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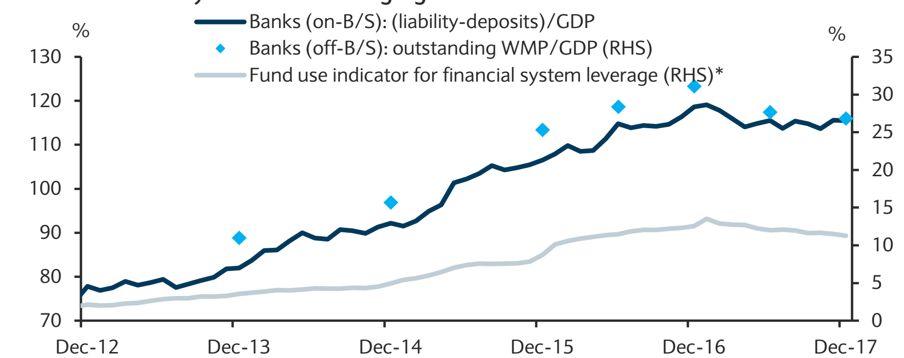
China

Evaluating financial deleveraging

- In view of the Chinese government's aim to bring financial risks and macro leverage under control in about three years, one question is where China stands in the 'financial deleveraging', and how much further it has to go. There are at least three interpretations of leverage: trading, financing system, and real economy leverage.
- We employ three methods – which analyse FIs' liabilities, interbank items, and fund uses, respectively – to gauge the progress of financial deleveraging, and discuss its impact on financial institutions, interest rates and the economy.
- The three methods consistently suggest that financial deleveraging (by our definition) was about 30% complete at the end of 2017, using the 2015 level as a benchmark. Among the three types of NBFIs, we find that the leverage of trust companies has continued to rise, in contrast to declines for securities firms and insurers.
- Looking ahead, while a tightening bias will remain, we think the PBoC may not necessarily follow the Fed in hiking rates given increasing uncertainty both domestically and externally. On regulatory policy, the final rules for AMPs will likely be rolled out in the coming months, which could add a source of market volatility. A new financial regulatory framework merging the CBRC and CIRC, with some of their rule-making functions transferred to the PBoC, has been approved by the NPC. We believe the new framework will enhance China's financial regulatory coordination.
- Moreover, we expect the impact of deleveraging on the economy to remain contained, as the policy focus continues to be on reducing regulatory arbitrage, shortening the excessively long capital chain, and deleveraging FIs' interbank liabilities, while ensuring sufficient support for the real economy. Hence, we expect a moderate slowdown in broad credit growth and note that the interbank lending rate, although rising, is still c.100bp below 2014-15 levels.

FIGURE 1

China's financial system is deleveraging



Note: This indicator is based on "share and other investment", which is a fund use item highly linked to interbank, wealth management, off-balance-sheet, and shadow financing activity.

Source: Wind, Barclays Research

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We present three methods to track financial deleveraging and evaluate its impact

With controlling financial risks likely to continue to lead China's policy agenda in the coming three years and more financial regulations expected to be rolled out and implemented, investors are keen to understand the current status of the country's "financial deleveraging" campaign, and how much further it has to go. Other questions being asked include: What is the impact of financial deleveraging on interest rates? Why has the "success" of financial deleveraging not come at the cost of GDP growth? And will any potential lagged impact be felt in 2018? In this report, we present and discuss three methods to gauge and track the progress of financial deleveraging in China, and evaluate its impact on the country's financial institutions, interest rates, and the real economy.

Financial de-risking: A key task for 2018-20

Chinese authorities started to emphasise deleveraging in 2016

Since H2 16, we have highlighted the People's Bank of China's intention to reduce leverage in China's financial markets and the government's commitment to reduce financial risks (see *China Outlook: More prudent PBoC balancing multiple goals*, 2 September 2016; *China: Annual conference sends tightening monetary bias signals*, 16 December 2016; and *China: National Finance Work Conference emphasized deleveraging and risk control,* 17 July 2017). For detailed monetary and regulatory measures rolled out during China's deleveraging campaign since 2016, see Box I: China's financial deleveraging: background and actions.

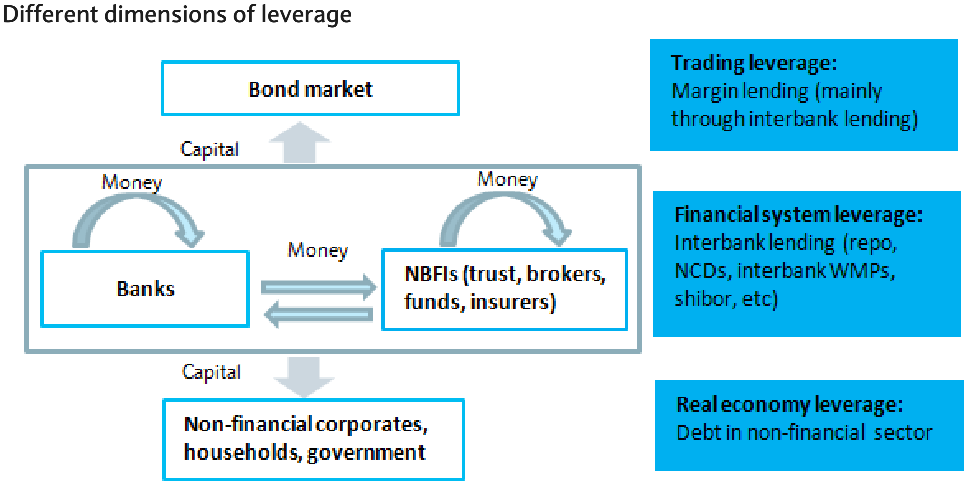
Controlling risks and leverage will remain key tasks, as emphasised by Liu He

In January 2018, Liu He, an economic advisor to President Xi Jinping and the director of the Office of the Central Leading Group for Financial and Economic Affairs, reiterated key risks facing China and policy priorities in a speech at the World Economic Forum in Davos, Switzerland. He singled out financial risk as a major challenge for the government, and said that China would strive to bring the country's systemic risks and macro leverage ratio under effective control in about three years' time. Liu's pledge follows official statements at the December 2017 Central Economic Work Conference that preventing major risks (in 2018-20) is one of the three key tasks for the government.[1]

The PBoC will maintain a tightening bias, but will also stay flexible with policy moves given the rising uncertainties

We expect the PBoC to continue its neutral and prudent monetary policy stance with a tightening bias in 2018. We think the central bank's policy actions in 2018 likely will focus more on domestic considerations (growth, inflation, liquidity) rather than external factors (capital outflows, maintaining interest rate differentials). While the PBoC could follow the Fed in hiking policy rates (OMO and MLF rates) again by 5-10bp each time, as it did in

FIGURE 2
Different dimensions of leverage



Source: Barclays Research

[1] The other two major tasks are poverty alleviation and pollution control (see *China: Annual conference confirms shift in major tasks while emphasising both quality and growth stabilisation*, 21 December 2017).

March and December 2017, we think it will prefer to stay flexible in 2018 in view of increasing uncertainty, domestically and externally, that could exert downward pressure on economic growth (see *Strong Jan-Feb activity data support our above-consensus growth forecast*, 14 March 2018). Our base case remains for no hike in the benchmark lending rate as we do not expect monthly CPI inflation to break the 3% level this year (it likely peaked at 2.9% in February). That said, potential renewed capital outflow pressures following successive rate hikes by the Fed could present risks to our view. On the other hand, we think the government's repeated calls for lowering corporate financing costs to support the real economy also suggest that RRR cut to retire MLF cannot be ruled out.

We also expect more MPA extensions and specified rules on AMPs

On regulatory policy, we look for more measures to be released or implemented by various regulatory bodies. We expect the PBoC to extend its macroprudential assessment (MPA) to include internet finance and more shadow credit items. Meanwhile, we expect the final rules on asset management products (AMPs) to be issued in the coming months, including more specific regulations to set detailed standards and rules for AMPs sold by particular financial institutions, adding a source of volatility to financial markets.

What leverage/deleveraging are we talking about?

This report mainly focuses on leverage in the financial system

As the words "leverage/deleveraging" could be interpreted differently in different contexts, we think it is useful to define what we are referring to and note there are at least three concepts of leverage commonly used by market (Figure 2):

1. Trading leverage: the borrowing by FIs in bonds and other investments;
2. Financial (system) leverage: the liabilities (particularly interbank lending and products) of financial institutions (FIs) and the financial system as a whole; and
3. Real economy leverage: the aggregate debt of the economy, which typically means the non-financial sector including government, corporates and households.

While the three concepts of leverage look at different market entities and use different measures, we think they are intrinsically related, and sometimes trading leverage could be perceived as part of financial leverage. As FIs borrow money (mainly through interbank lending) to add leverage in financial market investment, such borrowing will be reflected in both trading leverage and financial system leverage. Meanwhile, real economy leverage, the most commonly used form of leverage by overseas investors, is linked to FIs' assets and liabilities, given that non-financial debt is borrowed mainly from the financial system.

In this note, we mainly focus on discussing and understanding leverage/deleveraging in the financial system. In particular, we have constructed and/or selected indicators to monitor deleveraging in various types of FIs and the financial system as a whole.[2]

Financial deleveraging: Where do we stand?

Three approaches to monitor financial deleveraging

We use three different methods to gauge financial system leverage/deleveraging (as summarised in Figure 3):

1. Aggregate liability method, which directly calculates the debt level of various financial institutions (FIs; including both banks and non-banks).

[2] Although investment leverage can also be informative in monitoring financial deleveraging, we think it is difficult to construct a good tracking indicator due to lack of high-quality data on interbank lending used for, say, bond trading in China. While a common approach to gauge bond market leverage is to use outstanding repo as a measure of margin lending, we think this does not capture other types of interbank channels (such as NCDs and WMPs) used for margin financing. Although the aggregate data on these channels are available, we do not know how much such lending is used for bond trading and thus are unable to accurately measure the bond market leverage.

2. Interbank channel method, which tracks deleveraging by estimating interbank liabilities or banks' credit channelled to non-bank financial institutions (NBFIs).

3. Fund use method, which monitors an item commonly used by FIs to book interbank and off-balance-sheet activities.

FIGURE 3
Three methods to monitor financial deleveraging

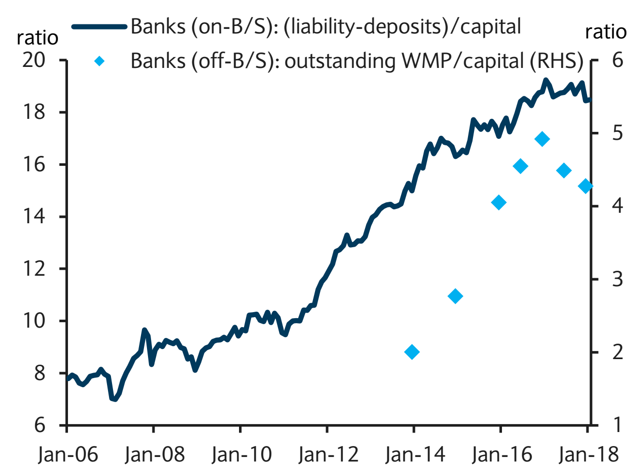
	Method (1) Aggregate liability				Method (2) Interbank channel		Method (3) Fund use
Financial institutions	Bank (on-B/S)	Bank (off-B/S)	Securities	Insurer	Bank (on-B/S)	NBFI	Bank & NBFI
Indicator	Liability-to-GDP, liability-to-capital				Interbank liabilities	Banks' claims on NBFIs	Share and other investment
Frequency	M	S	Q	Q	M	M	M
Deleveraging % complete^…	28-30%	28-30%	30-33%	25-29%	35%	26%	30%
...as of	Dec-17	Dec-17	Dec-17	Dec-17	Jan-18	Dec-17	Jan-18

Note: ^The progress on financial deleveraging is estimated using the level at the start of 2015 as a benchmark.
B/S = balance sheet; M = monthly; S = semi-annual; Q = quarterly; NBFI = non-bank financial institution.
Source: Wind, Barclays Research

Despite intrinsic differences, the three methods generate similar "deleveraging" estimates

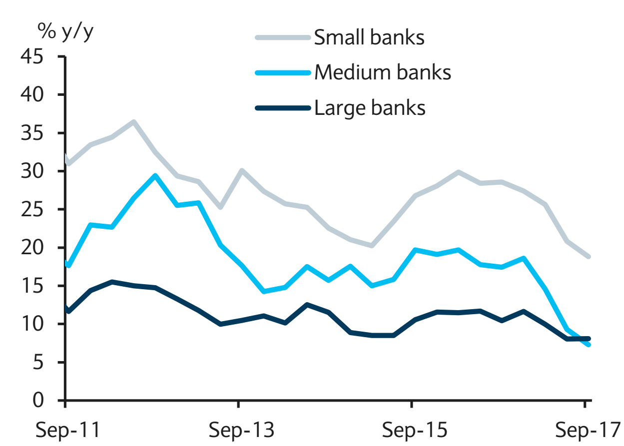
We recognise that each method may have limitations, especially given data availability. While Method 1 appears most straightforward in terms of identifying the aggregate debt of each type of FI, the low frequency of some underlying data means that tracking may not be very timely. In contrast, the data used in Methods 2 and 3 are updated on a monthly basis and, thus, could offer a more comprehensive indicator (Method 3 covers FIs as a whole), although it is difficult to identify the deleveraging for a particular type of FI using the two methods. Regardless, as shown in Figure 3, the three types of indicators paint a broadly consistent picture of the extent of "deleveraging" in China's financial system to date.
Despite such limitations, overall, the three methods generate similar a conclusion that China's financial deleveraging is about 30% complete as of end-2017 (using the 2015 level as a benchmark), as will be shown in our following analysis.

FIGURE 4
Banks' deleveraging measured by liability-to-capital ratio



Source: Wind, Barclays Research

FIGURE 5
Growth in banks' balance sheets has decelerated



Source: Wind, Barclays Research

Method 1: Direct measure of debt (leverage)

Debt method is the most straightforward indicator

The most straightforward indicator of "deleveraging" seems to be one that directly tracks leverage (debt) levels.[3] While there appear to be no standard measures to estimate debt for China's financial sector, conceptually, we believe such indicators should be able to capture on- and off-balance-sheet liability levels.

We construct direct measures of debt for banks and NBFIs

To reflect this, we use on- and off-balance-sheet liabilities for banks and assets under management (AUM) for NBFIs to construct their liability-to-GDP and liability-to-capital ratios. For banks, we use outstanding wealth management products (WMPs) as a proxy for off-balance-sheet liabilities. Although, in theory (and in practice in other countries), the debt of most NFBIs could be measured by on-balance-sheet liabilities, we focus on AUM in China's case, mainly because: 1) data on aggregate liabilities for some types of FIs are not available; and 2) we think AUM arguably could better capture off-balance-sheet debt; this is because many "pass-through" channels or entrusted investments from banks to NBFIs, although appearing off-balance sheet as AMPs, are widely viewed as liabilities due to their "implicit guarantee" feature (see Box 1; *China: Alternative credit aggregates*, 18 October 2016; and *China: PBoC watching: The evolving policy framework*, 14 December 2017).

In particular, the debt indicators of banks and NBFIs (and data frequency) are specified as:

FIGURE 6

Method 1: Measuring debt of financial institutions

Financial institution	Liability-to-GDP	Frequency	Liability-to-capital	Frequency
Bank (on-B/S)	(Total liabilities - deposits^) / GDP	Q	(Total liabilities - deposits^) / capital	M
Bank (off-B/S)	Outstanding WMPs / GDP	S	Outstanding WMPs / capital	S
Securities firms	AUM / GDP	Q	AUM / equity	Q
Insurers	AUM / GDP	Q	AUM / equity	Q
Trust companies	AUM / GDP	Q	AUM / equity	M

Note: ^ The adjustment of deposits is to capture banks' "proactive" liabilities – eg, banks raise funds through interbank channels to expand their balance sheets. B/S = balance sheet, M = monthly, S = semi-annual, Q = quarterly. Source: Wind, Barclays Research

The indicators are most useful when tracking deleveraging for the same type of FI

As shown in Figure 6, while liability-to-GDP measures may represent the macro level of FI debt more accurately, liability-to-capital indicators use data that are updated more frequently. However, we note that given the different features of FIs and the different formulas we use, it is not particularly meaningful to compare these debt indicators across FIs and draw conclusions about which FI has the lowest liability ratio. Given that our main objective is to track the changes in debt over time, we believe these indicators are sufficient to provide a consistent time-series comparison, at least for the same FI.

Debt indicators suggest deleveraging is c.30% complete by our estimates

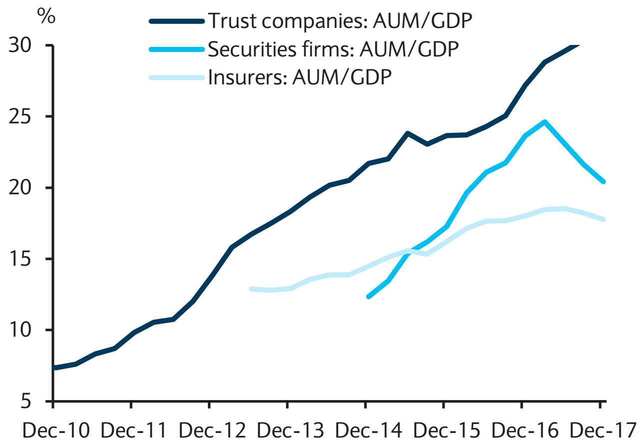
Debt indicators show banks are deleveraging

Figure 1 and Figure 4 show that banks' on- and off-balance-sheet debt both experienced a generally rising trend in the 10-year period ending 2016 before declining in 2017. In particular, we estimate that the on-balance-sheet liability-to-GDP ratio fell to 115% at end-2017 from 119% at end-2016, and off-balance-sheet liability-to-GDP fell to 27% from 31% over the same period. These results are consistent with the observed fall in growth of banks' liabilities and WMPs over this period (Figure 5 and Figure 9).

[3] We label Method 1 as a debt measure rather than a leverage indicator, to avoid it being confused with the Basel III "leverage ratio", which refers to the ratio of eligible tier-1 capital to a bank's adjusted on- and off-balance sheet assets. In this report, leverage refers to a concept that measures indebtedness.

FIGURE 7

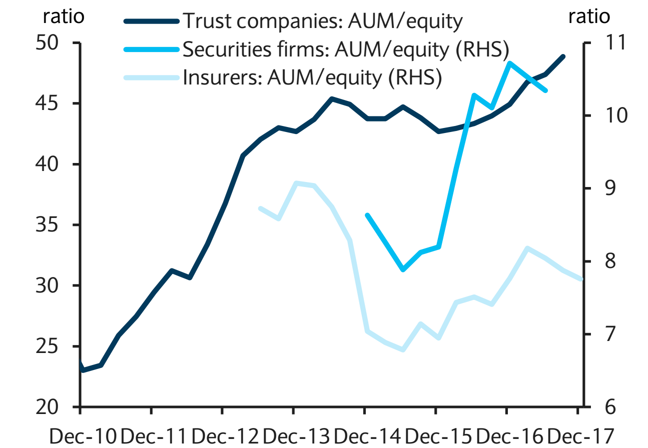
NBFIs' deleveraging measured by AUM-to-GDP



Source: Wind, Barclays Research

FIGURE 8

NBFIs' deleveraging measured by AUM-to-equity



Source: Wind, Barclays Research

To measure progress on deleveraging, we choose the 2015 level as our benchmark target

A frequent question being asked is how much of the deleveraging has been completed. To answer this, we need to select a certain criterion, eg, assigning a target debt level. Although no such goal has been announced by policymakers, we believe a reasonable target could be to reduce the liability ratio to its level in 2015, when the most recent surge in liabilities began (Figure 5). Thus, we choose 2015 as our benchmark target in the following analysis.

Banks' deleveraging is about 30% complete

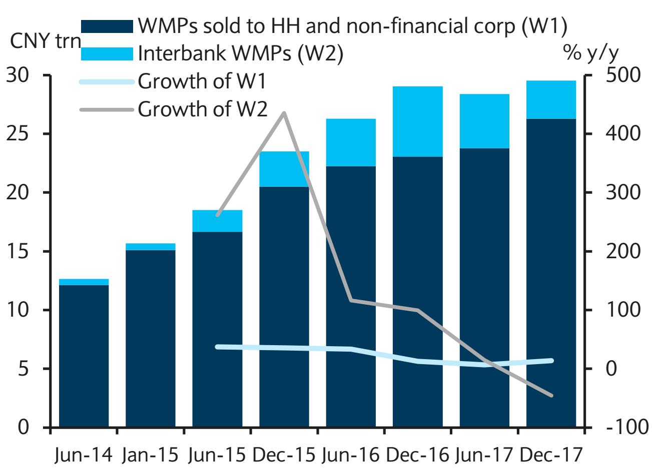
Assuming that deleveraging is deemed "complete" if banks' debt falls to the 2015 level from its recent peak, we estimate that, based on the liability-to-GDP (capital) ratio, deleveraging was c.30%, and c.28% complete for on-balance sheet and off-balance sheet as of end-2017.

We find that securities firms and insurers are also deleveraging, and at a similar pace as banks, while trust companies' leverage is still rising

We see a similar trend for NBFIs' debt; the liability ratios of securities firms and insurers both started to rise in 2015, and showed visible signs of deleveraging in 2017 (Figure 7 and Figure 8). The liability-to-GDP ratio of securities firms declined to 20.4% at end-2017 from 23.6% at end-2016, and the liability-to-GDP ratio of insurers decreased to 17.8% at end-2017 from a peak of 18.5% in March 2017. However, we see no sign of a reduction in debt at trust companies. These findings echo the changes in NBFIs' AUM growth (Figure 10).

FIGURE 9

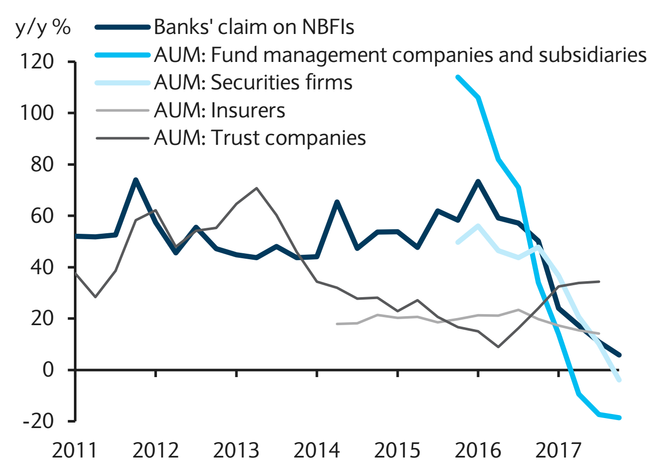
Outstanding (interbank) WMPs fell in 2017



Source: Wind, Barclays Research

FIGURE 10

Credit to NBFIs moves in tandem with NBFI AUM



Source: Wind, Barclays Research

Using the same criteria, we estimate that as of end-2017, securities firms' deleveraging was 30-33% complete, and the deleveraging of insurers was c.25-29% complete[4], suggesting their pace of deleveraging is similar to that of banks.

The rising leverage in trust business reflects substitution of "pass-through" channels via other NBFIs, but regulations on trust companies are catching up

We think the still-rising liability ratio for trust companies and the visible deleveraging in other NBFIs may reflect the shifts of some "pass-through" channels to trust business, which had not been directly targeted by the regulatory tightening in 2016-17. Indeed, growth in outstanding trust loans rose to c.36% y/y at end-2017, from c.16% at end-2016. This is in sharp contrast to the slight moderation in TSF growth from c.13% to c.12% during the same period. However, we expect to see deleveraging in trust companies this year, because since late 2017, there have been signs of tightened regulations on trust AUM, as represented by new rules issued in December 2017 on bank-trust cooperation (see Appendix), a common "pass-through" from banks to trust companies.

Method 2: Interbank channel estimates

This method overcomes the issue of infrequent data…

Given Method 1's limitations of low data frequency (quarterly or semi-annual basis) and long time lags, we look at two monthly indicators based on banks' interbank items.

… and its underlying logic is that deleveraging has been largely achieved through limiting interbank funding channels

The underlying logic is that deleveraging has been guided (under a tightened policy environment) mainly by limiting the rapidly-growing interbank funding channels during the previous "leveraging" period. The curbs on interbank funding, in turn, have forced banks (particularly small- to medium-sized banks; Figure 5) to adjust their balance sheets, given they are no longer able to continuously roll over matured interbank lending to finance balance sheet expansion. Banks have had to sell off underlying assets (bonds are typically the most liquid assets to cash in) or redeem entrusted investments. This, in turn, has forced NBFIs to sell off bonds and other securities investments, leading to reduced AUM (see Box 1; and *China: PBoC watching: The evolving policy framework*, 14 December 2017).

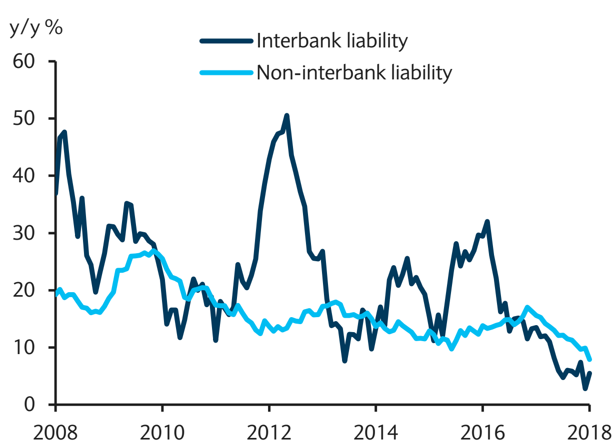
We estimate that deleveraging in interbank liabilities has progressed c.35%

Previously rapid growth in interbank liabilities…

Reflecting the rapid development of the interbank liquidity chain (Figure 2 in Box 1), the banking sector's aggregate interbank liabilities recorded 20%-plus growth between Q2 15 and Q1 16 (Figure 11). The breakdown, which includes deposits/borrowing from banks and NBFIs (adjusted to exclude stock deposits), and outstanding bonds and negotiable certificates of deposit (NCDs, which are booked under bonds), shows that the growth has mainly been driven by NCDs in recent years (Figure 12).

FIGURE 11

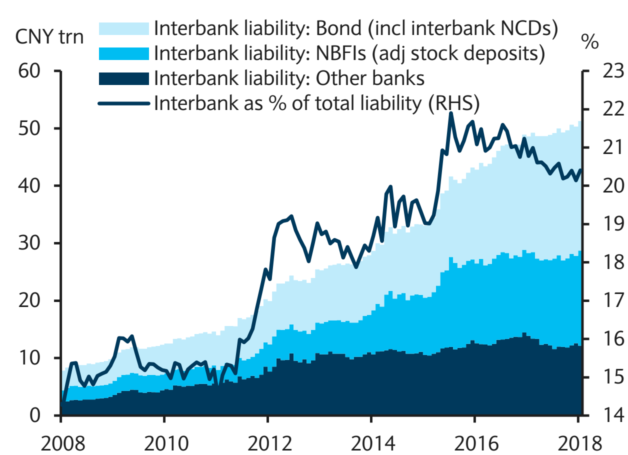
Growth in interbank liabilities has fallen more significantly than that of non-interbank liabilities



Source: Wind, Barclays Research

FIGURE 12

Interbank liabilities as a deleveraging monitor



Source: Wind, Barclays Research

[4] Due to data limitations, it is only possible to update the AUM-to-equity ratio for securities firms to Q2 17. To estimate the end-2017 ratio, we assume the pace of deleveraging in H2 17 is the same as in H1.

… has been curbed by tightening of interbank regulations

Indeed, much of the regulatory tightening in the past year has been directly aimed at limiting the expansion of interbank liabilities, in particular NCDs. For example, in August 2017, the PBoC announced the inclusion of NCDs in its macro-prudential assessment (MPA) of interbank liabilities; in April 2017 the China Banking Regulatory Commission (CBRC) issued rules stipulating that banks' interbank liabilities (including NCDs) should not exceed one-third of their total liabilities; and in January 2018 the CBRC stated that the emphasis of regulatory work would continue to be interbank and off-balance-sheet businesses.

Interbank-liability monitor suggests deleveraging is c.35% complete

As a result, growth in interbank liabilities has decelerated to single digits from a high of c.30% when financial deleveraging was launched in 2016 (Figure 11). Interbank liabilities as a percentage of total liabilities also began to fall amid deleveraging (Figure 12). Using a similar criterion that the target of deleveraging is for this share of interbank liabilities to return to its 2015 level, we calculate that deleveraging is c.35% complete as of January 2018. This is close to our estimate using Method 1.

Credit to NBFIs is c.26% deleveraged

Banks' claims on NBFIs is a useful indicator of deleveraging for NBFIs

We believe banks' claims on NBFIs, another balance sheet item, is a useful high-frequency indicator to monitor the deleveraging of NBFIs. This is because this item appears to be closely correlated with the growth in AUM of major NBFIs (Figure 10). New forms of credit channelled between banks and NBFIs have gained popularity since 2013, and banks' claims on NBFIs grew at c.60% y/y on average during 2013-16 (see *China: Alternative credit aggregates*, 18 October 2016). However, as the deleveraging campaign resulted in increased scrutiny of "pass-through" channels and entrusted investments between banks and NBFIs, growth in banks' claims on NBFIs has fallen sharply since late 2016, coinciding with a sharp slowdown in AUM growth of most NBFIs (Figure 10).

Balance sheet method suggests NBFIs' deleveraging is c.26% complete

Banks' claims on NBFIs as a percentage of their total assets rose from c.8% in 2015 to c.12% at end-2016, before declining in 2017 (Figure 13). Again, if the 2015 level is used as the target level of deleveraging, we estimate that NBFIs' deleveraging was c.26% complete as of end-2017, which is close to the range we estimated using Method 1.

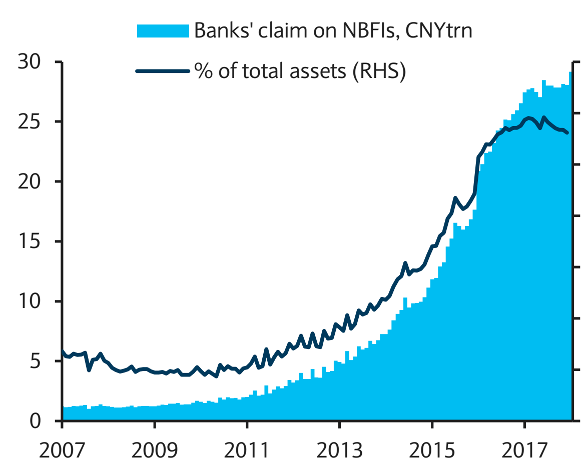
Method 3: Fund use suggests c.30% progress on overall deleveraging

Method 3 is better for capturing off-balance-sheet liabilities at a higher frequency

One shortcoming we note for Method 2 is that interbank items may not sufficiently capture banks' off-balance-sheet liabilities, while for Method 1, we see significant timing issues for estimates of off-balance-sheet liabilities, given that WMP data are only released twice a year. To overcome these weaknesses, Method 3 looks at an indicator that measures funds

FIGURE 13

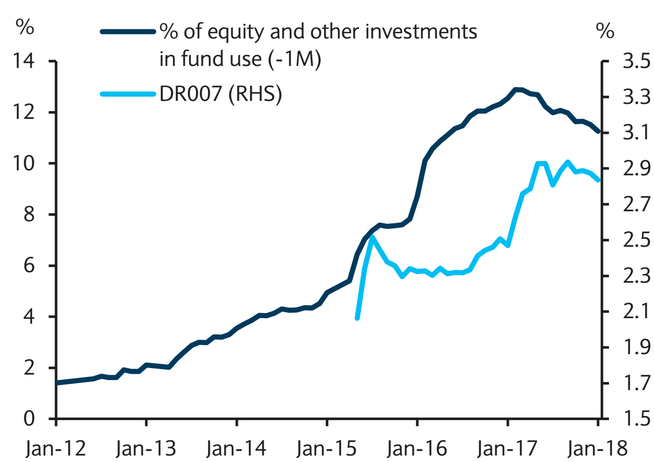
Claims on NBFIs as a deleveraging monitor



Source: Wind, Barclays Research

FIGURE 14

A fund-use item as a deleveraging monitor



Source: Wind, Barclays Research

used for “shares and other investments (SOI)”, which is published monthly by the PBoC as an item under the Sources and Uses of Funds of Financial Institutions.

The PBoC has highlighted EOI as a measure of financial deleveraging

Our rationale for selecting this indicator comes from the central bank itself. In a Q&A statement released on 14 June 2017 following the release of May 2017 credit data, the PBoC highlighted that “... the deleveraging of the financial sector has been illustrated in the slower expansion in items such as ‘shares and other investments’, which is highly linked to interbank, wealth management, off-balance sheet, and shadow financing activities”. As changes in the SOI item are strongly correlated with moves in DR007 (Figure 14), the PBoC’s policy target rate, we think this suggests that the central bank may have used SOI as a reference index when guiding interest rates higher (see Box 1, Figure).

Fund-use indicator estimates overall deleveraging is c.30% complete

Similar to earlier indicators, we find that the rapid increase in SOI (as a percentage of total funds used) since 2015 reversed in 2017. Assuming that the target for the SOI is a return to its 2015 level, we estimate that deleveraging was c.30% complete by January 2018. In addition, compared to Methods 1 and 2 that evaluate banks and NBFIs separately, Method 3 provides a more comprehensive estimate of deleveraging for the financial sector as a whole.

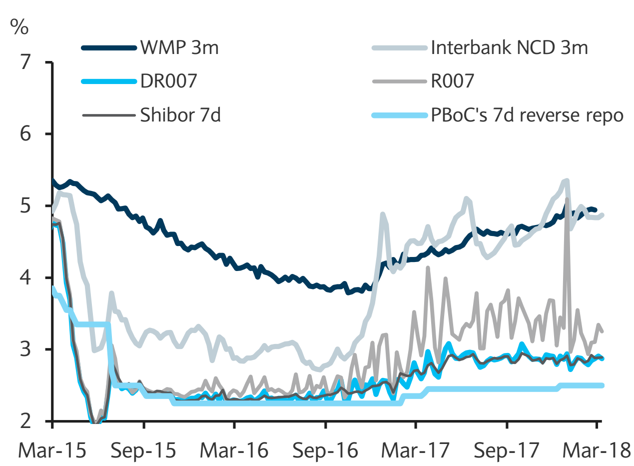
Deleveraging mainly targets the money chain within financial sector

Where has “deleveraged” money gone?

With our results suggesting significant progress in financial deleveraging to date, this raises the question of where has this money gone (eg, after matured interbank WMPs and NCDs are repaid). We think financial deleveraging has mainly targeted and affected the excessively long capital chain (as illustrated in Box 1, money may first flow within various financial institutions, in the form of interbank NCDs or WMPs), reducing the frequency of intermediate lending within the financial system, rather than affecting meaningfully the end channels where funds are raised from household and corporate depositors, and invested in certain assets. Moreover, even if some of the end-channel off-balance-sheet lending has been “deleveraged” under strengthened scrutiny of off-balance-sheet businesses, such lending has mostly been shifted to on-balance-sheet rather than been withdrawn from the real economy.

FIGURE 15

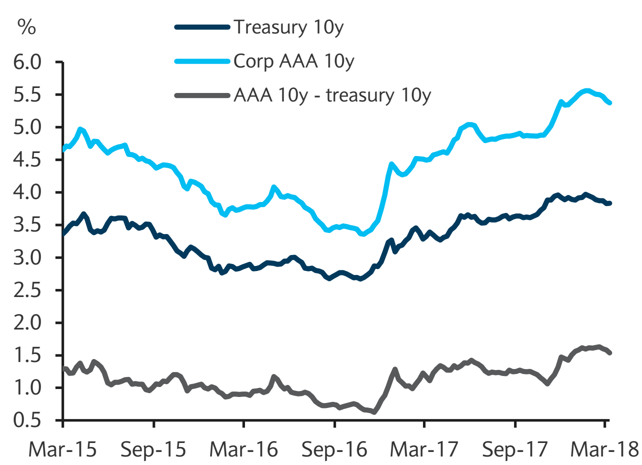
Money market rates rose amid deleveraging…



Source: Wind, Barclays Research

FIGURE 16

…as did bond yields



Source: Wind, Barclays Research

Deleveraging of the money chain within the financial sector has not significantly affected non-financial depositors

Therefore, in theory, shortening this money chain within the financial sector should not significantly affect the level of funds raised from depositors. Indeed, as shown in Figure 9, although interbank WMPs outstanding fell markedly in 2017 (-45% y/y at end-2017, from 100% growth at end-2016), the WMPs outstanding sold to household and (non-financial) corporate depositors rose (growth edged up to 14% y/y at end-2017 from 12% at end-2016). We think this also suggests that non-interbank WMPs, per se, are not a target of the government's regulatory tightening.

2018 is an important year for defusing financial risks

Assuming leverage returns to the 2015 level in about three years, we expect similar progress (c.30%) in 2018

We assume it will take approximately three years for leverage to return to our benchmark 2015 level, in view of the government's stated aim to bring systemic risks and overall leverage under effective control within three years (2018-20). To ensure this task can be accomplished, we would expect the government to take more action at the start of this period, which we think suggests that the pace of deleveraging is likely to be faster this year than during the following two years. Hence, given our estimate that deleveraging was about 30% complete at end-2017, we think a likely path to complete the remaining 70% could be approximately 30%, 20%, and 20% in 2018, 2019, and 2020, respectively.

Financial deleveraging: Impact on interest rates

In this section, we discuss the impact of financial deleveraging on interest rates by examining the changes observed in money market interest rates and bond yields during 2017 (Figure 17). We showed earlier that most of the indicators we track began to show signs of deleveraging in early 2017.

Money market rates increased markedly during 2017…

In *China: PBoC watching: The evolving policy framework*, 14 December 2017, we examined the central bank policy rates and market interest rates, the monetary + regulatory policy and interest rate transmission channels, and how the tighter policy environment had resulted in higher and more volatile market interest rates, particularly in H1 17 (Figure 15 and Box 1, Figure).[5] With the PBoC raising both open market operation (OMO) and medium-term lending facility (MLF) rates by 25bp in 2017, the DR007 (the PBoC's policy target rate) and R007 (7d repo rate among banks and NBFIs) rose by 37bp and 74bp, respectively.

FIGURE 17

Changes in market interest rates during 2017 amid the deleveraging push

	End-2017 level	Changes in 2017 (bp)
Deleveraging progress	c.30%	
PBoC 7d reverse repo	2.50%	+25
DR007	2.88%	+37
R007	3.71%	+74
Shibor 7d	2.86%	+36
CGB 10y	3.90%	+77
AAA 10y	5.38%	+129
CGB 10y - AAA 10y	148bp	+51

Source: Wind, Barclays Research

[5] We think the elevated and more volatile interbank funding costs have helped deleveraging by reducing opportunities for "regulatory arbitrage" (see Box 1); ie, borrowing at low costs from the central bank and/or large commercial banks to invest in higher-yield interbank products, especially for small- and medium-sized banks. Meanwhile, we think the rising and increasingly unstable R007 rate may have led to more expensive and insecure funding costs for NBFIs.

… so did bond yields

Meanwhile, the deleveraging measures have led to a significant rise in bond yields (Figure 16), reflecting: 1) the transmission from rising money market rates to bond yields; and 2) bond sell-offs (eg, end-October 2016 and end-March 2017) amid FIs' balance sheet adjustments in response to tighter regulations. The CGB 10y yield rose 77bp during 2017, while the spread between the CGB 10y and AAA corporate 10y yields widened by 51bp.

We expect the impact on market interest rates will be milder in 2018

In our view, the effect of deleveraging and the pipeline of regulations in 2018 on market interest rates will depend on: 1) the extent to which market participants have refined their expectations, in light of the government's strong commitment to deleveraging and the sustained policy tightening bias; 2) whether regulators will be more or less aggressive in implementing further tightening actions (such as the "regulatory storm" in March-April 2017, not our base case); and 3) whether any potential global financial market volatility would add to domestic volatility, in addition to further domestic regulatory tightening.

Financial deleveraging: Contained impact on the economy

Despite deleveraging, economic growth continued to surprise the market in 2017

In spite of the visible impact on the financial market in 2016-17, financial deleveraging coexisted with continued upside surprises in economic growth for most of 2017, amid stronger-than-expected export growth. How can this be explained and what is the outlook?

Credit flow to the real economy relatively unaffected

We expect a mild credit growth slowdown to support the economy

As discussed earlier, financial deleveraging has mainly affected the excessively long capital chain within the financial sector. Therefore, although there has been a significant slowdown in interbank lending, credit flow to corporate and household borrowers has been less affected, in our view. Technically, such credit would not be considered in total social financing (TSF) or broad credit, due to its repeated flow within the financial sector. Indeed, broad credit growth, as measured by the Barclays Alternative Credit Aggregate, moderated slightly, to c.13% at end-2017, from c.16% at end-2016. TSF growth has stayed broadly stable, edging lower to c.12% from c.13% during the same period (Figure 18).

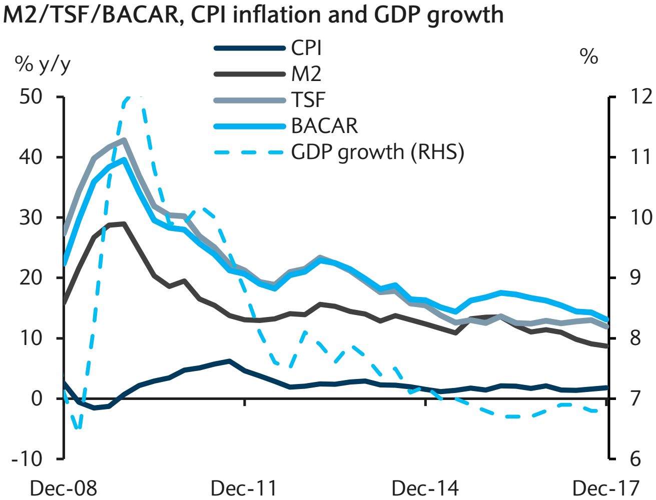
Bank lending rate is rising but remained low

Lending rate is rising but still relatively low

The majority of China's aggregate financing is still dominated by bank lending (accounting for c.65% of TSF). Although the PBoC has been guiding market interest rates higher (including 25bp hikes in both OMO and MLF rates in 2017), it has not raised its benchmark lending rate (1y rate at 4.35%), which has a bigger influence on corporate and household loan demand than market interest rates. Moreover, while the banks' average loan rate

FIGURE 18

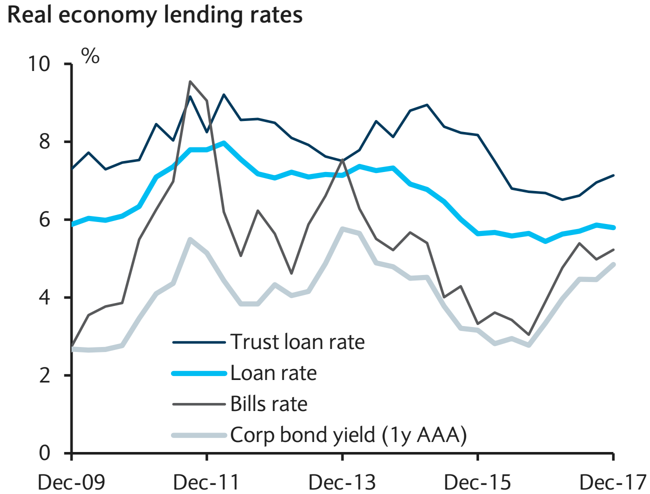
M2/TSF/BACAR, CPI inflation and GDP growth



Source: Wind, Barclays Research

FIGURE 19

Real economy lending rates



Source: Wind, Barclays Research

increased by 36bp last year, to 5.80% at end-2017, from a record low of 5.44% at end-2016, it was still c.100bp below the levels during 2014-15 (Figure 19).

Solid exports and resilient investment have supported the economy

Strong exports and moderating but still-solid investment have supported growth

Other factors, in particular strong exports and resilient investment growth, have supported the economy and more than offset the negative impact from financial deleveraging. After contracting for most of 2015 and 2016 (subtracting 0.5ppt from GDP growth in 2016), China's export performance improved strongly in 2017, making a positive contribution to GDP growth (0.6ppt). Meanwhile, while infrastructure and real estate investment growth moderated along with the government tightening measures, growth in private investment (which usually has less access to bank credit relative to the state-owned sector) accelerated notably on the back of strong external demand, to 6.0% y/y in 2017, from 3.2% in 2016.

Hence, financial deleveraging is unlikely to be a drag on 2018 growth

We expect the supporting factors to remain in place

We believe the above factors will continue to support the economy – we forecast GDP growth of 6.7% this year (2017: 6.9%). In particular, we expect China's broad credit growth to slow but remain double digits in 2018, at c.11% y/y (see *China: January new loans surge following quota reset; broad credit to slow amid deleveraging*, 12 February 2018). Moreover, our base case expects stable albeit moderate domestic demand and continued solid external demand to support growth in 2018. We forecast export growth to remain strong at c.8%, and FAI growth of c.7% (above consensus), both similar to 2017 levels.

That said, we see downward pressures to our forecasts beyond Q1, despite the strong January-February activity data, from 1) a more significant slowdown in infrastructure investment due to further tightening of local government financing (see *Strong Jan-Feb activity data support our above-consensus growth forecast*, 14 September 2018); 2) a potentially significant drag on China's exports from the escalating US-China trade tensions; and 3) the reduced political cycle story of the typical strong investment impulse by local governments and a lower priority given by governments to high-speed GDP growth.

New financial regulatory framework unveiled at the NPC

A restructuring plan merging the CBRC and CIRC has been approved by the NPC

A revamp of China's financial regulatory system, along with the restructuring of government institutions, was approved at the annual National People's Congress (5-20 March 2018; see *China NPC: Growth target suggests broad stability despite lower fiscal deficit*, 5 March 2018). Under the new structure (Figure 20), China's banking (CBRC) and insurance (CIRC) watchdogs will merge into a new regulatory body called the China Banking and Insurance Regulatory Commission (CBIRC), while the securities regulator (CSRC) remains a separate entity. Moreover, some of the functions of CBRC and CIRC, including the "drafting of key regulations and prudential oversight", will be transferred to the PBoC.

We believe the new regulatory system will improve regulatory coordination to help better manage financial stability

While it may take some time for the transferred "key" regulations/functions to be specified, and for the new regulatory commission and the central bank to become familiar with their revised responsibilities, we think this new regulatory framework, along with the already running cabinet-level Financial Stability and Development Committee that oversees financial regulations, will help improve coordination among the different regulatory bodies and enhance the government's ability to manage financial stability.

New heads of the central bank and the new regulatory commission will be unveiled on 19 March

On 19 March, the NPC session will elect key government leadership including the vice premier and minister-level officials, and will also appoint the new PBoC governor and the head of the new CBIRC. It is widely expected that Liu He, currently the director of the Office of the Central Leading Group for Financial and Economic Affairs (which directly reports to President Xi), will be appointed as vice premier overseeing economic and financial work, and chairman of the Financial Stability and Development Committee.

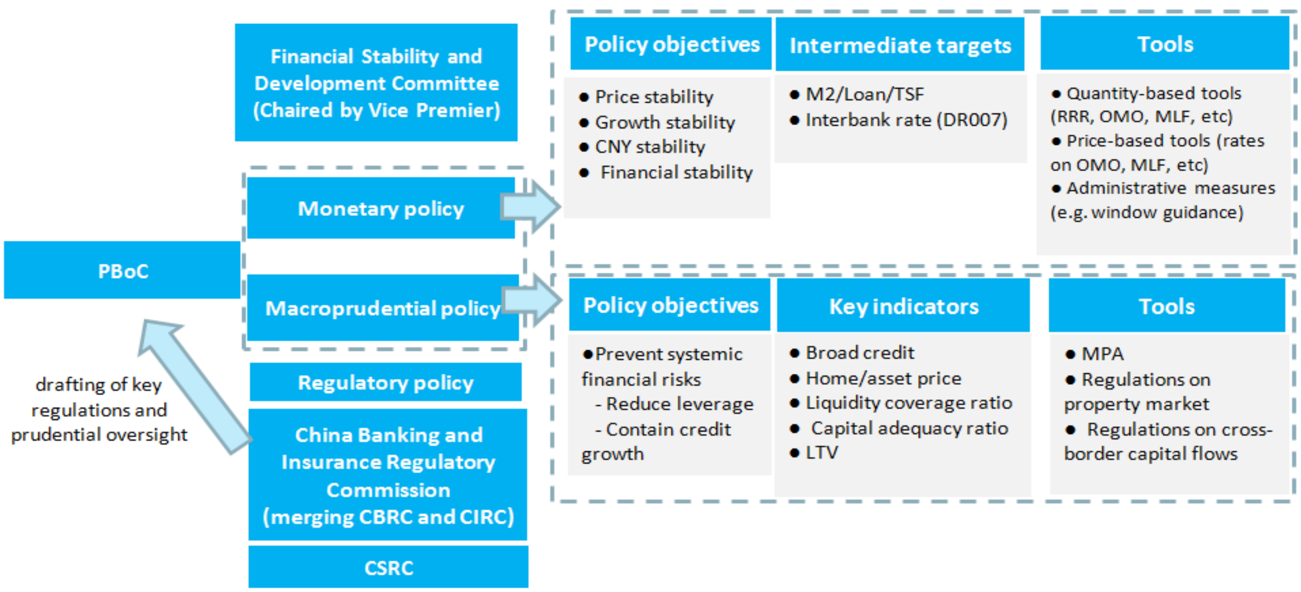
The front-runner candidate for the post of PBoC governor is Yi Gang ("Liberal market reformer set to be named as China's next central bank governor", *South China Morning Post*, 20 October 2017), currently the deputy PBoC governor (since 2007) and deputy director of the Office of the Central Leading Group for Financial and Economic Affairs (since 2016). Mr. Yi had PhD training and an academic career in the US, before he joined the PBoC in 1997 and has stayed most of his career in the central bank (including the Director of the SAFE during 2009-16).

Guo Shuqing, currently chairman of the CBRC and a front-runner candidate to chair the new CBIRC ("Analysis: Three regulatory commissions to form a 'super' regulatory body", *Ming Pao*, 3 March 2018), is also expected to play an important role in the new regulatory system. Mr. Guo has rich and all-round experiences in managing financial institutions and regulators, including the central bank (deputy governor of the PBoC and Director of the SAFE, 2001-05), commercial bank (president of China Construction Bank, 2005-11), financial regulators (CSRC 2011-13, CBRC 2017-18), and provincial government (Governor of Shandong, 2013-17).

The CSRC is chaired by Liu Shiyu (since 2016), another senior banker with experiences in both financial industry and the regulator side. His former roles include the deputy governor of the PBoC (2006-14) and the president of Agricultural Bank of China (2014-16).

FIGURE 20

China's financial regulatory framework



Source: PBoC, Barclays Research

Box 1: China's financial deleveraging: background and actions

Small- to medium-sized banks increasingly reliant on interbank funds to expand balance sheets

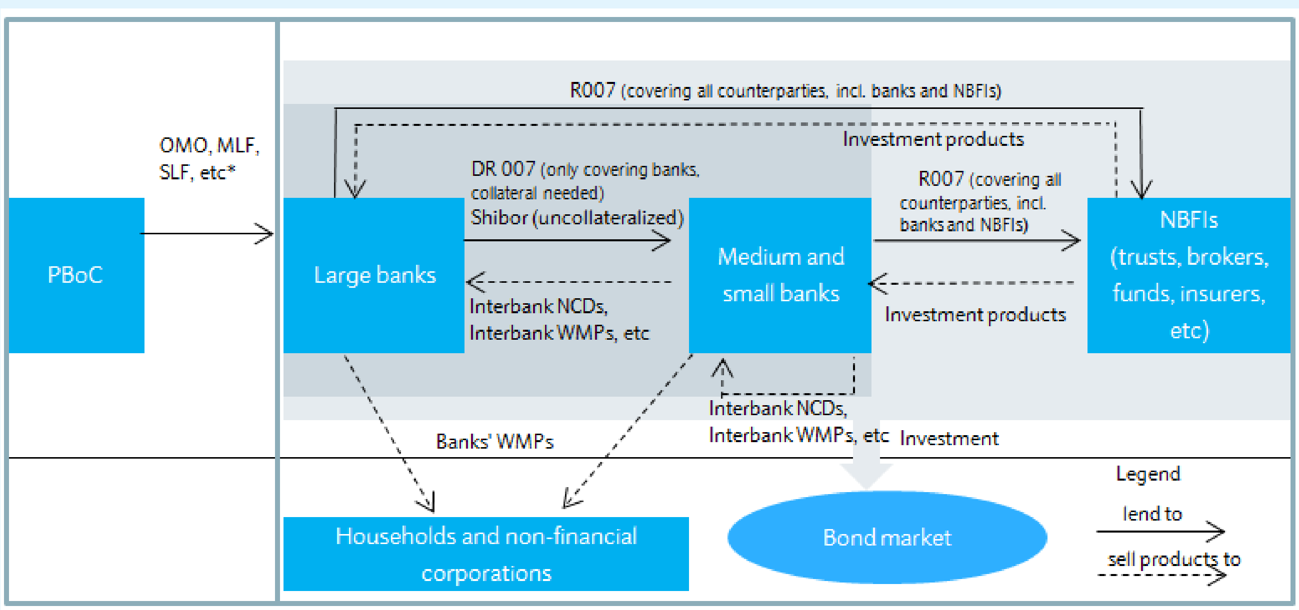
Financial liberalisation, a long period of stable funding costs post the liquidity squeeze in 2013, and "implicit guarantees" have encouraged the expansion of interbank and off-balance-sheet businesses of banks and non-bank financial institutions (NBFIs). Such activities became alternative businesses for financial institutions as a way to boost profit margins, circumvent capital requirements, and/or meet regulatory and loan requirements (see *China: Alternative credit aggregates*, 18 October 2016).

At the same time, the PBoC has been reluctant to fully utilise its most powerful quantitative tool – adjusting reserve requirement ratios (RRR) for all banks since February 2016 – instead opting to engage in frequent and sophisticated lending operations to replenish financial system liquidity (*China: PBoC watching: The evolving policy framework*, 14 December 2017). Because such lending operations favour the large- and medium-sized banks (Figure 21), this unbalanced access to extra liquidity has forced small to medium banks to rely on interbank wholesale funding to expand their balance sheets.

Indeed, China's financial sector has developed an interbank system that connects various institutions and channels money from banks to NBFIs (Figure 21). 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 open market operations (OMOs) and other liquidity facilities (amid the low interest rates of recent years). The large banks then channel this liquidity to the medium and small banks, mainly through interbank repo lending, or by purchasing interbank wealth management products (WMPs) and negotiable certificates of deposit (NCDs).[6] The money is then channelled (from medium/small banks, or directly from large banks) to NBFIs – ie, fund-management companies, securities firms, trust companies, insurers – through repo lending or banks' entrusted investment/"pass-through". Note that the interbank chain can be even longer as small- and medium-sized banks often channel money to peer banks (typically through purchasing interbank NCDs and WMPs) before the liquidity eventually flows to NBFIs.

FIGURE 21

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. Source: PBoC, Barclays Research

[6] 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.

Rising risks from rapidly growing interbank and off-balance-sheet businesses

The rapid expansion of interbank and off-balance-sheet financing activities has complicated the operation of China's financial sector, raising concerns about systemic risks. First, the opaque nature of WMPs and entrusted investment products makes it very difficult for the authorities to have a clear idea of the underlying assets and imbedded risks.

Second, given rising borrowing costs for downstream institutions along the interbank chain (particularly small- and medium-sized banks and NBFIs), to generate higher yields they are more likely to take on greater credit risks and increase leverage in securities investments, fuelling asset bubbles, which, in turn, creates liquidity and market risks.

Finally, the increasing reliance on (mostly short-term) interbank liquidity supplied by the central bank has led to "regulatory arbitrage" opportunities (Figure 15), making the system vulnerable to changes in monetary and regulatory policy. A typical arbitrage practice, for example, has been large banks using money borrowed via 7d OMOs (2.25% as of June 2016) for interbank lending (DR007: 2.3%, Shibor 7d: 2.35%) or to buy interbank NCDs (3m: 3.1%); for small- and medium-sized banks, a common arbitrage practice is to issue interbank NCDs to fund investment in WMPs (3m: 4%) or entrust NBFIs to make higher-yield leveraged investments (largely in the bond market).

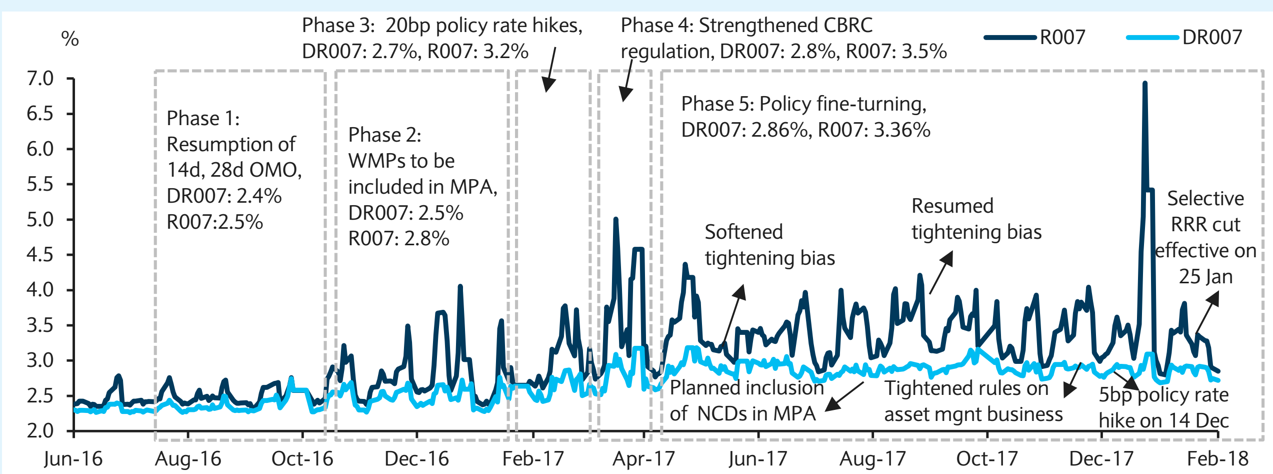
The government has been taking action

To push forward financial deleveraging, the PBoC has employed both monetary and regulatory tightening as well as guiding interbank interest rates higher since H2 16. At the same time, China's bank regulators have rolled out a series of tightening guidelines, mainly targeting off-balance-sheet and interbank financing (Figure and Figure 2; see *China: PBoC watching: The evolving policy framework*, 14 December 2017).

Following the PBoC's 5bp hikes in OMO and MLF rates in December, we view the increased activity of regulators as a firm sign that the 2016-17 theme of financial de-risking will continue this year. Indeed, in the first week of January, the PBoC, CBRC, and other regulators issued five new regulations covering bond trading, bank risk exposure, and entrusted loans (see Appendix). This was followed on 13 January by the CBRC pledging to intensify its crackdown on banking misconduct (eight types of misconduct were listed in its statement), and re-emphasising its priority on interbank and off-balance-sheet regulations this year.

FIGURE 22

The PBoC has guided interbank interest rates higher



Source: Wind, Barclays Research

FIGURE 23

Main areas targeted by monetary and regulatory policy since 2016

Area	PBoC monetary policy	PBoC MPA	CBRC regulations	Unified AMP rules
Interbank liability (including NCDs)	✓	✓	✓	
(Off-balance sheet) WMPs	✓	✓	✓	✓
NBFI pass-through (entrusted investment)	✓		✓	✓
Leveraged investment products	✓			✓

Note: The draft asset management products (AMP) rules were circulated in November 2017 and the final rules are expected to be issued (and take effect) in the coming months. The grace period was set until June 2019 (subject to change in the final rules). Source: PBoC, Barclays Research

APPENDIX

Summary of regulations in 2017-18

FIGURE 24

Date	Regulations	Circular
26-Jan-18	The China Insurance Regulatory Commission (CIRC) revised rules to tighten regulations over the use of insurance funds, effective 1 April, in order to better serve the real economy. Firms commissioned to manage insurance funds should not reassign the funds, and measures to reduce leverage should be strengthened. Overseas investment of insurance funds must follow the rules set by the CIRC.	CIRC
18-Jan-18	The Ministry of Finance (MoF) and the CIRC tightened rules on insurers providing financing to local governments. Insurers were prohibited from offering illegal financing services to local governments or local government financing vehicles.	MoF, CIRC
13-Jan-18	The CBRC pledged to intensify its crackdown on banking misconduct in 2018, with priorities on regulation of interbank, WMP, and off-balance-sheet businesses. The statement lists eight types of banking misconduct targeted by the CBRC in 2018.	CBRC 4
06-Jan-18	The CBRC announced strict supervision measures for entrusted loans of commercial banks. The new rules include strengthening risk management, supervision, and disclosures on the source and intended use of the funds. The rules prohibit the use of entrusted loans for investment.	CBRC
05-Jan-18	The PBoC and other regulators jointly announced regulations to tighten bond trading rules. All bond market participants should strengthen their internal controls and risk management procedures, improve compliance in trading deals, and control leverage ratios to an appropriate level. The regulations set a one-year transition period.	PBoC, CBRC, CSRS, CIRC
05-Jan-18	The CSRC released a document to improve supervision of fund management and securities firms' activities in bond trading deals. The document requires fund and management securities firms to enhance their internal controls and risk management procedures.	CSRC
05-Jan-18	The CBRC published new measures to increase scrutiny on investments in commercial banks. The regulations put limits on the number of commercial banks in which a single major shareholder can invest. Any stake purchase of more than 5% must be approved by the CBRC, and major shareholders cannot hold interests in the same institution via financial products. Major shareholders cannot transfer shares within five years.	CBRC
05-Jan-18	The CBRC unveiled a proposal to set standards of risk exposure. Under the draft rules, risk exposure cannot exceed 20% and 25% of first-tier capital for non-interbank clients and interbank clients, respectively.	CBRC
22-Dec-17	The CBRC issued a notice on regulating bank-trust operations, in order to further standardise bank-trust cooperation and better control the financing chain and regulatory arbitrage.	
17-Nov-17	The PBoC and other regulators jointly 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 June 2019.	
31-Aug-17	The CBRC tightened trust industry oversight, including limiting the number of trust beneficial accounts for each trust product, and clarified the liabilities and rights of all participating parties to better protect investors.	CBRC
11-Aug-17	The PBoC announced 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-Apr-17	The MoF asked provincial authorities to start self-examining their financing practices and to rectify all irregularities by the end of July 2017, with progress to be tracked by the MoF's 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 the shadow-finance industry. Trusts are one of the few financing channels that remain 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

Date	Regulations	Circular
12-Apr-17	The CBRC issued a notice to lenders requiring banks to report the amount of negotiable certificates of deposit (NCDs) as part of interbank lending and borrowing; requiring banks to ensure the ratios still hold when NCDs are included in outstanding interbank lending and borrowing. This move is to curb use of an increasingly popular interbank fund raising tool that is undermining moves to reduce leverage in the market.	
12-Apr-17	The CBRC plans to tighten its scrutiny of shareholders in the nation's lenders, as part of its wider efforts to plug regulatory loopholes and curb financial sector risks. The CBRC will check the suitability of the ultimate stakeholders in banks and ensure they fund any share purchases from their own capital. The CBRC will also start to regulate any sales of bank shares on both domestic and overseas primary, secondary and OTC exchanges.	
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 bank loans and other credit to serve the real economy, setting up a system of information collection and risk sharing, and cracking down on any evasion of the repayment of bank loans.	CBRC 4
11-Apr-17	The CBRC circulated a notice to crack down on improper banking practices in innovation, transactions, incentives, and 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 2017.	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 2017.	CBRC 45

Source: Bloomberg, Reuters, Xinhua, Barclays Research

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