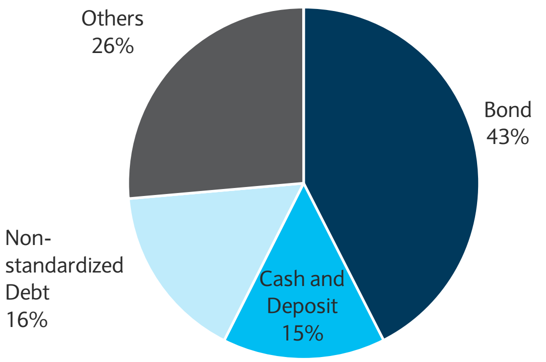
A simplified version of money flow in China's interbank system



Note: *The PBoC's lending tools can also be used by 48 financial institutions, including 6 big state-owned banks, 2 policy banks, 11 joint-stock banks, 22 city commercial banks, 3 foreign banks, and 4 security firms. 1,2,and 3 correspond to first, second, and third in the text above. Source: PBoC, Barclays Research

FIGURE 24

WMPs underlying assets

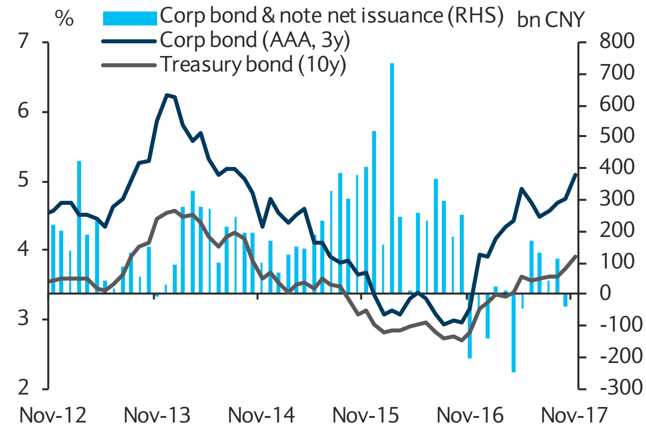


Note: data are as of 2017H1; others include equity, private funds, financial derivatives, etc.

Source: China Banking Association, Barclays Research

FIGURE 25

Bond market selloffs



Source: Wind, Barclays Research

Box 3. How PBoC tightened policy to guide interest rates higher in the past year

In the past year, we believe the PBoC's priorities have clearly shifted towards deleveraging and controlling financial risks, amid generally stronger-than-expected economic growth and moderate inflation. The December 2016 Central Economic Work Conference set preventing systemic risks as the paramount policy priority (see *China: Annual conference sends tightening monetary bias signals*, 16 December 2016), while the July 2017 National Finance Work Conference stressed SOE deleveraging (see *China: National Finance Work Conference emphasized deleveraging and risk control*, 17 July 2017).

We have noted a shift in the PBoC's monetary stance towards a tightening bias since August 2016. In particular, we think the PBoC has intentionally guided higher market interest rates since then, especially the policy target rate (DR007), through three main types of tightening actions using policy rates, liquidity management, and regulatory tools:

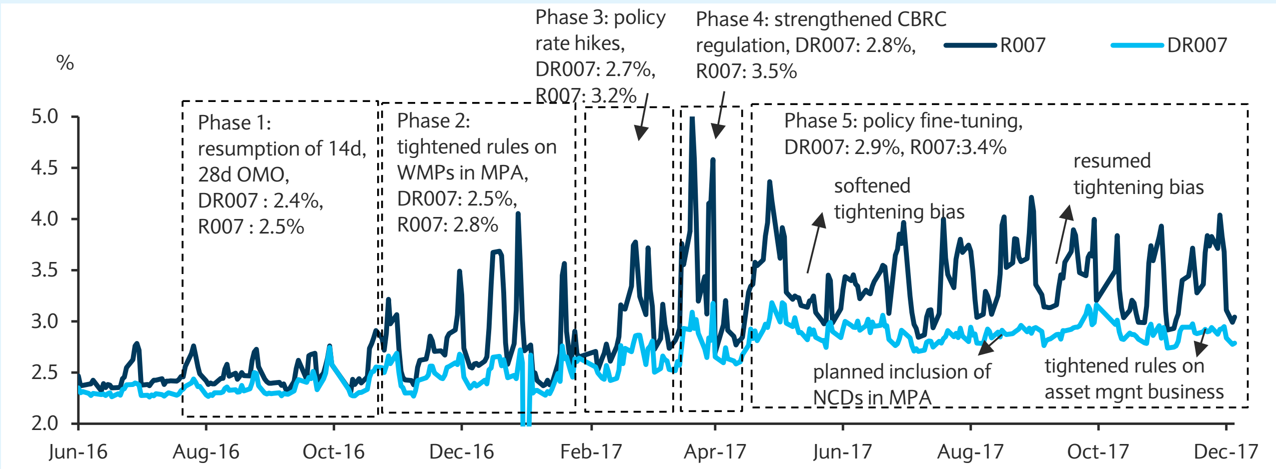
- It raised the (effective) policy rates (Figure 8) by: 1) "locking short-term and releasing long-term liquidity;" that is, it increased use of longer-maturity OMOs (14d-28d-63d) and MLFs (6m-1y); and 2) raising the interest rates of both tools (in February-March 2017).

- It maintained a "tight" liquidity environment by providing liquidity just "sufficient" to "smooth out the peaks and troughs" (Q1 Monetary Policy Report, May 2017). We think the PBoC intentionally maintained a liquidity shortfall and tight balance to control and guide interest rates under a "structural liquidity deficit" environment. Its liquidity management appears to have been designed to broadly offset passive fluctuations due to factors such as FX flows, treasury deposits and reserve changes (Figure 27). We note that the timing and volume of these effects could be difficult to gauge ex ante.

- It has tolerated the disruptive impact of regulatory policies (and other market forces) that led to higher and volatile interbank rates, through inactive or insufficient liquidity intervention, in our view. As discussed above, the strengthening of macroprudential and micro regulations has played a part in driving money market rates higher. While the central bank can opt to use liquidity management (ie, conduct more OMOs to inject liquidity) to ease upward pressure on interbank interest rates, it had at times chose not to do so when higher interest rates are actually preferred.

FIGURE 26

The PBoC guided interbank interest rates higher



Source: Wind, Barclays Research

To analyse the PBoC's intention under our monetary + regulatory tightening framework and the implication for money market rates, we divide the past 18 months roughly into five phases (Figure 26):

- **Phase 1: August – late October 2016 (monetary tightening bias begins)**

  The PBoC resumed 14d OMOs (Aug) and 28d OMOs (Sep) and suspended 3m MLFs (shifting more to 6m-1y MLFs).

- **Phase 2: November 2016 – January 2017 (regulatory tightening begins)**

  The PBoC announced it would include off-balance-sheet WMPs in its MPA in [late October](effective Q1 17).

- **Phase 3: February – March 2017 (monetary tightening + regulatory tightening)**

The PBoC raised the 1y MLF rate by 10bp on 24 January (40 days after Fed rate hike in December 2016) and 7d reverse repo rate by 10bp on 3 February (50 days after Fed rate hike in December 2016).

The central bank hiked 7d repo rate and 1y MLF rate by 10bp on 16 March, following the Fed rate hike on 15 March.

- **Phase 4: Late March – May 2017 (regulatory surprises)**

  The CBRC led a "regulatory storm" by issuing eight guidelines within a month, and the PBoC appears to have tolerated the subsequent rise in interbank interest rates in April-May before calling for more policy coordination in late May.

- **Phase 5: Late May – December (enhanced liquidity fine-tuning and policy coordination)**

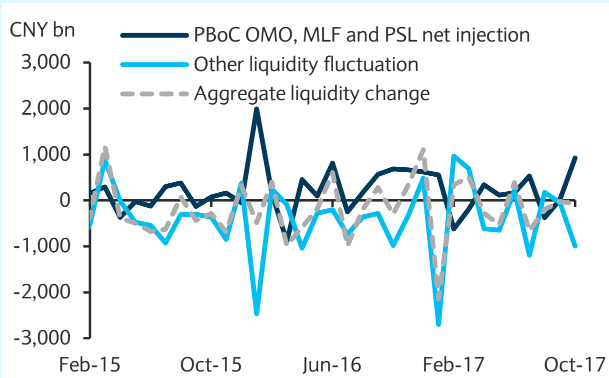
  In views of the risk from policy over-tightening in April-May, the PBoC appeared to ease its tightening bias in June. However, we think rebound in interbank and off-balance-sheet activities in July prompted the central bank to revert to a tightening bias in August.

Through the above five phases the tightened policy environment resulted in the DR007 and R007 rates rising by c.90bp and c.150bp at their peak in May before moderating to increases of c.50bp and c.90bp in Q4 2017, respectively. The greater volatility in the R007 underlined the PBoC's intention to guide its policy target rate (DR007) higher at a steady pace while being willing to tolerate a more volatile R007. Interestingly, it appears that the guided move in DR007 is strongly correlated with the change in financial institutions' equity and other investments (where banks book many of their disguised interbank and off-balance-sheet activities), which is consistent with a tightening bias intended to encourage deleveraging (Figure 28).

Our analysis also sheds some light on how the PBoC balances monetary and macroprudential policies. In our view, the PBoC appears to refrain from active monetary tightening when regulatory tightening has had a significant impact on market interest rates, likely reflecting its intention to avoid potential financial instability caused by too strong double-tightening. This was the case in phases 2 and 4. We think the only double-tightening period in phase 3 was likely due to the PBoC's intended use of monetary tightening to manage CNY depreciation pressure given the widely-expected Fed rate hike, against the backdrop of better-than-expected growth and subdued inflation. Notably, phase 3 was the only one when the PBoC raised policy rates.

FIGURE 27

PBoC's liquidity management (positive/negative indicates liquidity injection/withdrawal)

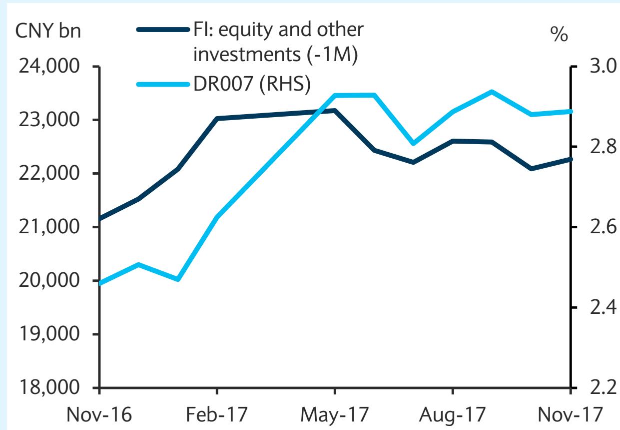


Note: other factors affecting liquidity include PBoC's FX purchase position, treasury deposits, reserves payment, and M0

Source: Wind, Barclays Research

FIGURE 28

Policy target rate appears to serve a deleveraging purpose



Source: Wind, Barclays Research

Outlook for policy and interest rates

PBoC likely to hike policy rates in 2018

We believe the PBoC's four policy priorities remain a useful guide to the outlook for monetary policy. Although CNY depreciation and capital outflows remain contained (Figure 29), we think the global monetary policy normalisation trend and expected Fed rate hikes (Barclays US economics team forecast three hikes in March, June and December 2018 with risks for more) on the back of a seemingly sustained global synchronised recovery and upward pressures to inflation suggest that the PBoC is likely to hike policy rates in 2018.

Given that deleveraging remains a priority, the central bank is likely to keep market interest rates elevated

This is also in view of deleveraging continuing to be the government's leading priority, as the Politburo meeting on 8 December highlighted "preventing and resolve major risks to effectively control macro leverage ratios" among the top 3 economic tasks in 2018.

We believe the PBoC sees elevated interest rates as the most desirable option to encourage deleveraging. In an article published in August, Min Ji,[18] deputy director of the PBoC's research bureau, stated that for China's deleveraging "an appropriately elevated interest rate would be on balance more beneficial to mitigating debt risks and curbing asset bubbles." Dr. Ji noted "ultra-low interest rates have been more associated with escalating asset prices rather than promoting growth in productivity over the past decade."

PBoC official expects faster global monetary policy normalisation in 2018

In a December speech, Guofeng Sun, head of the PBoC's financial research institute, said that long periods of interest rates being kept low by central banks would encourage risk-taking by commercial banks and in turn increase financial risks or even lead to a financial crisis. Moreover, he argued that in an environment of low interest rates, macroprudential policies could become less effective in containing high leverage in the market. Mr Sun argued that central banks need to raise interest rates to prevent excessive risk-taking and

[18] Min Ji, "What kind of interest rate environment better suits deleveraging", Modern Bankers, August 2017.

said he expected both developed and emerging economies to accelerate or initiate normalisation of monetary policies in 2018.

We see upside risks to our 2018 GDP growth forecast

In the near term, we expect GDP growth to slow gradually as production disruptions and factory closures resulting from the government's winter smog controls could exert temporary downward pressure on industrial activity. However, in the medium term, we think the risks to our 2018 growth forecast have shifted to the upside, with potentially stronger-than-expected investment and exports next year (see *China Quarterly Outlook: Strong investment to support growth in 2018*, 17 November 2017).

We forecast rising, albeit contained, CPI inflation

We expect CPI inflation to rise modestly in the coming quarters, to 2.2% in 2018. While we do not envisage monthly CPI inflation exceeding 3%, given the contained upward pressure on housing inflation, stable wage growth and an expected moderation in PPI inflation , we think easing food inflation, upside risks to GDP growth, and the deregulation of pricing in the services sectors present upside risks (Figure 30, see *China: 2018 inflation forecast raised, amid rising but contained PPI pass-through to CPI*, 9 November 2017).

We now expect the PBoC to hike policy rates, likely in March 2018

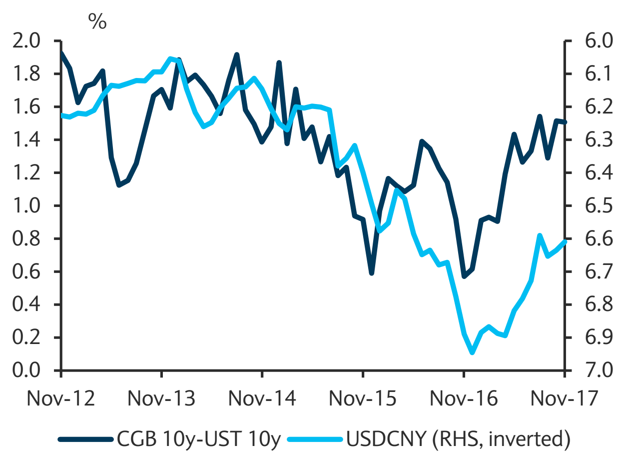
On monetary policy, we now forecast that the PBoC will hike policy rates in 2018 (OMO and MLF by 10bp), likely in March, but keep benchmark rates unchanged. We do not expect the PBoC to raise policy or benchmark interest rates following the Fed rate hike in December 2017. We think the materialisation of upside risks to growth and inflation in 2018 would increase the chance of the PBoC raising policy rates more than once. Overall, we expect the PBoC to maintain the neutral stance with a tightening bias, unless growth slows more than expected, and will guide the policy target rate (DR007) higher.

We also expect more regulatory tightening and elevated market rates

On regulatory policy, the recently released unified rules on asset management products and other regulatory developments suggest that the PBoC remains committed to deleveraging and controlling financial risks. More MPA extensions are already in the pipeline (or under consideration), to cover, for example, 1) large, systemically important internet finance firms (China Regional Finance Reports, August 2017); and 2) growth in broadly-defined credit to the property market. We think the PBoC's continued tight grip on regulatory policy again illustrates its tightening bias, with its desire for higher interest rates likely to ensure that market interest rates remain at elevated levels.

FIGURE 29

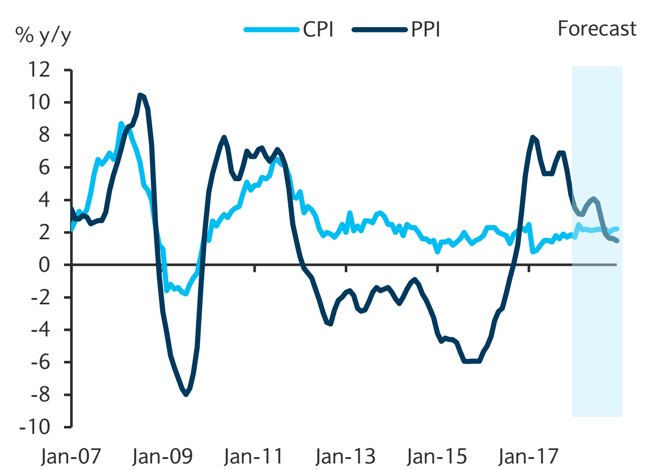
USDCNY and China-US government bond yield differential



Source: Wind, Barclays Research

FIGURE 30

CPI and PPI inflation



Source: Wind, Barclays Research

APPENDIX 1

PBoC's monetary policy tools

FIGURE 31

	Time of introduction	Who are eligible to receive	Functions	Maturity	Collateral required	Outstanding (November 2017)	Interest rates
Short-term liquidity operations (SLO)	2013	Primary dealers (including, commercial banks/foreign banks/securities firms)	Supplementary to OMO	1d/7d	Repurchase agreements	Not in use since January 2016	Decided by PBoC
Open market operation (OMO)	1998	Primary dealers (including, commercial banks/foreign banks/securities firms)	Adjust market liquidity	7d/14d/28d /63d	High-quality bonds	CNY1350bn	Decided by PBoC
Standing lending facility (SLF)	Early 2013	Commercial banks and policy banks	Supplementary to OMO	1d/7d/1m	High-quality bonds, and credit assets	CNY19bn	Decided by PBoC
Temporary lending facility (TLF)	Jan-17	Large commercial banks		28d	No collateral		Decided by PBoC
Medium-term lending facility (MLF)	Sep-14	Commercial banks and policy banks	Provide medium-term liquidity	3m/6m/12 m	High-quality bonds	CNY4421bn	Decided by PBoC
Pledged supplementary lending (PSL)	Apr-14	Policy banks	Provide longer-term large-scale financing to policy banks tasked with financing government projects	3-5y	No disclosure	CNY2622bn	Decided by PBoC

Source: PBoC, Barclays Research

FIGURE 32

Key policy rates and money market rates

Name	Definition	Current rate (range in November 2017)	Notes	Important
Policy rates				
OMO rates	Rates on open market operation	7d OMO: 2.45%	PBoC's 7d OMO rate is viewed as short-term policy rate	Y
Benchmark rate	The PBoC sets the benchmark deposit and lending rates for all financial institutions	1y lending: 4.35%; 1y deposit: 1.5%	Despite interest rate liberalisation, a large portion of loans are still priced very close to the benchmark rate	Y
MLF rate	Rates on medium-term lending facility	3m: 2.75%; 6m: 3.05%; 12m: 3.2%	MLF rates are viewed as medium-term policy rates	Y
Interest on RR	Rate of remuneration on required and excess reserves	0.72%		
PBoC bill yield	Yields on PBoC bills used for sterilization	3y: 3.5%	Not in use since November 2013	
SLF rate	Rates on standing lending facility	1d: 3.3%; 7d: 3.45%; 1m: 3.8%		
TLF rate	Rates on temporary lending facility	28d: 2.75%		
PSL rate	Rates on pledged supplementary lending facility	2.75%		
Money market rates				
DR007	Weighted average of 7d interbank repo rate, covering only banks	2.7-3%	According to the PBoC, DR007 plays an active role in cultivating the market benchmark interest rate	Y
R007	Weighted average of 7d interbank repo rate, covering all counterparties, including banks and NBFIs	3%-4%		
SHIBOR	Average fixing of participating banks' offered rate	7d: 3%-4%		
CD rate	Rate of banks CDs	3m, AAA: 4.2%-4.5%		

Source: PBoC, Wind, Barclays Research

APPENDIX 2

MPA overview

The macro-prudential assessment (MPA) framework, which was launched in Q1 16, built upon the PBoC's previous credit-growth management measures (ie, administrative controls and prudential regulations including credit quotas and differentiated RRRs). The MPA assigns a score to each bank based on seven parameters. Depending on their MPA score, banks are penalised/rewarded via higher/lower RRR or harder/easier access to PBoC lending facilities (Figure 33). Currently the MPA is evaluated on a quarterly basis, and banks' month-end data are also monitored. The PBoC has refined the MPA parameters since it was launched, mainly to incorporate more off-balance-sheet and interbank activities.

The central bank and government have highlighted the increasingly significant role of macro-prudential management over the past year. In its Q4 Monetary Policy Report (February 2017), the PBoC stated, for the first time, that the MPA has become "an important part of its two-pillar framework built on monetary policy and macro-prudential policy". Most recently, the Party Work Report delivered by President Xi at the 19th Communist Party Congress highlighted the need to improve the two-pillar regulatory framework further.

FIGURE 33

MPA overview

Seven parameters	Indicators (score)	From Q3 16 onwards	From Q1 17 onwards	From Q1 18 onwards
Capital and leverage	Capital adequacy ratio (80 points), leverage ratio (20 points)			
Assets and liabilities	Broad credit (60 points), entrusted loans (15 points), interbank liabilities (25 points)		Inclusion of off-balance-sheet WMPs in broad credit	Inclusion of interbank CDs in interbank liabilities
Liquidity	Liquidity coverage ratio (LCR, 40 points), net stable funding ratio (NSFR, 40 points), compliance with reserve requirement (20 points)			
Pricing behaviour	Pricing of interest rates (100 points)			
Asset quality	Non-performing loan (NPL) ratio (50 points), provision coverage ratio (PCR, 50 points)			
Foreign debt risks	Risk-weighted balance of foreign debt (100 points)	Inclusion of banks' cross-border business risks		
Carrying out of credit policy	Carrying out of credit policy (70 points), use of PBoC's funds (30 points)			
Grade categories	**Conditions**	**Incentives & penalties**		
Grade A	If score in each area exceeds 90 points	Banks will be paid a premium (10%/20%/30%)* over the official reserve interest rate		
Grade B	Neither A or C	Banks will be paid the official reserve interest rate		
Grade C	If score for either capital and leverage or pricing behaviour is below 60 points, or scores for at least two of the remaining areas are below 60	Banks will receive a reserve interest rate discount (-10%/-20%/-30%)*		

Note: *±10%: normal case; ±20%: strong incentive/penalty; ±30%: extreme case. Source: PBoC, Barclays Research

APPENDIX 3

Summary of regulations in 2017

FIGURE 34

Date	Regulations	Regulatory body/Circular
17-Nov-17	The PBoC unveiled a proposal to tighten supervision of asset-management products. Financial institutions should offer yields based on the net asset value of the products they issue, to reflect the risks and return of the underlying assets, instead of offering a guaranteed principal repayment or rate of return. The draft rules are set to take effect in 2019.	CBRC 30
31-Aug-17	The CBRC tightened trust industry oversight, including limiting the number of trust beneficial accounts for each trust product, and clarify the liabilities and rights of all participating parties to better protect investors.	CBRC
11-Aug-17	The PBoC said that it would start to include NCDs (tenors within one-year, issued by banks with assets of more than CNY500bn) in its quarterly MPA from Q1 18.	PBoC
26-Jun-17	The CBRC circulated a notice requiring banks to strengthen their auditing and performance appraisal system, in order to crack down on graft in deposit-raising activities.	CBRC 30
08-May-17	The CBRC told banks to strengthen management of loan collateral to contain financial risks	CBRC 16
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

Date	Regulations	Regulatory body/Circular
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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