Deutsche Bank
Markets Research

F.I.T.T.

Industry
Chinese Banks

Date
7 April 2014

Asia
China

Banking / Finance
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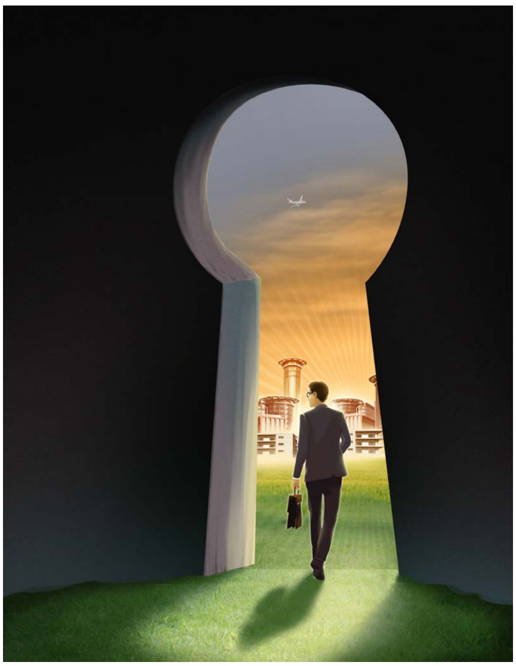

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F.I.T.T. for investors

Clearing the air on corporate bond defaults in China

Two proprietary studies to show credit risks are covered

We undertook two proprietary studies, on 2,400 Chinese corporate bond issuers and 13,000 collective trust products, and identified credit risks worth Rmb237bn for these two markets, with listed banks exposed to 37% of these risks. Despite setting aside excess provisions of Rmb819bn, their valuation prices in NPLs of Rmb2.8tr. We expect the sentiment on Chinese banks to reverse after the end of the repayment peaks of the corporate bonds and trust products this May/June, when the market realizes that the actual default rates are materially lower than expected and a gradual rise in default rate is the usual path towards correct pricing of credit and an efficient capital allocation.

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Quantifying the expected default rate of the corporate bond market

Our proprietary study on 2,400 Chinese corporate bond issuers, with a combined issuance of 5,500 bonds, identifies 88 issuers facing suspension risks due to P&L losses in 2012 and 1H13 with 74 of them being SOEs that are unlikely to default. This leaves 14 privately owned entities (POEs) as higher risk bond issuers, in addition to the 8 POEs downgraded and on the negative watch list, with a combined issuance of Rmb28.6bn, or 39bps of the total outstanding corporate bonds, which reached Rmb7.4tr in February 2014. Around 65% of these loss-making issuers are involved in the overcapacity sector, namely steel (34%), mining (20%), metal (9%) and solar (2%), in terms of issuance size.

Assessing the default risks of the shadow banking system

While we estimate the size of the shadow banking system to be Rmb19.7tr as of 2013, we believe the risks are derived primarily from the Rmb2.7tr collective trust products, which account for 24.7% of the trust assets. Through our proprietary study which covers 13,000 collective trust products, even an extreme scenario shows a potential default rate of 4.9%, implying assets at risks of Rmb132bn, mostly due to the industrial and commercial sector. Assuming a default rate comparable to banks' loans at 1%, we identify Rmb76bn of assets at risk for the Rmb7.6tr single-fund trust products.

Bond price differentiation leading to improved capital allocation

We believe the risk of bond trading suspension after making two consecutive years of losses and higher re-financing costs should be a deterrent to issuers, making them focus on profitability. This market mechanism of penalizing non-profitability and rewarding efficiency will continue through the re-pricing of corporate bonds and lead to more efficient capital allocation.

Short-term headwinds likely to continue; maintaining positive stance

Our analysis shows that 37% of the outstanding corporate bonds were held by the listed Chinese banks as of 2013, which also provided 36% of funds that financed the trust sector, implying listed bank asset at risks of potential default worth Rmb88bn. We believe the risks are more than covered by the Rmb819bn of excess provision set aside by these banks. On our estimates, the H-share listed banks are trading at 0.84x 2014E P/B and 4.7x 2014E P/E, and A-share banks at 0.74x 2014E P/B and 4.3x 2014E P/E. Our top picks are BOC and ABC among H-share listed banks and BOBJ and CEB among A-share listed banks. A slowing Chinese economy and policy risks leading to higher capital requirements and lower NIM and business growth are key downside risks to the sector.

Top picks

Bank of China (3988.HK),HKD3.42	Buy
Agri. Bank of China (1288.HK),HKD3.40	Buy

Source: Deutsche Bank

Companies Featured

ICBC (1398.HK),HKD4.78	Buy
China Construction Bank (0939.HK),HKD5.45	Buy
Agri. Bank of China (1288.HK),HKD3.40	Buy
Bank of China (3988.HK),HKD3.42	Buy
Bank of Communications (3328.HK),HKD5.07	Buy
China Merchants Bank (3968.HK),HKD14.06	Buy
China CITIC Bank (0998.HK),HKD4.55	Hold
China Minsheng Bank (1988.HK),HKD7.96	Hold
Chongqing Rural Bank (3618.HK),HKD3.47	Buy
Huishang Bank (3698.HK),HKD3.52	Sell
Bank of Chongqing (1963.HK),HKD5.03	Hold
Shanghai Pudong Bank (600000.SS),CNY9.73	Hold
Industrial Bank (601166.SS),CNY9.58	Hold
China Everbright Bank (601818.SS),CNY2.49	Buy
Ping An Bank (000001.SZ),CNY10.79	Buy
Bank of Beijing (601169.SS),CNY7.62	Buy
Bank of Nanjing (601009.SS),CNY7.82	Hold
Bank of Ningbo (002142.SZ),CNY8.86	Buy

Source: Deutsche Bank

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Executive summary

While the market waits for the dust to settle…

With the total corporate bond market having expanded at a CAGR of 49.3% (2007-2013) to reach Rmb7.4tr as of February 2014, we see a gradual rise in default cases as a natural step towards correct pricing of credit and more efficient capital allocation. Nonetheless, the share prices of the Chinese banks have been weak year-to-date as the market over-generalizes the risks of a handful of default cases in the listed bond market and trust products.

Two proprietary studies undertaken on: (a) 2,400 corporate bond issuers (SME issuers: 384) and (b) 13,000+ collective trust products

The rising market concerns on the credit quality of China's non-bank financial system has prompted us to conduct two proprietary studies on (a) 2,400 Chinese corporate bond issuers, of which 384 are privately placed SME issuers, with a combined issuance of 5,500 bonds. The aim of the study is to evaluate the likely near-to-medium term default risks of China's corporate bond market in comparison to the 1.08% long-term average default rate of corporate bonds issued globally; and (b) 13,000 collective trust products, out of which 9,000+ products are still outstanding to account for 71% of the total AUM of Rmb2.7tr.

Conclusion suggests relatively low near-term default risks for the corporate bond market

In our study, we identify only 88 (out of the 2,400) issuers facing suspension risks due to the P&L losses recorded in 2012 and 1H13, with total outstanding bonds issued of Rmb308bn (or 4.2% of the total outstanding corporate bonds). In China, bonds are subject to suspension of trading if the issuers make two consecutive years of losses.

As 74 of the loss-making issuers are state-owned enterprises (SOEs) that are unlikely to default, this leaves 14 privately owned enterprises (POEs) as higher risk bond issuers, in addition to the 8 POEs downgraded and put on the negative watch list. According to company data, the total amount of bonds issued by these 22 issuers amounted to Rmb28.6bn, or 39bps of total outstanding corporate bonds. This outcome has led us to believe that the eventual default rates should be lower than market expectation.

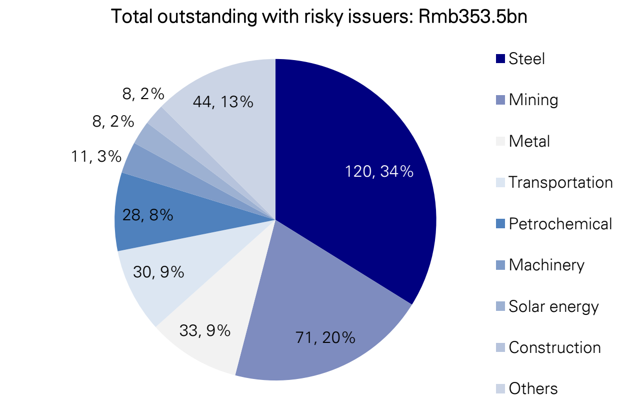
Figure 1: From our proprietary study, outstanding higher risk corporate bonds issued by POEs only account for 0.39% of total corporate bond market

Rmb bn	SOEs	POEs	Total	SOEs as % total	POEs as % of total
Corporate bonds with issuers making losses in both FY12 & 1H13	289.6	18.8	308.4	93.9%	6.1%
Other corporate bonds being downgraded or put into negative watch list	35.3	9.8	45.1	78.3%	21.7%
Total higher risk corporate bonds outstanding	**324.9**	**28.6**	**353.5**	**91.9%**	**8.1%**
Total corporate bonds outstanding			7,402.6		
Higher risk corporate bonds as % of total			**4.8%**	**4.39%**	**0.39%**

Source: Deutsche Bank, WIND, CEIC, Chinabond.com.cn
**Note: total corporate bond outstanding is of Feb 2014*

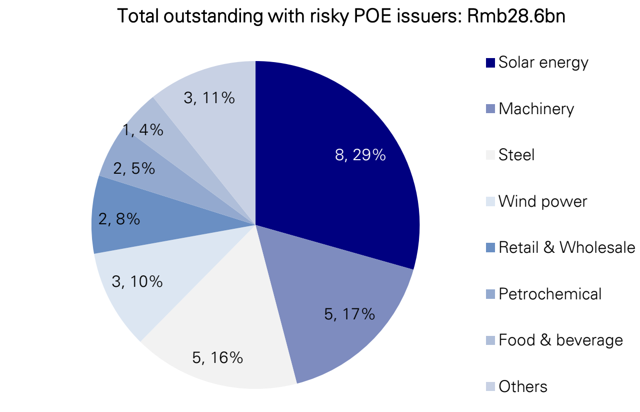
According to company data, around 65% of the 88 loss-making issuers are involved in the overcapacity sector, namely steel (34%), mining (20%), metal (9%) and solar energy (2%).

Figure 2: Sector breakdown of all higher risk corporate bonds - SOEs and POEs (as of 19 March, 2014)



Source: Deutsche Bank, WIND, company data

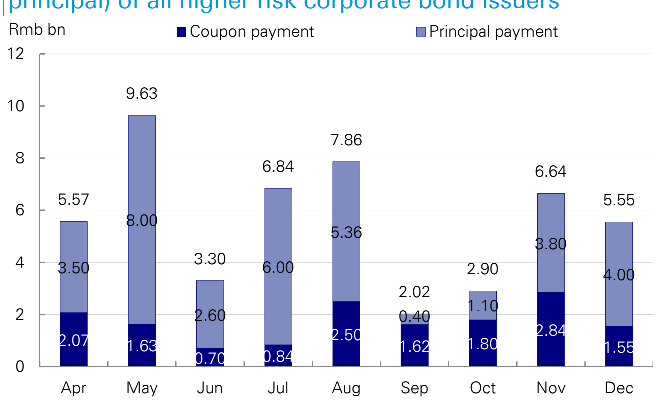
Figure 3: Sector breakdown of higher risk corporate bonds - POEs only (as of 19 March, 2014)



Source: Deutsche Bank, WIND, company data

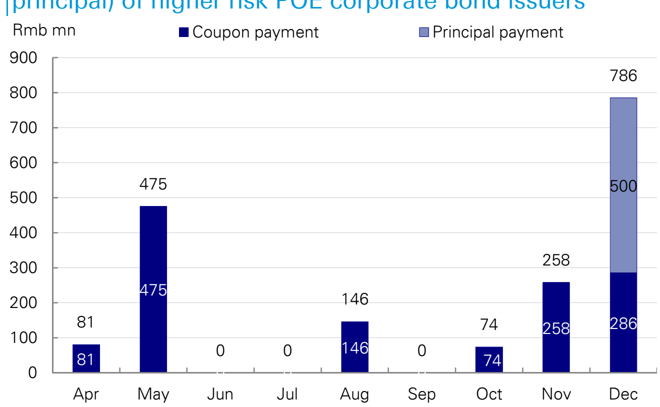
Given the repayment peaks of listed corporate bonds in May and June, we believe the market might be cautious about any negative sentiments surrounding the repayment difficulties of the POE bonds/trust products and overlook the fact that the eventual default rates might be lower than the global average of 1.08%.

Figure 4: 2014 due payment schedule (coupon + principal) of all higher risk corporate bond issuers



Source: Deutsche Bank, WIND

Figure 5: 2014 due payment schedule (coupon + principal) of higher risk POE corporate bond issuers



Source: Deutsche Bank, WIND

Collective trust products – another storm in a Chinese teacup

Our proprietary study on trust products suggests that the asset quality risks should only be associated with the collective trust products, which make up Rmb2.7tr, or 24.7% of the outstanding trust products as of 2013. Even under an extreme scenario, our bottom-up analysis shows assets at risk of less than Rmb132bn, or a potential default rate of 4.9% (Figure 4). This ratio is comparable to the share of the higher risk corporate issuers (SOEs and POEs) in the corporate bond market.

On an industry level, we expect collective trust products backed by industrial and commercial sectors (equal to 20% of the total) to be the riskiest, but even a default risk of 10% shows only Rmb54bn of assets at risks. The other two big sector exposures are real estate and infrastructure, which account for 30% and 28% of the collective trust products. As our property team sees low default risks given that rising land prices in China should raise ability for repayment or rate of recovery in the event of default, we assume a 5% default rate to take into account the extreme scenario. Lastly, we consider trust products backed by infrastructure projects as the lowest risks with a 1% assumed default ratio, given that these trust loans are generally backed by the local government.

Figure 6: Extreme case default ratio for collective trust products (FY13)

Rmb bn	Sector exposure	Total Default	Default ratio
Industrial & commercial	540	54.0	10.0%
Real estate	810	40.5	5.0%
Infrastructure	756	7.6	1.0%
Others	594	29.7	5.0%
Total	**2,700**	**131.8**	**4.9%**

Source: Deutsche Bank estimates, WIND

Implications of the risks from the shadow banking system

While we estimate the size of the shadow banking system to be Rmb19.7tr as of 2013, we believe the risks are derived primarily from the Rmb2.7tr collective trust products, which account for 24.7% of the trust assets. As the single-fund trust products are essentially bank loans packaged in the form of inter-bank assets or proprietary investments in trust beneficial rights with the trust companies as intermediaries, if we assume a default rate comparable to banks' loans at 1%, we identify Rmb76bn of assets at risk for the Rmb7.6trn single fund trust products.

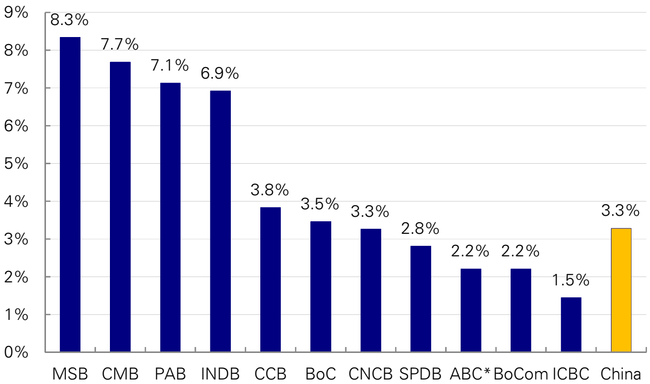
We believe the risk management for the rest of the shadow banking system, which comprises primarily of financing leasing and small money lending, is market driven and should be generally effective.

Bottom-up analysis suggests manageable asset quality risks for the Chinese banks and supports our positive view on the sector

We think the outcome of the two proprietary studies support our positive view on the listed Chinese banks. Our analysis shows that 37% of the outstanding corporate bonds were held by the listed Chinese banks as of 2013, which also provided 36% of funds that financed the trust sector, implying listed bank asset at risks of potential default worth Rmb88bn. We believe the risks are more than covered by the Rmb819bn (or 1.71% of loans) of excess provision set aside by these banks

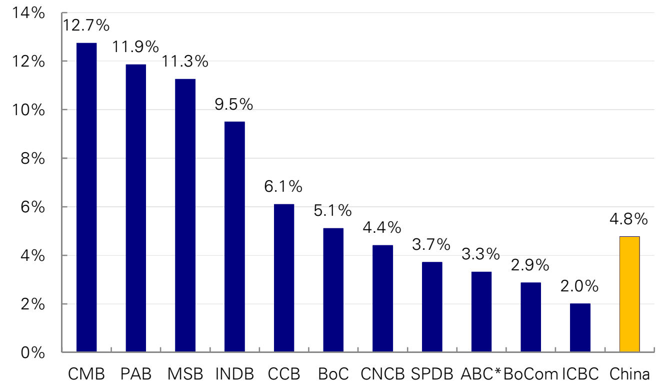
In addition, the listed banks have limited exposure to the overcapacity sector. Our analysis shows that lending to the overcapacity sector only accounts for 3.3% of the total loans for the listed banks, with MSB having the highest exposure at 8.3% of loans. We see limited asset quality risks as the bulk of the loans are extended to the market leading SOEs.

Figure 7: Chinese Banks – Two-high and overcapacity loans as % of total loans (FY13)



Source: Deutsche Bank, company data
Note: For ICBC, MSB and BOC, we use overcapacity, for CCB, we use "too high", for ABC we use "steel and cement loans as of 3Q13"

Figure 8: Chinese Banks – Two-high and overcapacity loans as % of total corporate loans (FY13)

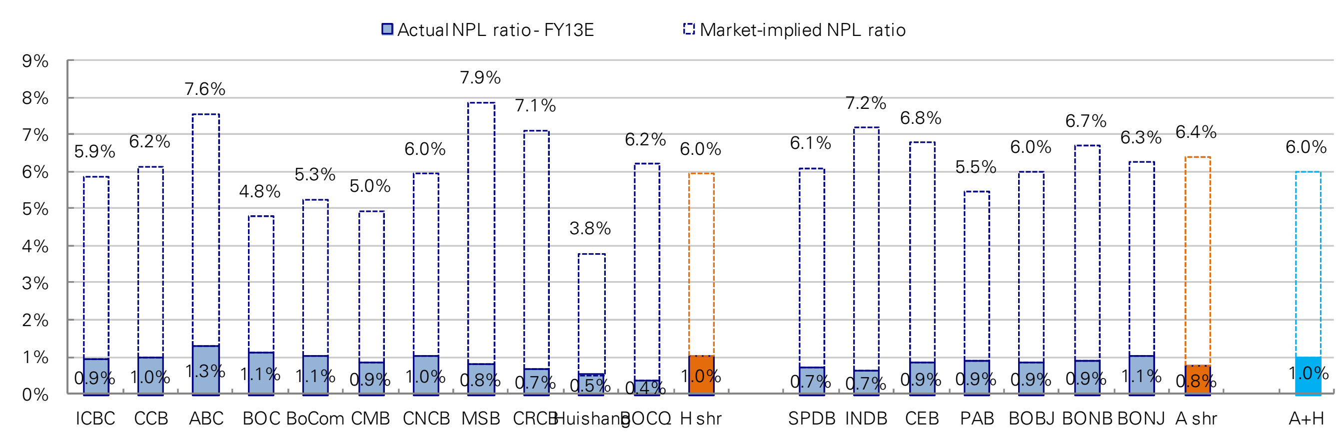


Source: Deutsche Bank, company data
Note: For ICBC, MSB and BOC, we use overcapacity, for CCB, we use "too high", for ABC we use "steel and cement loans as of 3Q13"

Despite the risk of a slowing economy, we believe our earnings forecasts have assumed one rate cut and the lifting of deposit rate to 1.2x (now: 1.1x) PBOC's benchmark rates, which will translate into 10-12bps NIM compression from 4Q13 levels, and rising credit costs to 62bps of average loans, compared with 55bps in 2013.

On our estimates, the H-share listed banks are trading at 0.84x 2014E P/B and 4.7x 2014E P/E and A-share banks are trading at 0.74x 2014E P/B and 4.3x 2014E P/E. Due to the low valuation, the H-share and A-share listed banks are offering respective current dividend yields of 6.9% and 5.5% to be payable before July. These depressed valuations of the Chinese banks mean that the market is pricing in sector NPLs worth Rmb2.8tr, or an NPL ratio of 6% for the sector, as against the 1% reported by the banks in FY13. Figure 9 provides a breakdown per bank.

Figure 9: Chinese banks – The current valuations have priced in an NPL ratio of 6.0% (ranging 3.8%-7.9%), or an NPL balance of Rmb2.8tr



Source: Deutsche Bank, company data. Note: share price as of 1 Apr 2014.

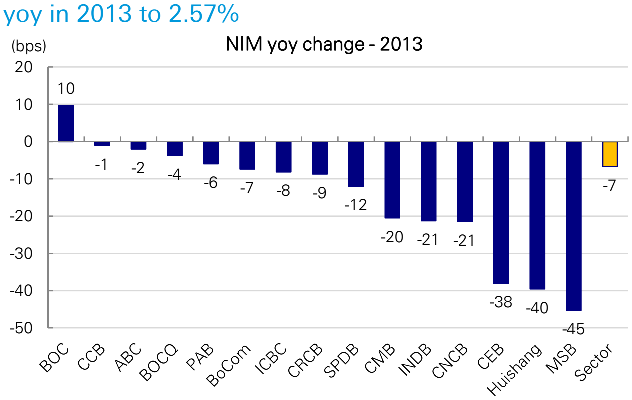
Leading the asset quality race – top picks: BOC and ABC

As 2013 is the first year after the deposit rate cap was lifted to 1.1x PBOC benchmark rate in June 2012, the operating results of banks during the year should be indicative of future performance. Given the challenges of a slowing economy and rising pressure for interest rate deregulation, we see increasingly divergent performances among listed banks.

We judge their performance based on 1) NIM, 2) asset quality as implied by the gross NPL formation rate, 3) operating efficiency, and 4) change in asset/liability mix in response to the changing macroeconomic environment. As the bulk of the Chinese banks' profitability comes from its liability spreads for its low cost demand deposits, we use the change in demand deposit mix to gauge how strong their liability franchises are.

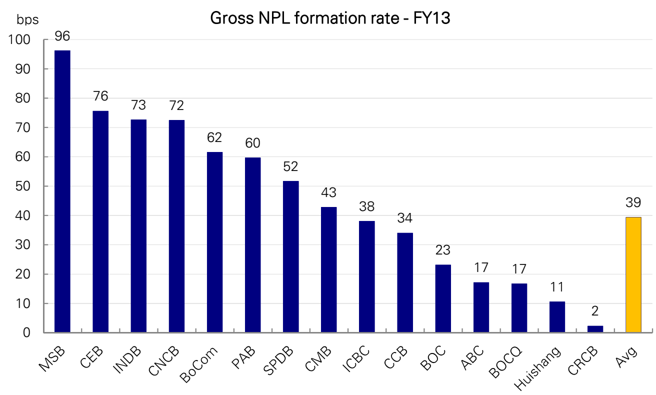
Our top picks for the H-share listed banks, BOC and ABC, have outperformed their peers on almost all four fronts. We believe their superior performance is partly helped by the differentiated business mix, making them less vulnerable to interest rate deregulation. For example, over 25% of BOC's assets are derived from fully deregulated overseas market, whereas 36.1% of ABC's pre-tax profit in 2013 is generated from the county area, which faces less competition from peers.

Figure 10: Chinese Banks – Sector NIM declined by 7bps yoy in 2013 to 2.57%



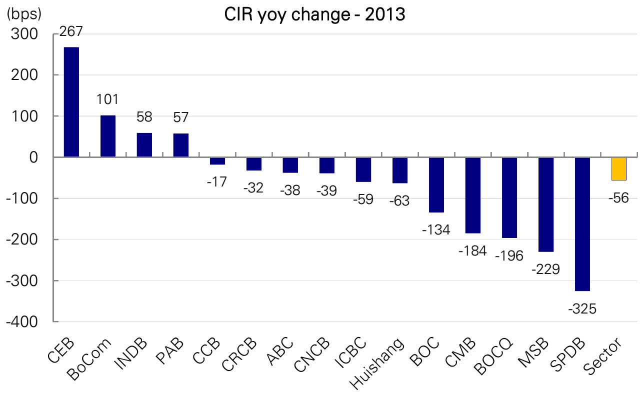
Source: Deutsche Bank, company data

Figure 11: Chinese Banks – Gross NPL formation rate



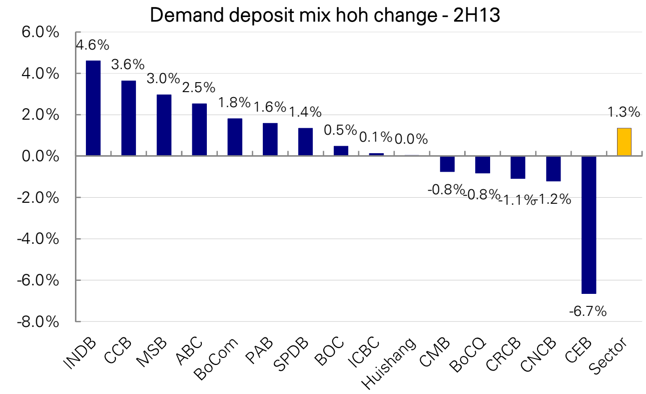
Source: Deutsche Bank, company data

Figure 12: Chinese banks – CIR declined by 56bps yoy in FY13



Source: Deutsche Bank, company data

Figure 13: Chinese banks – Demand deposit mix hoh change comparison



Source: Deutsche Bank, company data
Note: The drop in CEB's demand deposit mix was mainly due to change of classifications

Clearing the air on corporate bond defaults in China

Market over-generalizing the risks of a handful of default cases

Since the news of the first corporate bond default emerged in early-March (Shanghai Chaori Solar Energy), investors have been worried about the worsening financial condition of bond issuers and the potential contagion effect on banks and the economy. On our part, we have tried to understand and disseminate the likely risks to the sector, and through this report we aim to highlight what the future may have in store.

While a gradual rise in bond defaults is a natural development in China, the lack of a long default history seems to have instilled fear in the market, as investors seem to have misunderstood the critical difference between debt markets in China and other countries, and as such have overestimated the probability of default.

We believe the critical difference lies in the ownership structure of companies issuing these bonds, making the loss induced default ratio much lower than investor perception. As such, we believe it is important to highlight some salient features of China's debt market.

- While 5% of total corporate bond issuers have reported accounting losses in FY12 and 1H13 and hence are closer to suspension of their bond trading, not all of them are likely to default as majority are SOE-backed or owned.
- 74 of the 88 loss-making bond issuers are state-owned enterprises, which are essentially backed by the local/central government. A default by any of these SOEs can loosely be seen as a potential default by the state, a scenario which China is highly unlikely to allow, and hence step in to help their troubled subsidiaries in case of repayment difficulties.
- Over 63% of the loss-making corporate bond issuers are operating in the overcapacity sector, comprising steel, mining, metal and other overcapacity industries. However, Chinese banks have continued to reduce their loan exposure to this industry by lending primarily to the market leading players.
- Only 14 of the troublesome loss-making corporate issuers are POEs (private-owned enterprises) with total issuance of Rmb18.8bn and could default on their bond payments in face of continued difficulties. However, given the minor issuance size, we do not think it will be a big burden on the economy or the banks even if all these bonds are defaulted.

Understanding the corporate bond market in China

As explained in our report dated 5 March 2014, *Chinese Banks – No surprises; limited impact from 1st corporate bond default*, the corporate bond market mainly includes four types of fixed income instruments issued by corporates in China: corporate bonds, enterprise bonds, medium-term notes (MTN) and short-term notes (STN). Figure 14 highlights the key nature of the four corporate bonds in China with a combined issuance size of Rmb7.4tr as of February 2014.

Figure 14: Key nature of the four corporate bonds in China

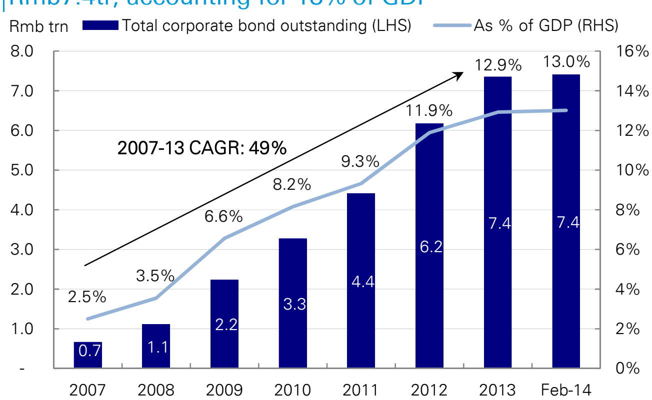
Type of bond	Regulator / Approver	Trading market	Size (Rmb bn)	Term
Enterprise bonds	NDRC	Interbank (72%); Exchange (28%)*	2,371	Usually 3-10Y
Corporate bonds	CSRC	Exchange	701	>1Y
Mid-term notes	NAFMII (regulated by PBOC)**	Interbank	2,983	>1Y, usually 3Y or 5Y
Short-term financing bills	NAFMII (regulated by PBOC)**	Interbank	1,348	<1Y
Total			**7,403**	

Source: Deutsche Bank, Chinabond.com.cn, NDRC, CSRC, NAFMII, PBOC
** Note: As of Feb 2014. **Note: NAFMII is short for National Association of Financial Market Institutional Investors, which is regulated by PBOC.*

Figure 15 shows the rise in the importance of the total corporate bond market in China as evident by the rapid growth in total corporate bond outstanding (CAGR of 49% between 2007 and 2013). However, the actual spike in the growth of the bond market has been over the past two years, growing 1.7x since 2011 and reaching an outstanding amount of Rmb7.4tr in February 2014, or 13% of GDP (up from 9.3% in 2011).

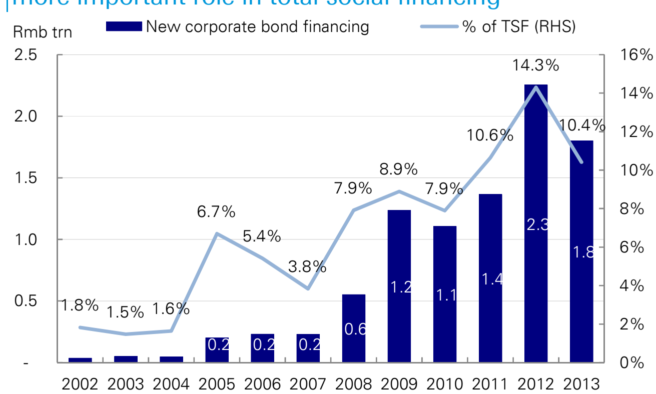
The importance of the bond market as a means of financing for the corporates can also be seen in the growth of new corporate bond financing in China, which makes up 10.4% of the new total social financing as of December 2013, up from 3.8% in 2007.

Figure 15: Total corporate bond outstanding has reached Rmb7.4tr, accounting for 13% of GDP



Source: Deutsche Bank, CEIC, Chinabond.com.cn

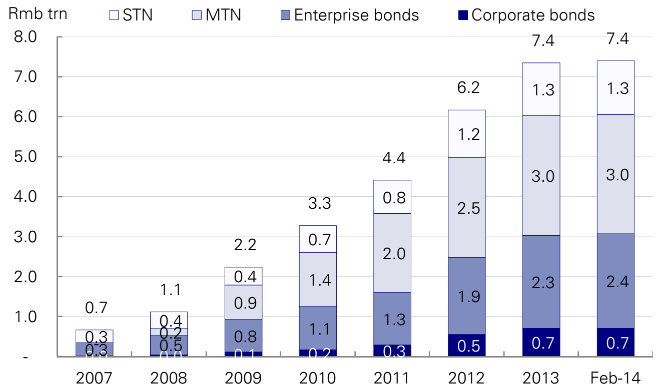
Figure 16: New corporate bond financing is playing a more important role in total social financing



Source: Deutsche Bank, Moody's – Corporate Default and Recovery Rates (1920-2007)

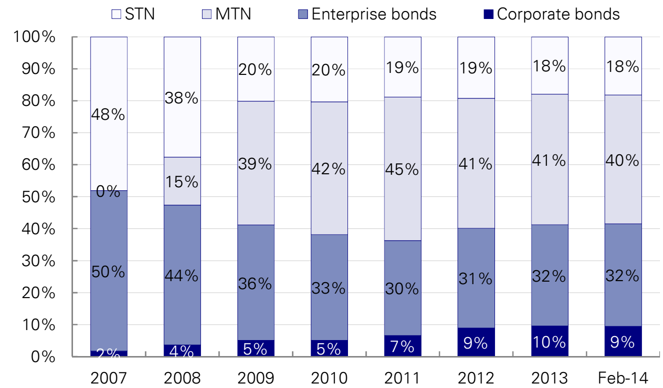
Broken down by type, we see that medium-term notes and enterprise bonds make up over 70% of the total issued corporate bonds, with MTNs in majority since 2009.

Figure 17: Corporate bond outstanding – breakdown by type (absolute level)



Source: Deutsche Bank, CEIC, Chinabond.com.cn

Figure 18: Corporate bond outstanding – Breakdown by type (as % of total)



Source: Deutsche Bank, CEIC, Chinabond.com.cn

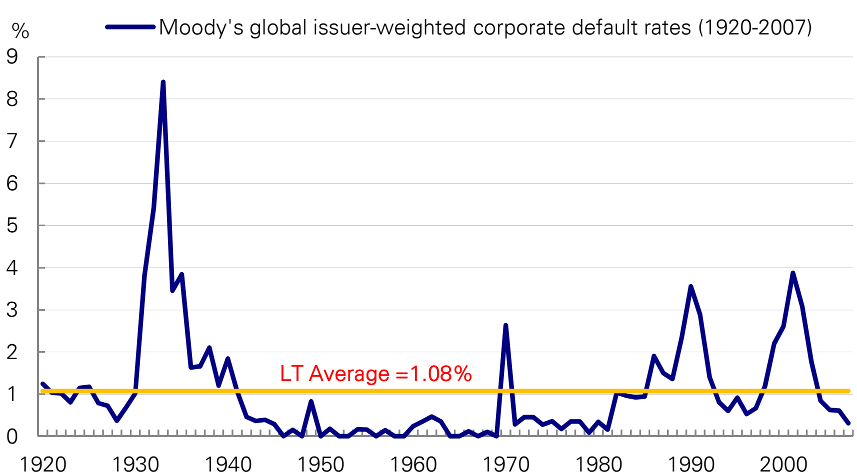
According to our proprietary study, only 22 of the 2,400 corporate bond issuers are likely to default

China should move towards global average default rate of corporate bonds

As the corporate bond market has grown in size, it is natural for the overall risk profile to rise, leading to a higher probability of default. Hence, we were not alarmed at the first corporate bond default in China, issued by Shanghai Chaori Solar Energy, which was largely an expected event.

Rather, we believe that a natural and gradual rise in bond default is a step in the right direction for China's bond market to grow and develop, helping investors differentiate between the good and the not-so-good issuers. Indeed, we expect a few more corporate bond default cases in the future, with a gradual alignment towards the long-term average default rate of 1.08% for corporate bonds, as suggested by Moody's.

Figure 19: Moody's global issuer-weighted corporate default rate



Source: Deutsche Bank, Moody's – Corporate default and recovery rates (1920-2007)

Our analysis of 2,400 corporate bond issuers in China

Armed with the understanding that the probability of default of corporate bonds might rise in China, we analyzed the 5,500 outstanding corporate bonds (as of 19 March 2014) in China. Collectively issued by 2,400 bond issuers (inclusive of 384 SME issuers), the list consisted of common corporate bonds, enterprise bonds and MTNs.

According to the listing criterion imposed on Chinese corporates, two consecutive years of accounting losses leads to suspension in the trading of all listed bonds issued by a corporate, pending an assessment on the future credit capability of the company and its ability to repay investors. Hence, we divided our sample into two groups: one group consisted of bond issuers who reported positive results in either FY12 or 1H13, and the other group who reported consecutive accounting losses in FY12 and 1H13 and hence were closer to seeing their bonds suspended from trading in the near future. The latter list was made up of 177 bonds, issued by a total of 88 issuers totaling Rmb308.4bn in bond issuance, and we call them the “higher risk corporate bonds”.

We further expand our study and include another two sets of corporate bonds which might concern investors – bonds that have been downgraded by credit rating agencies and bonds that have been put into negative watch list since January 2014, with a combined issuance amount of Rmb45.1bn. These issuers are most affected by worsening financial conditions, according to the credit analysis of credit rating agencies in China. Combining these three sets of corporate bonds, our higher risk corporate bonds category has a total issuance of Rmb353.5bn, or 4.8% of the total issued corporate bonds in China (Figure 20).

Figure 20: From our proprietary study, outstanding higher risk corporate bonds issued by POEs only account for 0.39% of total corporate bond market

Rmb bn	SOEs	POEs	Total	SOEs as % total	POEs as % of total
Corporate bonds with issuers making losses in both FY12 & 1H13	289.6	18.8	308.4	93.9%	6.1%
Other corporate bonds being downgraded or put into negative watch list	35.3	9.8	45.1	78.3%	21.7%
Total higher risk corporate bonds outstanding	**324.9**	**28.6**	**353.5**	**91.9%**	**8.1%**
Total corporate bonds outstanding			7,402.6		
Higher risk corporate bonds as % of total			**4.8%**	**4.39%**	**0.39%**

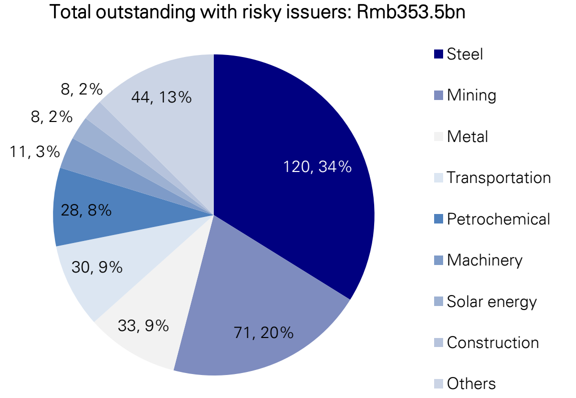
Source: Deutsche Bank, WIND, CEIC, Chinabond.com.cn
**Note: total corporate bond outstanding is of Feb 2014*

Why the growth in higher risk corporate bonds?

The answer to that question lies in analyzing the behavior of Chinese banks over the past few years, which have been cutting down their exposure to the riskier overcapacity sectors. Hence, it is not surprising to see that these companies have turned their attention to the corporate bond market to raise funds, despite recording negative profits.

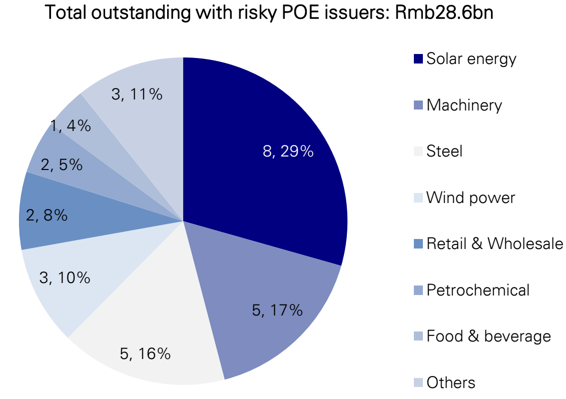
As a result, over 65% of the loss-making corporate bond issuers come from the overcapacity sectors of steel, mining, metals and solar energy, and make up Rmb232bn of outstanding bond issuance. For the POE corporate bond issuers, solar energy (Rmb8bn or 29%) and machinery (Rmb5bn or 17%) make up the highest sector exposures.

Figure 21: Sector breakdown of all higher risk corporate bonds – SOEs and POEs (as of 19 March, 2014)



Source: Deutsche Bank, WIND, company data

Figure 22: Sector breakdown of higher risk corporate bonds – POEs only (as of 19 March, 2014)



Source: Deutsche Bank, WIND, company data

The China difference: SOE ownership means less risk of default

On the outset, a 4.8% higher risk bond portfolio (as against 1% global default rate) might seem pretty high. However, unlike the West, the ownership structure of corporates in China is still largely dominated by the state, and this is prevalent in the corporate bond market as well.

In fact, out of the 88 potential suspension candidates, 74 bond issuers are owned by state-owned enterprises (SOEs), who in turn are backed by the local or central government. As such, a default by any of these SOEs can loosely be seen as a potential default by the state, a scenario which China is highly unlikely to allow. Hence, we are reasonably certain that if any of these SOE corporate bond issuers end up facing repayment difficulties, they will get financial help from their stronger and financially secure parents.

This means that the actual higher risk corporate bond issuers are only the private-owned enterprises which have a total bond issuance of Rmb28.6bn (including the bond issuers on the negative watch list/downgraded), corresponding to only 0.39% of the total corporate bond issuance in China. In Figure 23, we provide more details on the 22 higher risk POE issuers.

Figure 23: Earnings and bond information of 22 higher risk POE issuers

S. No.	Bond issuer	Sector	FY11 NPAT (Rmb m)	FY12 NPAT (Rmb m)	1H13 NPAT (Rmb m)	Net assets (Rmb m)	Issued amount (Rmb m)	Maturity date	1H13 Bank borrowings (Rmb m)
Corporates with reported losses in FY12 and 1H13									
1	Nanjing Iron and Steel Co., Ltd.	Steel	326	-562	-77	8,821	4,000	2018-05-06	11,170
2	Jiangsu Zhongneng Silicon Technology Development Ltd.	Solar energy	2,821	-1,233	-687	6,925	3,000	2018-11-15	8,533
3	Sinovel Wind Group Co., Ltd.	Wind power	599	-583	-458	12,004	2,800	2016-12-27	2,078
4	Baoding Tianwei Yingli Energy Ltd.	Solar energy	-490	-643	-222	5,666	2,400	2015-10-13/ 2016-05-12	777
5	China Rongsheng Heavy Industries	Machinery	2,125	-40	-1,028	10,116	2,000	2015-03-29	17,520
6	Xianglu Petrochemicals Co., Ltd	Petrochemical	1,088	-267	-320	4,651	1,500	2015-12-28/ 2017-04-27	6,638
7	Yingli Solar (China) Co., Ltd.	Solar energy	770	-1,094	-485	2,976	1,500	2015-05-03/ 2017-05-03	12,484
8	Zhuhai Zhongfu Enterprise Co., Ltd	Food & beverage	73	-204	-78	2,017	1,180	2015-05-28/ 2017-03-28	1,766
9	Shanghai Chaori Solar Energy Science & Technology Co., Ltd.	Solar energy	-55	-1,752	-423	694	1,000	2017-03-07	2,675
10	Fujian Shengnong Development Co., Ltd	Farming & forestry	472	-34	-264	3,090	700	2018-05-16	1,449
11	Doosan Infracore Construction Equipment Co., Ltd	Machinery	570	-107	-95	3,111	600	2016-03-22	4,519
12	LDK Solar Co., Ltd.	Solar energy	-5,490	-4,342	-756	-153	500	2014-12-08	12,732
13	Huiyin Household Appliances (Holdings) Co., Ltd	Wholesale & retail	40	-185	-102	1,148	390	2015-08-22	173
14	Shandong Best Precision Co., Ltd	Machinery	15	-30	-16	137	30	2016-01-31	112
Total for corporates with losses in FY12 and 1H13							**21,600**		**82,626**
Corporates downgraded or placed on a negative watch list									
1	Pangda Automobile Trade Co., Ltd	Retail & Wholesale	650	-825	281	9,108	2,200	2017-03-01	16,844
2	Jiangsu Feida Group	Machinery	1,139	223	72	4,824	1,600	2018-08-30	0
3	Changjiang Jinggong Steel Building (Group) Co., Ltd	Steel	280	210	104	2,174	700	2015-03-22	1,445
4	Huafu Top Dyed Melange Yarn Co., Ltd.	Textile	407	91	115	3,135	600	2016-11-18	2,740
5	Sichuan Western Resources Holdings Co., Ltd	Mining	247	186	20	1,372	600	2018-03-08	1
6	Chengdu Xinzhu Road & Bridge Machinery Co., Ltd	Machinery	158	-69	9	1,868	500	2016-12-07	806
7	Beijing Xiang'e Qing Group Co., Ltd.	Catering	93	82	-220	986	480	2017-04-05	267
8	Zhejiang Hisoar Pharmaceutical Co., Ltd.	Medical & health	105	23	2	713	300	2015-10-31	641
Total for corporates placed on a negative watch-list							**6,980**		**22,744**
Total for the 22 corporate issuers							**28,580**		**105,370**

Source: Deutsche Bank, WIND, company data
Note: Multiple maturity dates means the corporate issuer has issued multiple bonds

Minor risks from privately-placed SME corporate bonds as well

It has been almost two years since private-placed SME bonds were first issued in China. Offering an average coupon rate of 9.1% and average maturity of 2.8 years, we believe investors are already aware of the high risk nature of these bond investments. However, with recent media reports (21st Century Business Herald) regarding the near default of the Rmb180m private-placed bond issued by Xuzhou Zhongsen Tonghao New Board Co. (Zhongsen) and its subsequent resolution, we consider it prudent to highlight that the risks from these products should be manageable.

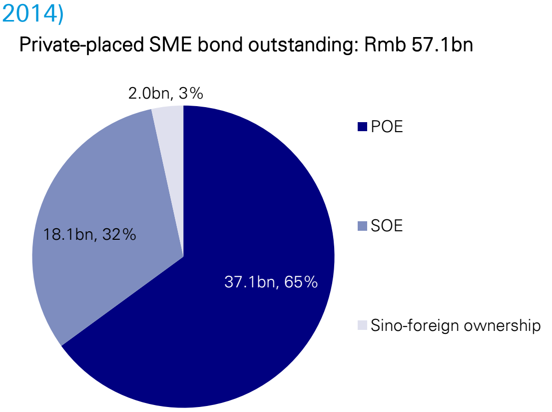
Figure 24: Total issuers of private-placed SME corporate bonds

Owner/Issuer	Total
POE owned	280
SOE owned	92
Sino-foreign ownership	12
Total issuers	**384**

Source: Deutsche Bank, WIND

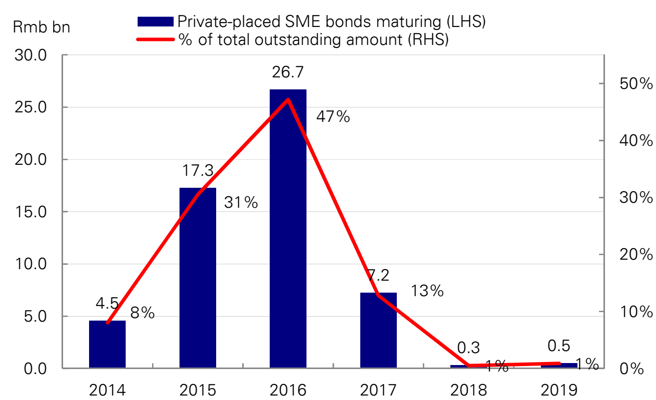
As Figure 25 shows, as of 1 April 2014, the total outstanding privately-placed SME bonds amounted to Rmb57.1bn, or merely 0.8% of total corporate bond market, with 65% POE ownership (Rmb37.1bn issued by 280 issuers), 32% SOE ownership (Rmb18.1bn issued by 92 issuers) and 3% Sino-foreign ownership (Rmb2bn issued by 12 issuers). These bonds are mostly issued by companies involved in manufacturing and construction. Just like other corporate bonds, these bonds are medium-term in nature, as can be seen by the maturity peak in 2016 when 47% of the bonds are expected to mature.

Figure 25: Private placed SME bonds outstanding (as of 2 April 2014)



Source: Deutsche Bank, WIND

Figure 26: Maturity profile of private placed SME bonds



Source: Deutsche Bank, WIND

While the Rmb18.1bn of SOE-owned SME bonds are devoid of default risks, we find that 53.3% of the remaining Rmb39.1bn are backed by guarantee covenants, either by the parents of the POEs/Sino-foreign owners or by guaranteeing companies, which makes the total higher risk portion of these bonds at a minimal Rmb18.2bn. This has also been the case for Zhongsen, with the Sino-Capital Guarantee Trust stepping in to honor Zhongsen's obligation after the company nearly defaulted on its coupon payment (Rmb80m for 10% coupon rate).

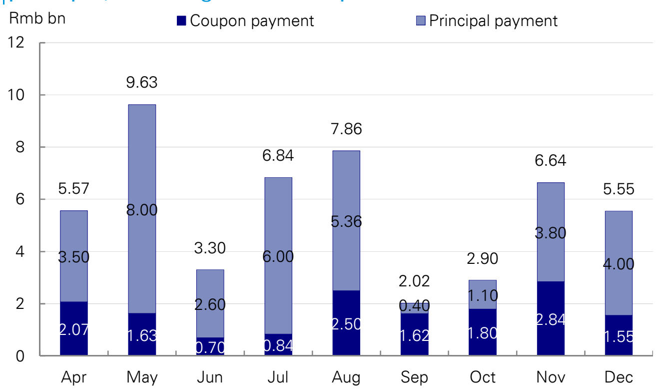
Expecting more clarity on defaults in next two months

As most Chinese corporates finish reporting their full year 2013 results in April, we expect more clarity on the financial positions of the 22 higher risk corporate bond issuers in China, especially on whether their bonds will be suspended following two consecutive years of losses.

While it is impossible to predict which ones will be suspended, we know for sure that even if all of them are suspended, and gradually go on to default, the risks for the Chinese banking system are manageable.

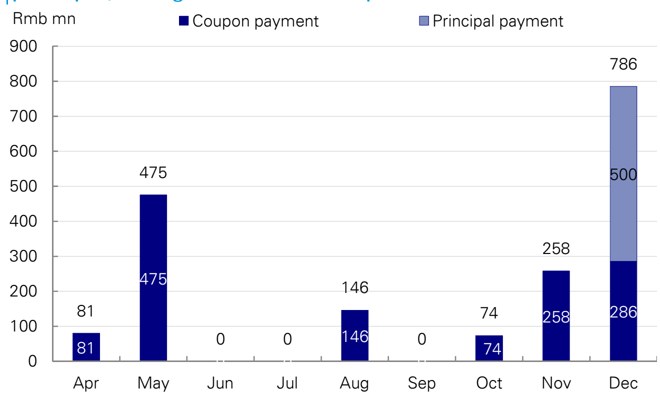
In Figures 27 and 28, we provide the payment schedule (coupon and principal) for the higher risk corporate bonds and the higher risk POE corporate bonds. As can be seen, May represents the payment peaks for both types of corporate bonds, and we believe a lot of investor queries about the corporate bond default will be answered by the end of the two months.

Figure 27: 2014 due payment schedule (coupon + principal) of all higher risk corporate bond issuers



Source: Deutsche Bank, WIND

Figure 28: 2014 due payment schedule (coupon + principal) of higher risk POE corporate bond issuers

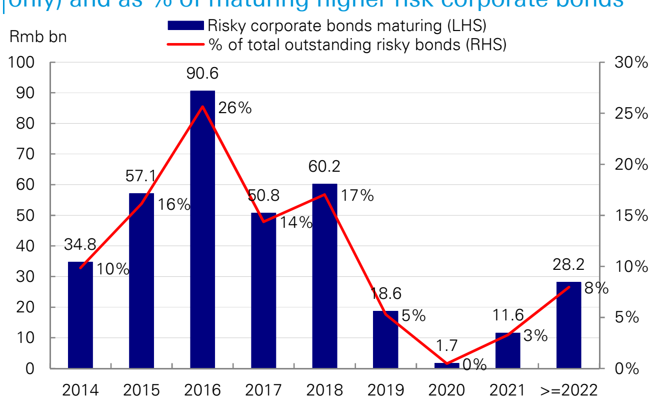


Source: Deutsche Bank, WIND

For the higher risk POEs (loss-making or with credit rating downgraded), we expect Rmb475m of coupon payments due in May, the highest in the calendar year. If a majority of these POE issuers report losses for FY13, we expect a wave of corporate defaults to hit China in May. However, as mentioned earlier, the higher risk POE issuers make up just 0.39% of the corporate bond market, and the risks must be easily contained by the system.

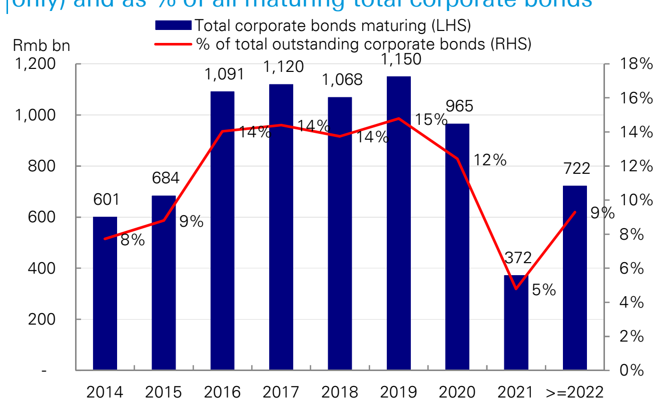
Figures 29 and 30 highlight the maturity profile by year. Showcasing the medium-term nature of the bonds issued by corporates in China, the maturity peaks are in 2016 and 2017.

Figure 29: Higher risk bonds maturity profile (principal only) and as % of maturing higher risk corporate bonds



Source: Deutsche Bank, WIND

Figure 30: Corporate bonds maturity profile (principal only) and as % of all maturing total corporate bonds



Source: Deutsche Bank, WIND

Silver lining in rising corporate defaults – separating wheat from chaff

While nobody likes defaults – investors, issuers or even us – they are a part and parcel of a healthy and competitive market mechanism. And for that purpose alone, we believe that the rising corporate defaults in China are not necessarily as bad as the investor community thinks them to be. Essentially, the process is a necessary pre-condition for improving capital allocation through differentiated pricing of bonds.

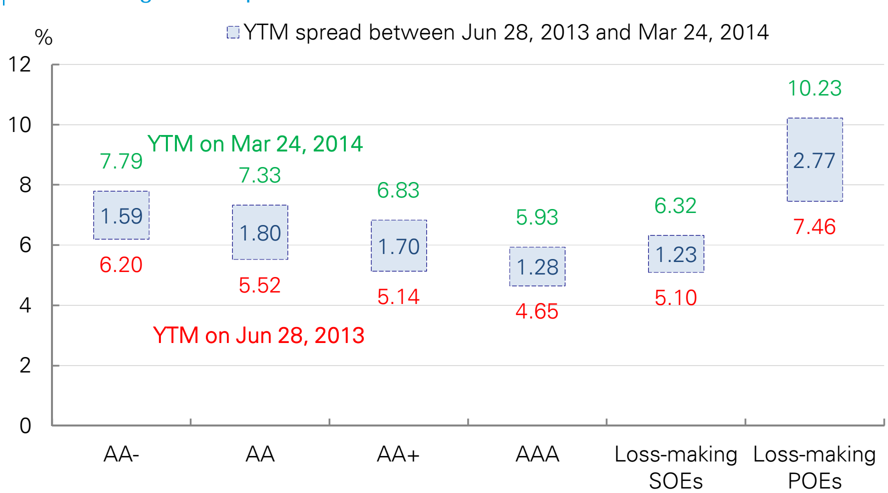
For starters, most of the higher risk corporate bond issuers come from the overcapacity industry, which has often been flagged as a higher risk industry and has seen reduced exposure by Chinese banks over the years. Additionally, bond investors are well aware of the risk-reward dynamics involved in funding a corporate operating in a higher risk industry, with a probability of higher returns countered by a risk of higher losses.

Defaults to lead to right asset price and improving capital allocations

Starting in June 2013, the process of corporate bond re-pricing has been driven by tightening market liquidity and growing price differentiation between issuers. As a result, investors seem to have factored in corporate profitability and the credit worthiness of parents, as is reflected in the respective spread widening of bonds of POEs versus SOEs and AAA-rated bonds.

As Figure 31 shows, from June 2013 onwards, the YTM for the loss-making POEs has widened by 277bps, from 7.46% to 10.23%, while the corresponding widening is only 123bps for the loss-making SOEs (from 5.1% to 6.32%) and 128bps for the AAA-rated bonds (from 4.65% to 5.93%).

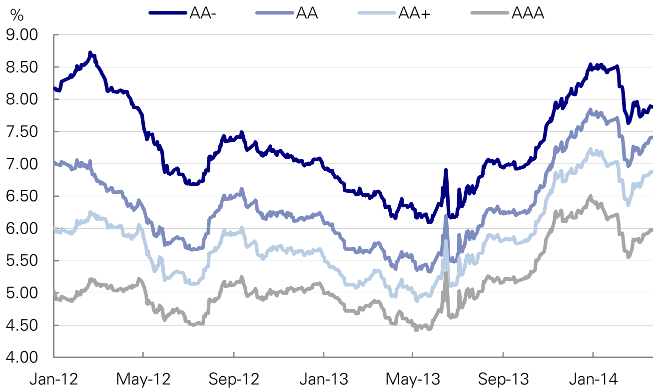
Figure 31: YTM change since mid-2012: Loss making POEs and SOEs vs. investment grade corporate bonds



Source: Deutsche Bank, WIND

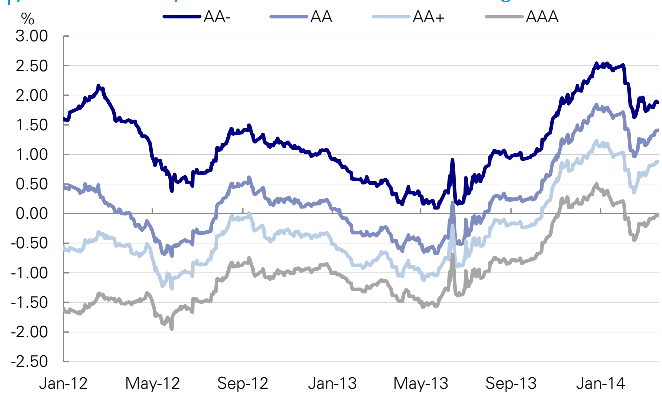
While we believe that the calm market reaction to the first corporate default could be a signal that the re-pricing of corporate bonds seen since 4Q13 might have largely run its course, some minor bond re-pricing is likely to continue over the next two months as the market comes to terms with, and adjusts to, the rising bond default probabilities in China. Figures 32 and 33 illustrate the trends in corporate bond yields and the spread against one-year PBOC benchmark yield over the past two years.

Figure 32: Five-year corporate bond yield by credit rating



Source: Deutsche Bank, WIND

Figure 33: Spread between five-year corporate bond yield and one-year PBOC benchmark lending rate



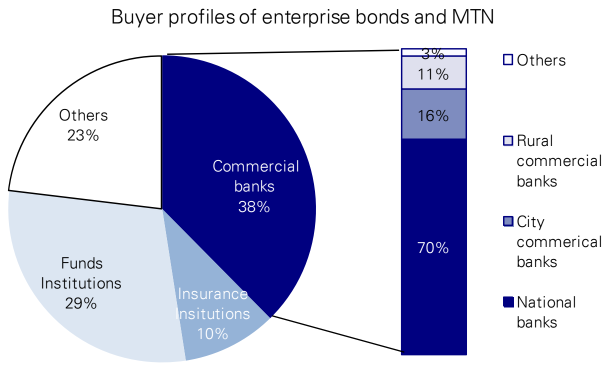
Source: Deutsche Bank, WIND, CEIC

We believe the risk of bonds being suspended from trading after posting two consecutive years of losses and the potentially higher re-financing costs should be a deterrent to bond issuers, leading them to reassess their strategy with a renewed focus on profitability. As such, we expect investors to carefully consider risks of defaults before financing corporates in the future, leading to a new market mechanism of penalizing non-profitability and rewarding efficiency, and making further capital allocation more efficient. In our view, this is a silver lining that will put China's bond market in good stead.

Chinese banks – limited exposure to corporate bonds and minimum impact from the gradual rise in default rates

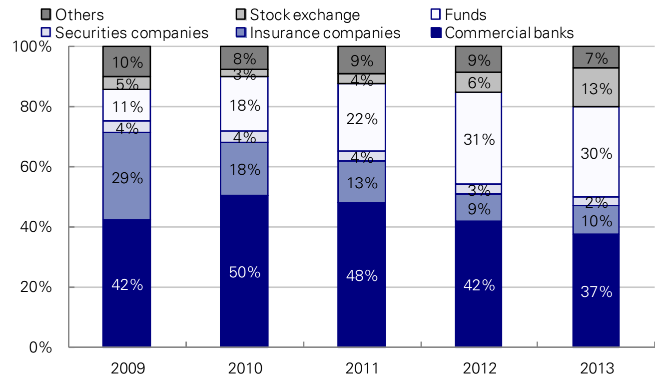
We believe the gradual rise in default cases in the bond market should impose minimum impact on listed banks, given their limited exposure. We estimate that the commercial banks hold 38% of total outstanding of all corporate bonds, which accounts for merely 2.4% and 2.9% of total assets of all commercial banks in the system and listed Chinese banks under DB coverage, respectively. As shown in Figures 34 and 35, commercial banks have been buying less and less corporate bonds since 2010 and hold 38% of total outstanding of enterprise bonds and MTNs as of February 2014.

Figure 34: We estimate commercial banks hold 38% of total outstanding of all corporate bonds (Feb 2014)



Source: Deutsche Bank, CEIC, Chinabond.com.cn

Figure 35: Commercial banks' holding of corporate bonds have been declining since 2010

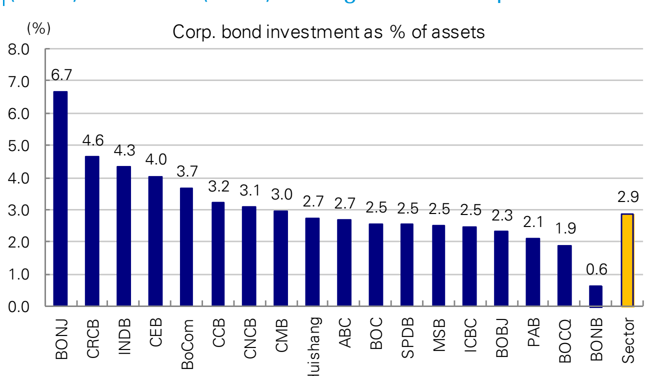


Source: Deutsche Bank, CEIC, Chinabond.com.cn

Figure 36 illustrates that listed Chinese banks generally have limited exposure to corporate bonds at 2.9% of total assets, with BONJ (6.7%), CRCB (4.6%) and INDB (4.3%) among the most exposed.

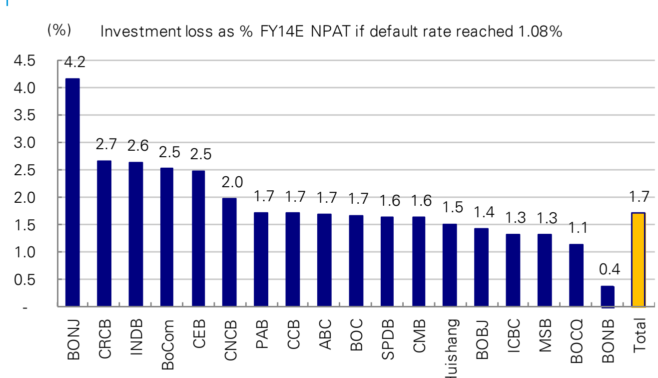
Reflecting their limited exposure, if we assume a default rate of 1.08%, which is the same as the long-term default rate in the global bond market and is higher than the 0.39% for higher-risk POE bonds as a percentage of total corporate bond outstanding, the investment losses from the corporate bond investment portfolios of listed banks would be only 1.7% of FY14E NPAT, by our estimates (Figure 37).

Figure 36: Listed banks see limited exposure to corporate bonds at 2.9% of total assets, with BONJ (6.7%), CRCB (4.6%) and INDB (4.3%) among the most exposed



Source: Deutsche Bank, company data

Figure 37: As a result, if we assume a default rate of 1.08%, earnings impact on listed banks would be only 1.7% of FY14E NPAT



Source: Deutsche Bank estimates, company data

Figure 38: Listed Chinese banks' exposure to corporate bond investments – 2013

	Total corporate bond investments					As % of assets				
Rmb mn, 2013	Trading	AFS	HTM	Receivables	Total	Trading	AFS	HTM	Receivables	Total
ICBC	87,027	369,964	12,317	-	469,308	0.5%	2.0%	0.1%	0.0%	2.5%
CCB	61,261	235,850	157,831	36,495	491,437	0.4%	1.5%	1.0%	0.2%	3.2%
ABC	24,768	167,724	166,623	31,018	390,133	0.2%	1.2%	1.1%	0.2%	2.7%
BOC	16,236	177,340	159,798	9	353,383	0.1%	1.3%	1.2%	0.0%	2.5%
BoCom	35,323	56,851	126,977	-	219,151	0.6%	1.0%	2.1%	0.0%	3.7%
CMB	5,531	96,869	4,256	12,462	119,118	0.1%	2.4%	0.1%	0.3%	3.0%
CNCB	3,398	54,976	32,800	20,814	111,988	0.1%	1.5%	0.9%	0.6%	3.1%
MSB	12,914	50,295	14,182	3,373	80,764	0.4%	1.6%	0.4%	0.1%	2.5%
CRCB	2,502	4,985	13,763	2,033	23,284	0.5%	1.0%	2.7%	0.4%	4.6%
Huishang	923	5,400	4,121	-	10,443	0.2%	1.4%	1.1%	0.0%	2.7%
BOCQ	2,010	1,873	46	-	3,928	1.0%	0.9%	0.0%	0.0%	1.9%
SPDB	18,781	54,762	13,186	6,328	93,057	0.5%	1.5%	0.4%	0.2%	2.5%
INDB	37,530	79,721	24,123	17,747	159,121	1.0%	2.2%	0.7%	0.5%	4.3%
PAB	5,868	-	33,838	-	39,706	0.3%	0.0%	1.8%	0.0%	2.1%
BOBJ	8,491	9,005	9,040	2,290	28,827	0.7%	0.7%	0.7%	0.2%	2.3%
BONJ	6,525	17,023	3,723	-	27,271	1.6%	4.2%	0.9%	0.0%	6.7%
BONB	2,086	652	-	-	2,737	0.5%	0.1%	0.0%	0.0%	0.6%
CEB	5,511	67,759	24,393	-	97,663	0.2%	2.8%	1.0%	0.0%	4.0%
Total	**336,684**	**1,451,048**	**801,017**	**132,570**	**2,721,319**	**0.4%**	**1.5%**	**0.8%**	**0.1%**	**2.9%**

Source: Deutsche Bank, company data

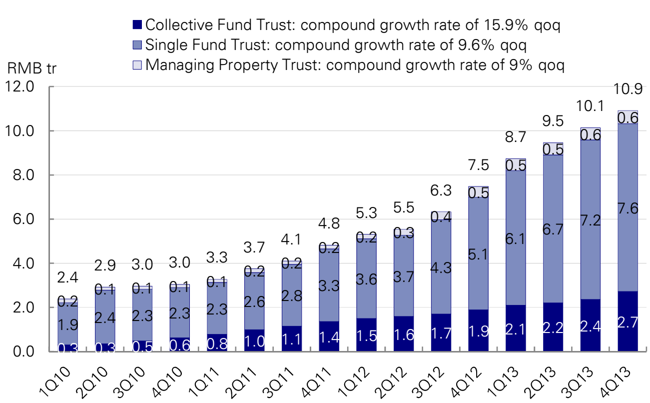
Demystifying risks of the trust sector

Where the risk does not lie: Single fund trusts

With intense media and investor attention on the unchecked growth of the trust sector, we aim to provide a better understanding of the risks associated with these products.

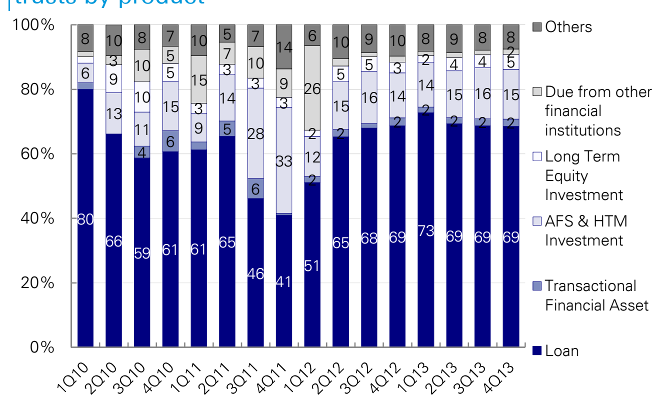
As Figure 39 shows, assets managed by trust companies are primarily divided into single fund trusts and collective fund trusts. Single fund trusts, which are essentially loans and tradable securities, make up roughly 70% of the total AUM of trust companies at Rmb7.6tr as of December 2013. As the source of the funds for single fund trust assets generally come from a single financial institution or a corporate, the ownership of risks is clear, suggesting limited contagion effect from the increase in default rate on the financial system. Figure 40 shows that 69% of the single fund trust is made up of loans, a ratio that has been constant since June 2012, despite the doubling of the funds managed by these type of trusts.

Figure 39: AUM of trust companies by business



Source: Deutsche Bank, CEIC

Figure 40: Breakdown of new investment of single fund trusts by product



Source: Deutsche Bank, CEIC

Where the risk lies: Collective trust products

How high are the risks?

Another Rmb2.7bn or 24.7% are invested under collective fund trusts and warrant a closer scrutiny as the source of funds is primarily from the sales of trust products to retail investors. The collective fund trust products are the riskier investments sourced and underwritten by the trust companies, and thus risk weighting applied to these trust products is higher than for single fund trusts.

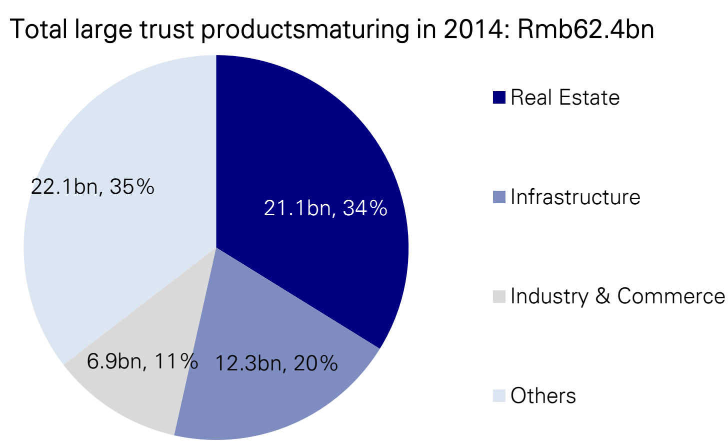
Taken in their entirety, trust investments are usually diversified in a variety of industries with biggest exposures to industrial and commercial (28%) and infrastructure (25%), and the real estate sector (10%).

In order to evaluate the credit risks of the trust assets, we conducted a proprietary study on 13,000+ collective trust products, out of which 9,000+ products are still outstanding to account for 71% of the total AUM of Rmb2.7tr. We mention the highlights below:

Small product size implies low event risks

We estimate the average size of the collective trust products to be Rmb200m, with only 46 products having an outstanding size greater than Rmb1bn that are likely to mature in 2014. The total outstanding amount of these large size trust products is Rmb62.4bn, making up 8.8% of the sampled products to be matured in 2014. Around 34% of these large size trust product issuers are involved in the real estate sector, followed by infrastructure (20%) and industry and commerce (11%). However, none of these trust products exceed Rmb3bn in size, signifying smaller impact from an individual default, if any.

Figure 41: Sector-wise exposure for large-sized trust products (over Rmb1bn) maturing in 2014



Source: Deutsche Bank, CBRC, China Trustee Association, banks' annual report

Figure 42 shows the details of the trust products with size of over Rmb1bn and maturing in 2014.

Figure 42: Details of the largest trust products (trust size >=RMB1bn) maturing in 2014

S.No	Trust product name	Trustee	Size (Rmb m)	Start date	Maturity date	Exp. return (%)	Trust type	Invest area
1	Guangzhou Yayun City Loan Trust	Anxin Trust & Investment	2,912	17-Aug-11	17-Aug-14	9.50	Loan type	Real Estate
2	Golden Peony. Rongfeng, Energy Communications Investment Co., Daxi, Jinyulu Equity/ Stock rights Investment Trust	Huarong Int'l Trust	2,651	20-Sep-11	20-Sep-14	9.75	Property right	Infrastructure
3	Sinyaoo Program Trust	Huarong Int'l Trust	2,328	24-Jun-10	24-Jun-14		Loan type	Real Estate
4	Jinxiu No.2 Equity	Citic Trust	2,047	20-Sep-07	20-Sep-14	5.00	Equity Investment	Others
5	Postal Savings Bank of China, Golden Seed Preferred Investment RMB Trust	Shaanxi Int'l Trust	2,000	11-Nov-09	11-Nov-14		Security investment	Others
6	Tianshun No.20 Changjiang Securities Asset Management Single Trust Funds	AVIC Trust	2,000	7-May-13	7-May-14	4.71	Others	Others
7	Shenzhen Zhongzhou Equity Rights Investment Trust	Citic Trust	2,000	1-Mar-11	1-Mar-14	8.25	Property right	Real Estate
8	Tianshun No.266 Avic-intl Working Capital Loan Single Fund Trust	AVIC Trust	2,000	16-Feb-12	16-Feb-14	9.00	Loan type	Others
9	Shanxi Communications Loan Trust	Huarong Int'l Trust	1,593	5-Dec-12	5-Dec-14	7.90	Loan type	Infrastructure
10	Xian Daming Palace Wanda Equity Rights Investment Trust	Daye Trust Co, LTD	1,500	29-Oct-12	29-Oct-14		Property right	Real Estate
11	Hengzhi Investment Trust	Minmetals International Trust	1,500	8-Aug-13	8-Aug-14	6.70	Equity Investment	Real Estate
12	Harbin Haxi Wanda Square Loan Trust	Citic Trust	1,500	10-Jan-13	10-Jul-14	7.50	Loan type	Real Estate
13	Fenghui I, No.1301 Trust	Huaxin Trust	1,500	29-Mar-13	29-Mar-14		Others	Others
14	Minyue No.4 Jiangyin City Receivable Investment Fund	Citic Trust	1,475	29-Jul-13	29-Sep-14	8.00	Debt investment	Infrastructure
15	Pingan No.1 Automobile Consumption Loan of 2013 Asset Backed Trust	JIC Trust	1,425	28-Nov-13	28-Nov-14		Property right	Others
16	Yurun Agriculture Products Equity	Huarong Int'l Trust	1,401	3-Dec-12	3-Dec-14		Equity Investment	Industry & Commerce
17	Hongsheng No.1 Directional Add-Issuance Trust	FOTIC	1,397	17-Jan-13	17-Sep-14		Security investment	Others
18	Xingji Weiye Equity Rights Investment Trust (2009)	China Credit Trust	1,300	29-Sep-09	29-Sep-14		Property right	Others
19	Credit Equals Gold No.2 Trust (2011)	China Credit Trust	1,300	26-Jul-11	26-Jul-14	10.50	Equity Investment	Industry & Commerce
20	Shengjing Tianjin District Development Trust Funds 3	Citic Trust	1,291	5-Mar-12	5-Mar-14	10.50	Loan type	Infrastructure
21	Green City Investment Fund Trust	Citic Trust	1,200	15-Aug-11	15-Aug-14	8.00	Others	Others
22	Dayou Energy Directional Add-Issuance Trust	Daye Trust Co, LTD	1,200	23-Oct-12	23-Apr-14		Equity Investment	Industry & Commerce
23	Wuqing Development Receivables Investment Trust	Citic Trust	1,170	13-Sep-12	13-Dec-14	10.00	Debt investment	Infrastructure
24	Credit Equals Gold No.1 Trust (2010)	China Credit Trust	1,112	1-Feb-11	1-Feb-14	9.50	Equity Investment	Others
25	Ruishi No. 28 Real Estate Investment Trust	Ping An Trust	1,100	11-May-11	11-May-14		Portfolio	Real Estate
26	Baoying No. 113 Trust (No.2 Jianye Property Trust Fund)	Bridge Trust	1,078	6-May-11	6-May-14	12.50	Portfolio	Real Estate
27	Suning Group Working Capital Loan Trust	China Jingu International Trust	1,077	4-Jun-13	4-Jun-14		Loan type	Others
28	Vanka Jindaotian Old Town Renovation Project Equity Rights Trust	Chang'an Trust	1,070	6-Apr-12	6-Apr-14	9.50	Equity Investment	Real Estate
29	Suzhou High-tech Park State-owned Assets Mgt. Co. Receivables Investment Trust	Citic Trust	1,066	18-Jul-12	18-Jul-14	8.50	Debt investment	Infrastructure
30	Chongqing Jiangbeizui CBD Equity Rights Trust	Chongqing Int'l Trust	1,050	25-Dec-12	25-Dec-14		Equity Investment	Real Estate

Source: Deutsche Bank, CBRC, China Trustee Association, banks' annual report

Figure 42: Details of the largest trust products (trust size >=RMB1bn) maturing in 2014 (Cont'd)

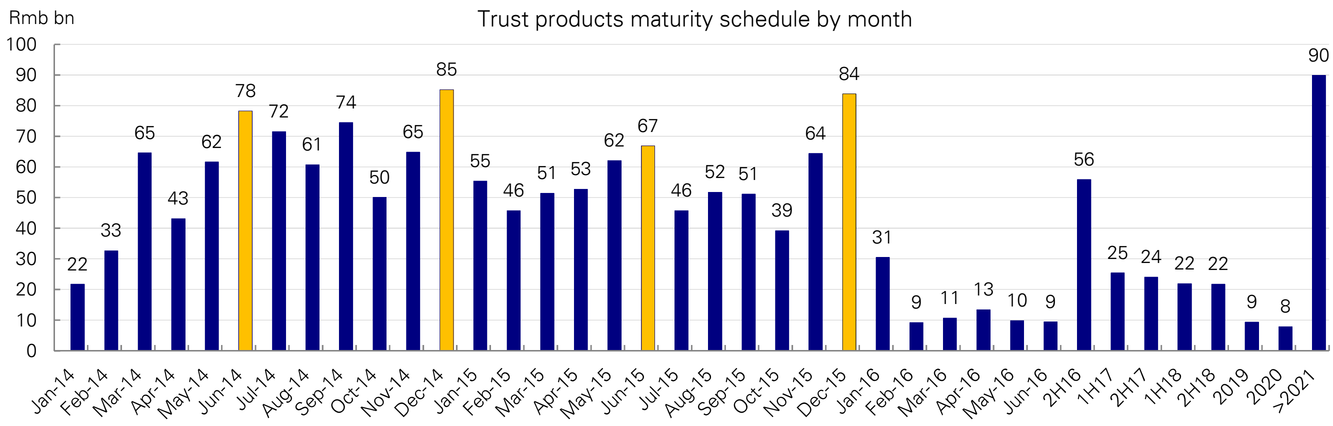
S.No	Trust product name	Trustee	Size (Rmb m)	Start date	Maturity date	Exp. return (%)	Trust type	Invest area
31	Shanghai Shengtong Social Housing Project Trust (2012)	China Credit Trust	1,050	19-Jun-12	19-Mar-14	9.50	Loan type	Real Estate
32	Minhui No. 4 Xiangcheng Infrastructure Receivables Investment Trust	Citic Trust	1,032	3-Jul-12	3-Jul-14	8.60	Debt investment	Infrastructure
33	Huajin Industrial Contract Beneficiary Rights Trust	Daye Trust Co, LTD	1,027	7-Sep-12	7-Sep-14	8.50	Property right	Others
34	Taihu New City Receivables Investment Trust	Minmetals International Trust	1,004	30-Oct-12	30-Oct-14	7.50	Debt investment	Others
35	Tianqi No. 147 Elion Goldway Jining Social Housing Trust (30 months)	AVIC Trust	1,000	18-May-12	18-Nov-14	9.50	Equity Investment	Real Estate
36	Ruishang Investment Trust	Minmetals International Trust	1,000	24-Oct-13	24-Oct-14	7.00	Equity Investment	Others
37	Hongdao No. 1 Loan Trust (Subordinated)	Citic Trust	1,000	24-Feb-12	24-Aug-14		Loan type	Industry & Commerce
38	Fortune No. 19 - Binhai New Area No. 3 Property Beneficiary Rights Investment Trust	Kun Lun Trust	1,000	15-Aug-12	15-Aug-14		Property right	Infrastructure
39	Guangkong Lenovo RMB Fund Investment Trust	China Jingu International Trust	1,000	19-Jul-12	19-Jul-14		Others	Others
40	Shanxi Huaying Equity Rights Investment Trust	Chang'an Trust	1,000	5-Jul-12	5-Jul-14	9.00	Property right	Industry & Commerce
41	Jin'an No. 1 Single Fund Investment Trust	Lujiazui International Trust Co.	1,000	29-Jun-12	29-Jun-14		Others	Industry & Commerce
42	BoCOM No. 1 Wealth Management Trust	Kun Lun Trust	1,000	28-Jun-12	28-Jun-14		Others	Others
43	Hengrun Infrastructure No. 2 Trust (Suzhou Wuzhong City Investment Receivables Rights)	Minmetals International Trust	1,000	19-Jun-12	19-Jun-14	9.00	Debt investment	Infrastructure
44	Tianqi No. 147 Elion Goldway Jining Social Housing Trust (24 months)	AVIC Trust	1,000	18-May-12	18-May-14	10.00	Equity Investment	Real Estate
45	Jia Yuan No.1 Trust	Ping An Trust	1,000	16-Feb-12	16-Feb-14		Others	Real Estate
46	Ma'anshan Wanda Equity Rights Investment Trust	BoCOM International Trust	1,000	8-May-13	8-May-14	7.00	Property right	Real Estate
Total			**62,355**					

Source: Deutsche Bank, CBRC, China Trustee Association, banks' annual report

Maturity peak likely in June

Our proprietary study shows that Rmb183bn of trust products will mature in the second quarter of 2014, with maturity peak expected in June 2014 (Figure 43). Over the course of the year, 41% of the collective trust products, with a combined AUM of Rmb709bn are likely to mature by 2014, showcasing the short-term nature of these trust products. As the average duration of the collective trust products has fallen to 1.5 years, unsurprisingly a large portion of these products are maturing in 2014 and 2015.

Figure 43: Monthly maturity schedule of 13,000+ collective trust products



Source: Deutsche Bank, WIND

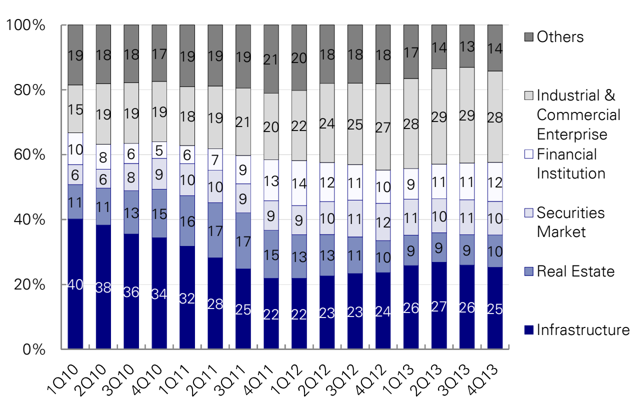
Real estate sector – high land prices mean risks much lower than perceived

Given the industry concentration of large-sized collective trust products in the real estate sector, the market has raised a lot of concerns about the trust funds' investments in the property sector.

Trust sector's exposure to real estate sector falling

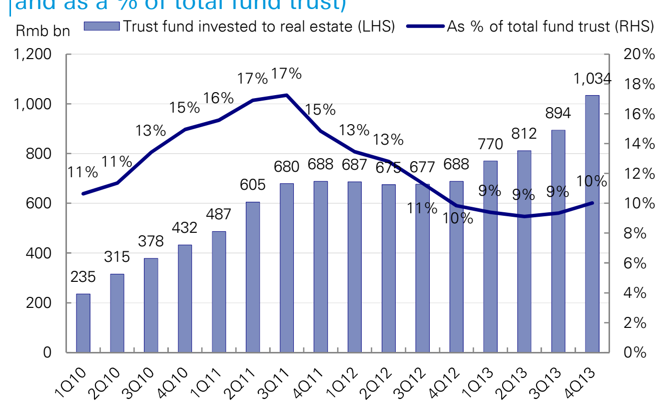
Data shows that the trust sector's exposure to the real estate sector has actually been declining since reaching a high of 17% in September 2011. As of December 2013, one in ten investments was extended towards the higher risk real estate sector, with a combined investment of just over Rmb1tr.

Figure 44: Breakdown of trust investment by industry



Source: Deutsche Bank, CEIC

Figure 45: Trust fund investment in real estate (absolute and as a % of total fund trust)



Source: Deutsche Bank, CEIC

Rising land prices/collateral value to protect trust loan quality

Deutsche Bank's property team believes that the default risk for trust financing in the real estate sector is low, given that land prices are currently at record high levels. This implies that the underlying collateral should be higher than the outstanding loan value. As a result, the handful of default cases relating to the real estate sector witnessed in the past 12 months are mostly due to cash flow issues driven by weaker-than-expected property sales leading to temporary cash shortage and failure to meet financial obligations.

With 14 out of the 21 previously defaulted or near default cases of trust products invested in the real estate sector, most investors managed to recover all their investments, as the underlying assets were sold to other developers in form of distressed assets. As the proceeds from the distressed asset sales is usually larger than the outstanding loan value (i.e. collateral has generally appreciated in value), the recovery rate for the trust loans is usually high.

Figure 46: Summary of previously default or nearly-default trust plans – mostly bailed out by trust companies

Reporting Date	Issuers	Nature of Issuers	Distribution bank	By sector	Size (Rmb mn)	Collective /Single	Resolution plan
Feb 2012	SDIC Trust	Central govt owned	ICBC	Mining	200	Collective	SDIC Trust: the borrower not default
Apr 2012	Jilin Trust	Local govt owned	CEB	Real Estate	200	Collective	Huarong AMC stepped in
May 2012	Zhongrong Int'l Trust	Privately-owned	MSB	Real Estate	1,164	Collective	Repaid by trust company first
May 2012	Jilin Trust	Local govt owned	SPDB	Building Material	150	Collective	Repaid by trust company first
June 2012	Sino-Aus Int'l Trust	Privately-owned	CCB	Real Estate	645	Collective	Tried to recover through lawsuit.
July 2012	Zhongrong Int'l Trust	Privately-owned	BODL	Real Estate	871	Collective	The repayment fund may be offered by trust company
Aug 2012	Anxin Trust	Privately-owned	CNCB	Real Estate	1,180	Collective	The repayment fund may be offerred by trust company
Dec 2012	Zhongrong Int'l Trust	Privately-owned	CCB	Real Estate	385	Collective	Repaid by trust company first
Dec 2012	CITIC Trust	Central govt owned	CEB	Mining	3,017	Collective	N.A.
Dec 2012	China Fortune Int'l Trust	Central govt owned	CEB	Agriculture	547	Collective	Trust company: the borrower not default
Dec 2012	CITIC Trust	Central govt owned	CNCB	Steel	1,340	Collective	Trust plan extended by 3 months
End 2012	Zhongtai Trust	Central govt owned	na	Real estate	31	Single	Tried to recover through lawsuit
End 2012	Xinhua Trust	Privately-owned	INDB	Real estate	850	Collective	TBD
Apr 2012	Jilin Trust	Local govt owned	CEB	Real Estate	200	Collective	Huarong AMC stepped in
Mar 2013	Sichuan Trust	Privately-owned	NA	Real estate	100	Collective	A third-party enterprise stepped in
Mar 2013	Anxin Trust	Privately-owned	CNCB	Real estate	627	Collective	Repaid by trust company first
Apr 2013	Anxin Trust	Privately-owned	NA	Real estate	400	Collective	A third-party enterprise stepped in
July 2013	Minmetals Int'l Trust	Central govt owned	PAB	Real estate	400	Collective	Tried to recover through lawsuit.
Nov 2013	Xinhua Trust	Privately-owned	MSB	Real estate	310	Collective	Tried to recover through lawsuit.
Dec 2013	Jilin Trust	Local govt owned	CCB	Mining	973	Collective	TBD
Jan 2014	China Credit Trust	Fins-owned	ICBC	Mining	3,030	Collective	Get repaid

Source: Deutsche Bank, media report

Figure 46 shows the 21 previous cases of nearly default trust companies, with most cases seeing a holding/parent company stepping in on behalf of the trust company to ensure full repayment to investors. As mentioned above, 14 out of the 21 troublesome cases pertain to the real estate sector.

Infrastructure sector – an accepted form of government borrowing

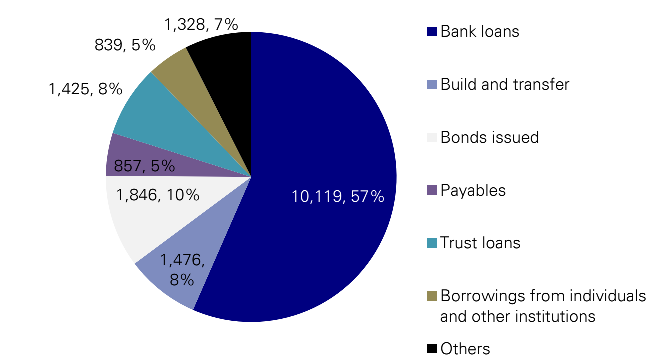
The National Audit Office (NAO) reported that local government debt amounted to Rmb17.9tr as of June 2013, of which Rmb1.43tr was borrowing from trust loans. In other words, borrowing from local governments made up 34% of the total trust loans. The fact that these trust loans are included in the total debt recognized by the central government, we believe the expenses for repayment should be earmarked in the budget of the local governments, suggesting lower probability of default. Technically, if a local government defaults, the market might equate this to a sovereign default.

Figure 47: Summary of local government debt balance by funding source

Unit: Rmb bn 1H2013	Debt with direct repayment obligation	Contingent debt liabilities: Debt with guarantee provided	Contingent debt liabilities: Debt might lead to contingent liabilities	Total
Bank loans	5,525	1,909	2,685	10,119
Build-and-Transfer (BT)	1,215	47	215	1,476
Bonds issued	1,166	167	512	1,846
including: local government bonds	615	49	0	664
Enterprise bonds	459	81	343	883
Mid-term notes	58	34	102	194
Short-term financing bills	12	1	22	36
Payables	778	9	70	857
Trust loans	762	253	410	1,425
Borrowings from individuals and other institutions	668	55	116	839
Construction expenditure incurred but not paid & delayed payments	327	1	48	376
Financing from brokers, insurers and other FIs	200	31	106	337
Fiscal on-lending (treasury bond & foreign debt)	133	171	0	303
Financial leasing	75	19	137	232
Private funds	37	4	39	80
Total	**10,886**	**2,666**	**4,339**	**17,891**

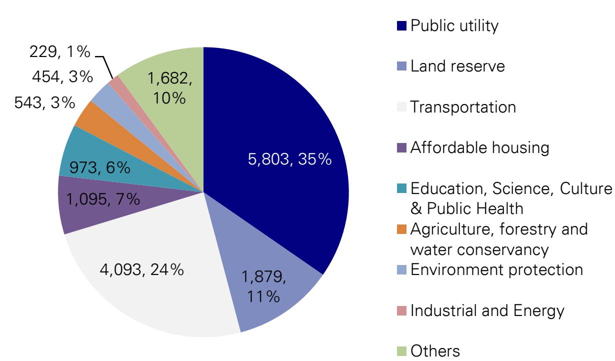
Source: Deutsche Bank estimates,. NAO

Figure 48: Summary of local government debt balance by funding source (1H13) – Rmb bn



Source: Deutsche Bank, NAO

Figure 49: Summary of local government debt balance by use of funds (1H13) – Rmb bn



Source: Deutsche Bank, NAO

Industrial and commercial sector: where the real risks lie

We believe the riskiest component of the collective trust products is lending to the industrial and commercial sector as it also overlaps with the overcapacity sector, including mining, steel, metal and thermal power. Assuming that 20% of the issued collective trust products are involved in the industrial and commercial sector, the exposure should amount to Rmb540bn. In the extreme scenario that the default rate rises to 10% with minimal recovery, the expected losses should be around Rmb54bn, which are manageable in our view.

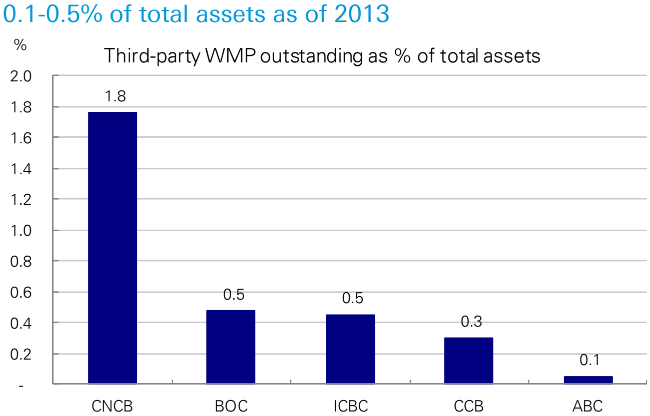
Chinese banks – limited exposure to third-party WMPs, suggesting low event risks

Our survey on the listed banks shows limited exposure to third-party WMPs (including trust products) and this implies low event risks despite potential negative news flow. In addition, we believe the ownership of risks for their direct exposure to the trust assets, for example, through investments in trust beneficial rights, should be clear and transparent to allow appropriate risk control.

Specially, Chinese banks are exposed to trust product through the following two ways:

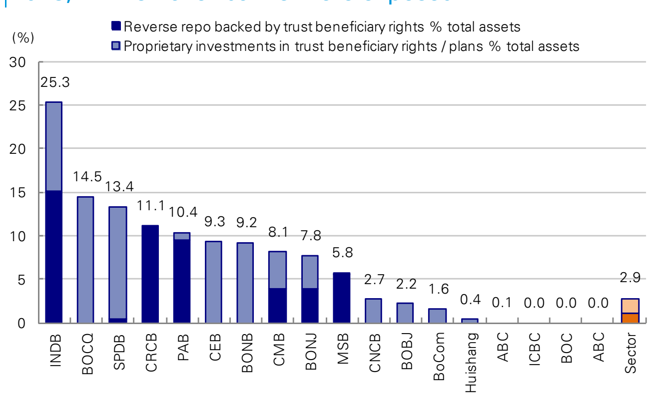
- Distribution of third-party WMPs (including collective trust products), which are recorded off balance sheet and will expose banks to potential reputational risks in the events of potential default. While only a handful of banks reported their exposure, the big-four banks, which make up approximately 45% of the assets in the banking system, distributed third-party WMPs worth of Rmb205bn in combine as of end-2013, or 0.1%-0.5% of their total assets, pointing to minimum impacts on banks if any default occurred.
- Direct exposure to trust beneficiary rights (TBR), which include two major forms: 1) the collateral that a trust company pledges to a bank in exchange for inter-bank funding, which is booked under financial assets held under reverse repurchase agreement backed by TBR; and 2) proprietary investments as banks acquire trust asset plans in exchange for yields. These assets are parts of on-B/S non-standardized assets, which we elaborate in details in the next section. Listed Chinese banks' exposure to TBR amounted to 2.9% of total assets as of end-2013, with smaller banks more exposed. We believe the credit risks for the trust assets are comparable to bank loans as the bulk of the single-fund trust products are essentially loans extended by banks to corporate borrowers.

Figure 50: Listed Chinese banks' exposure to third-party WMP is limited, with big-four banks' exposure ranging 0.1-0.5% of total assets as of 2013



Source: Deutsche Bank, company data

Figure 51: Listed Chinese banks' exposure to trust beneficiary rights amounted to 2.9% of total assets as of 2013, with smaller banks more exposed



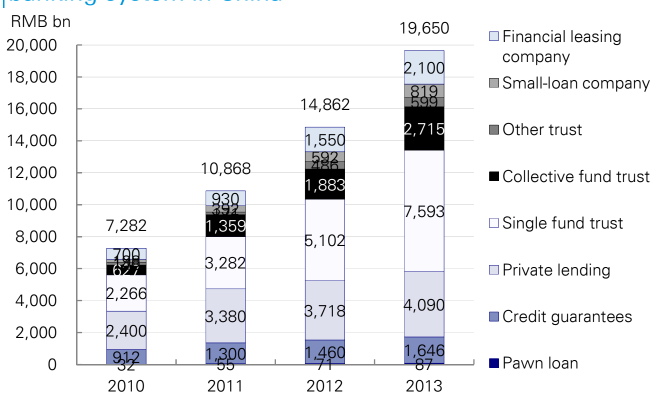
Source: Deutsche Bank, company data

Banks' connectivity with the shadow banking system

The role of banks in the growth of shadow banking system

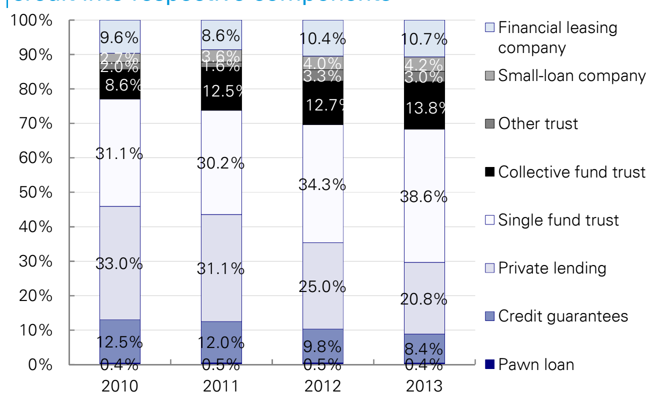
Slowing system deposit growth and tighter bank regulations (including the loan/deposit ratio cap of 75%) since 2009 has fueled strong growth in China's shadow banking system, which we estimate to serve Rmb19.6tr (as of December 2013) through its different channels, representing a 1.7x increase in size since 2010, or equal to 23.9% of China's 2013E GDP.

Figure 52: Growth in credit issued by the shadow banking system in China



Source: Deutsche Bank estimates, WIND, Ministry of Commerce, PBOC, Shanghai Leasing Trade Association, China Trustee Association

Figure 53: Breakdown of the shadow banking system credit into respective components



Source: Deutsche Bank estimates, WIND, Ministry of Commerce, PBOC, Shanghai Leasing Trade Association, China Trustee Association

We believe the shadow banking system is funded primarily by the commercial banks through: (1) inter-bank financing, as indicated by sharply rising financial assets held by the listed banks under the reverse purchase arrangements backed by bills and trust beneficial rights (TBR), which reached Rmb2.3tr as of June 2013 before falling to Rmb1.7tr by December 2013; (2) proprietary investments made by banks, totaling Rmb1.98tr by the listed banks as of December 2013; and (3) issuance of wealth management products (WMPs) by banks, which reached Rmb12.2tr as of February 2014 (with one-third invested in trust and other loans).

In the Circular No.8 issued by the CBRC in March 2013, the regulator introduced the terms "non-standardized assets" while regulating the issuance of WMPs by banks. Essentially, non-standardized assets refer to non-tradable and credit-backed assets, including trust loans and assets, asset management plans issued by different financial intermediaries (e.g. trust companies, brokers, insurance companies), bank acceptance and bills, letters of credits and receivable financing.

We believe the major connectivity between banks and the shadow banking system is represented by the on-balance sheet (on-B/S) non-standardized assets, of which 70% are inter-bank assets collateralized against TBR or proprietary investments in TBR and loan-type WMPs issued by different financial institutions, and off-balance sheet (off-B/S) non-standardized WMPs. Please refer to Appendix B for more details on the three main types of non-standardized assets.

We believe the credit risks for the trust assets are comparable to bank loans as the bulk of the single-fund trust products are essentially loans extended by banks to corporate borrowers. This credit exposure is recorded under either interbank assets or proprietary investments with the trust companies as the counter-party, instead of being classified as loans, so that the banks can circumvent the loan quota and capital requirements.

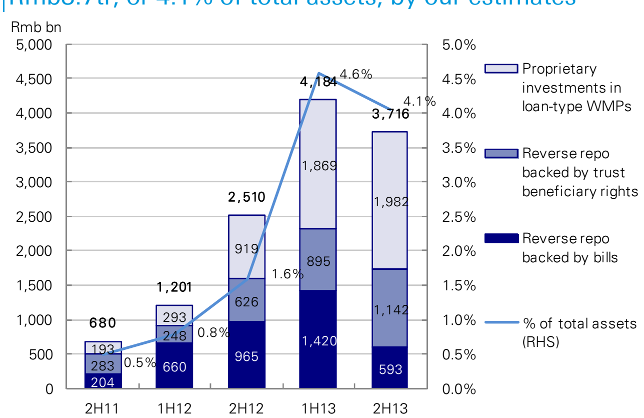
Nonetheless, we see rising regulatory risks against the non-standardized assets, as less capital and loan losses reverse have been set aside for this exposure to guard against asset quality deterioration.

In the following section, we highlight that the banks have been cutting back on inter-bank assets backed by bills in 2H13, making the sector less vulnerable to tighter regulation, despite company-level risks that might stay high for the smaller banks.

The rise and subsequent deleveraging of the on-B/S non-standardized assets

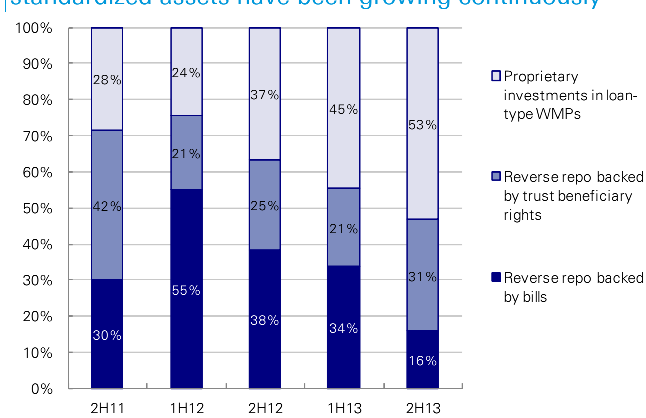
In anticipation of tighter regulations on capital and provisioning, the 14 listed banks that have reported FY13 results, reduced their exposure to on-B/S non-standardized assets by 11% hoh during 2H13 to Rmb3.7tr or 4.1% of total assets (1H13: 4.6%), according to our estimates. More specifically, these banks had slashed their exposure to loan-type bill-backed reverse repo assets by 58% hoh to Rmb593bn, while their exposure to TBR-backed reverse repo backed and proprietary investment in loan-type WMPs rose by 28% and 6% hoh, respectively. Figure 54 shows the total outstanding of non-standardized assets for listed Chinese banks and the percentage of total assets. Figure 55 shows the breakdown of non-standardized assets by the three main types.

Figure 54: Listed Chinese banks have deleveraged their non-standardized assets in 2H13 by 11% hoh to Rmb3.7tr, or 4.1% of total assets, by our estimates



Source: Deutsche Bank estimates, company data

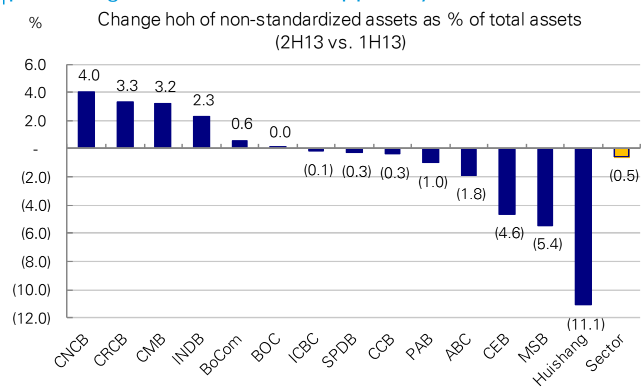
Figure 55: Bill-backed reverse repo dropped significantly by 11% hoh, while the other two types of non-standardized assets have been growing continuously



Source: Deutsche Bank estimates, company data

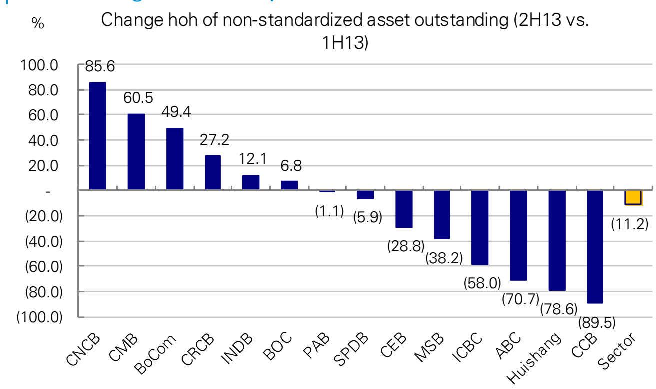
Among these 14 listed banks, Huishang, CEB and MSB showed the sharpest drop in their exposure to non-standardized assets as a percentage of total assets, by 11.1%, 5.4% and 4.6% hoh during 2H13, respectively, as these three banks were among the most exposed as of 1H13. In contrast, CNCB, CRCB and CMB have been continuously growing their exposure to non-standardized assets, raising the proportion as of total assets by 4.0%, 3.3% and 3.2%, respectively.

Figure 56: Chinese banks – Non-standardized assets as a percentage of total assets dropped by 0.5% hoh in 2H13



Source: Deutsche Bank, company data

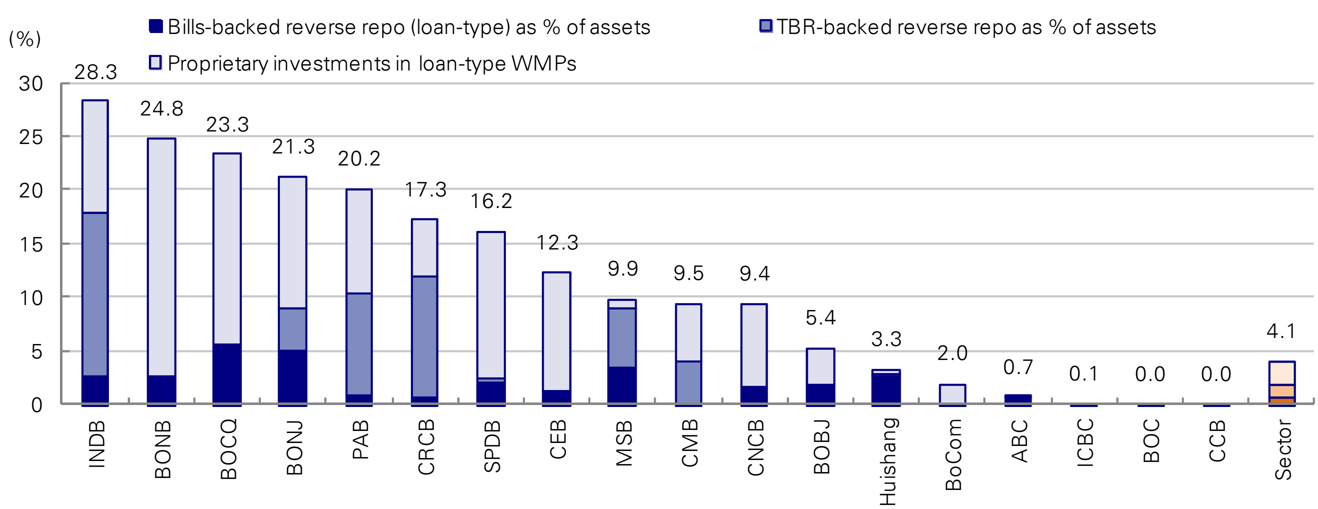
Figure 57: Chinese banks – Non-standardized asset outstanding declined by 11.2% hoh in 2H13



Source: Deutsche Bank, company data

Figures 58 and 59 illustrate the exposure to non-standardized assets for each bank, with the big-four banks being marginally exposed (0.0-0.7% of total assets). Smaller banks generally have higher exposure due to their tight balance sheets and relatively weaker capital positions.

Figure 58: A+H listed Chinese banks' exposure to non-standardized assets – Smaller banks are more exposed (FY13)



Source: Deutsche Bank estimates, company data. Note: BOCQ, BOBJ, BONJ and BONB's data are as of 1H13.

Figure 59: A+H listed Chinese banks' exposure to non-standardized assets – INDB, PAB, CRCB and SPDB are among the most exposed

2H13, RMB bn	H share banks											A share banks					
	ICBC	CCB	ABC	BOC	BoCom	CMB	CNCB	MSB	CRCB	Huishan	H shr	SPDB	INDB	CEB	PAB	A shr	A+H
Reverse repo backed by bills or trust beneficiary rights																	
Bills (adjusted for loan-type only)	18	6	98	7	26	13	66	113	4	10	361	76	104	35	16	231	593
Trust beneficiary rights	0	0	2	0	0	156		177	56	1	391	17	554	0	180	751	1,142
Total	**18**	**6**	**100**	**7**	**26**	**168**	**66**	**290**	**60**	**11**	**752**	**92**	**658**	**35**	**197**	**982**	**1,734**
% of total assets	0.1%	0.0%	0.7%	0.0%	0.4%	4.2%	1.8%	9.0%	12.0%	2.9%	0.9%	2.5%	17.9%	1.5%	10.4%	8.4%	1.9%
% of total loans	0.2%	0.1%	1.4%	0.1%	0.8%	7.7%	3.4%	18.4%	29.4%	5.6%	1.8%	5.2%	48.5%	3.0%	16.2%	17.8%	3.6%
Investments in loan-type WMPs																	
Bank-issued WMPs	0	0	0	0	0	0	66	21	26	1	114	25	6	38	168	237	351
Trust beneficial rights / plans	0	0	6	0	94	171	97	9	0	1	379	475	376	225	16	1,092	1,471
Broker-issued WM schemes	0	0	0	0	0	0	115	0	0	0	115	5	0	0	0	5	120
Insurer-issued WM schemes	0	0	0	0	0	41	0	0	0	0	41	0	0	0	0	0	41
Total	**0**	**0**	**6**	**0**	**94**	**212**	**278**	**30**	**26**	**2**	**648**	**504**	**382**	**263**	**184**	**1,333**	**1,982**
% of total assets	0.0%	0.0%	0.0%	0.0%	1.6%	5.3%	7.6%	0.9%	5.3%	0.4%	0.8%	13.7%	10.4%	10.9%	9.8%	11.4%	2.2%
% of total loans	0.0%	0.0%	0.1%	0.0%	2.9%	9.7%	14.3%	1.9%	12.9%	0.8%	1.5%	28.5%	28.1%	22.5%	15.2%	24.2%	4.1%
Total non-standardized assets	**18**	**6**	**106**	**7**	**120**	**381**	**344**	**320**	**87**	**13**	**1,400**	**597**	**1,040**	**298**	**381**	**2,316**	**3,716**
% of total assets	0.1%	0.0%	0.7%	0.0%	2.0%	9.5%	9.4%	9.9%	17.3%	3.3%	1.7%	16.2%	28.3%	12.3%	20.2%	19.9%	4.1%
% of total loans	0.2%	0.1%	1.5%	0.1%	3.7%	17.3%	17.7%	20.3%	42.3%	6.5%	3.3%	33.8%	76.6%	25.5%	31.3%	42.0%	7.7%

Source: Deutsche Bank estimates, company data.

Limited impact from upcoming regulation but company-level risks might stay high

According to *Caijing* magazine (18 November 2013), the CBRC is planning to impose stricter regulations on on-B/S non-standardized assets owned by Chinese banks. The potential new regulations may focus on capping interbank exposure and require banks to set aside additional capital and provisions to cover counterparty risks. Specifically:

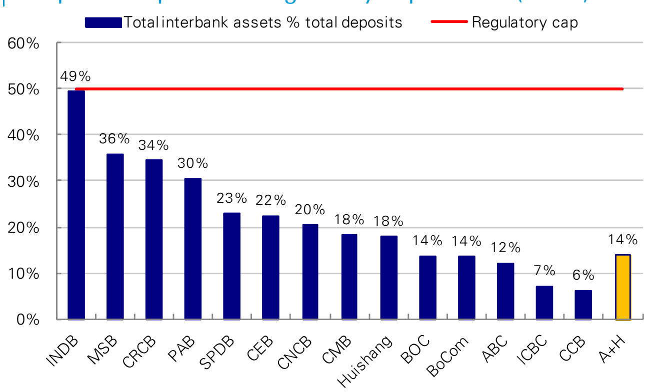
- Cap the inter-bank exposure:
  - To limit the banks' exposure to inter-bank assets to 50% of deposits
  - To limit inter-bank lending to non-bank financial institutions to 25% of the net capital
  - To limit the inter-bank exposure (both assets/liabilities) to a single financial institution to 100% of the capital.
- To set aside additional capital and provisions to cover the counterparty risks for riskier inter-bank transactions, i.e. financial assets held under reverse repo backed by bills and trust beneficiary rights.
- Banks might be required to reduce the duration mismatch of their inter-bank portfolio.
- Banks are prohibited to provide or receive implicit guarantee on inter-bank transactions.

Should this materialize, we expect a modest impact on the sector as there would still be room for most banks to grow their interbank business without incurring major capital deductions (tier 1 ratio down 21bps, we estimate) and earnings impact (FY14E earnings down 2.3%). In addition, we believe the new regulations should drive down systemic risks, which we view as a positive development.

Cap the interbank exposure – still room to grow for the sector

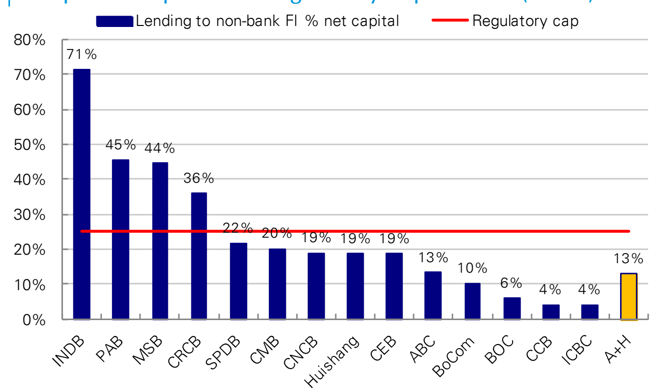
As of December 2013, we estimate that the total inter-bank assets owned by the 14 listed Chinese banks amounted to Rmb9.5tr to account for 14% of total deposits, of which lending to non-bank financial institutions made up 13% of net capital or Rmb954bn. The exposure is lower than the upcoming regulatory caps of 50% and 25% respectively, as reported by the *Caijing* Magazine, suggesting room for most banks to further increase interbank businesses to support the sector's growth. The outliers are INDB, PAB, MSB and CRCB, with their lending to non-bank financial institutions accounting for 71%, 45%, 44% and 36% of net capital, making them more vulnerable to policy tightening. The big-four banks generally have lower exposure to inter-bank assets.

Figure 60: Chinese banks – Total interbank assets amounted to Rmb9.5tr or 14% of total deposits, compared to potential regulatory cap of 50% (2H13)



Source: Deutsche Bank, company data

Figure 61: Chinese banks – Total lending to non-bank FIs amounted to Rmb0.95tr or 13%% of net capital, compared to potential regulatory cap of 25% (2H13)

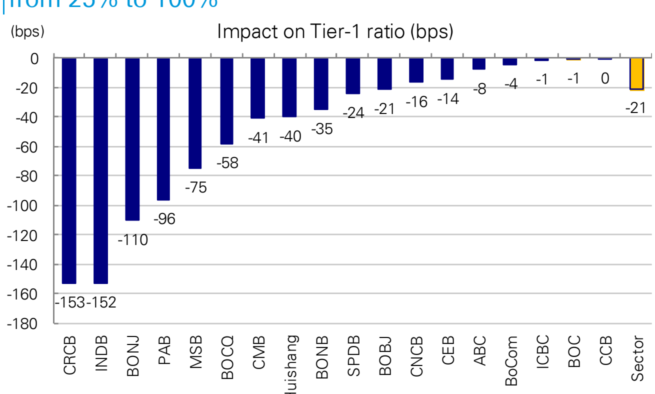


Source: Deutsche Bank, company data, PBOC
Note: We assume 19% of reverse repo is conducted with a non-bank FI as a counter-party

Increase risk weights – Sector's tier 1 ratio down merely 21bps to 9.58%

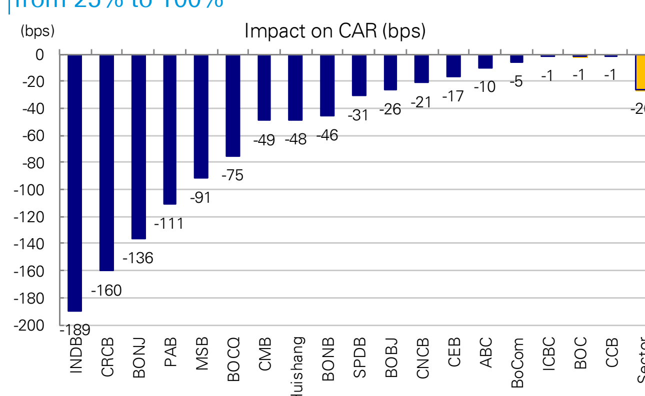
Our analysis shows that if the risk weights on bill- and TBR-backed reverse repos increase to 100% from 25% currently, the listed Chinese banks should see their tier 1 ratio and CAR fall by 21bps and 26bps respectively. CRCB, INDB and BONJ should witness the biggest impact with tier-1 ratios dropping 153bps, 152bps and 110bps, respectively. The impact on core tier 1 ratio and CAR are summarized in Figures 62 and 63.

Figure 62: Tier 1 ratio lowered by 21bps if the risk weights of the bill- and TBR-backed reverse repo is lifted from 25% to 100%



Source: Deutsche Bank estimates, company data

Figure 63: Total CAR lowered by 26bps if the risk weights of the bill- and TBR-backed reverse repo is lifted from 25% to 100%

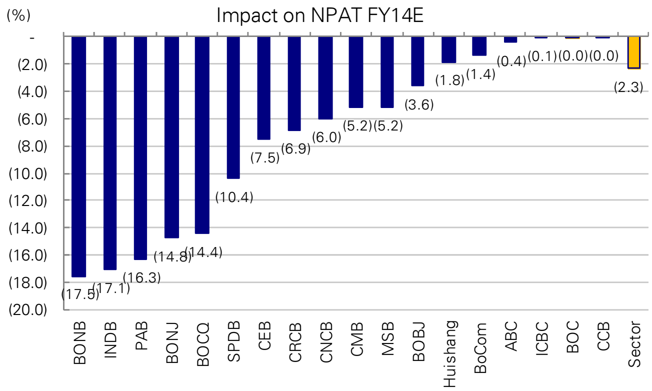


Source: Deutsche Bank estimates, company data

Charge higher provisions – Sector FY14E NPAT down by only 2.3%

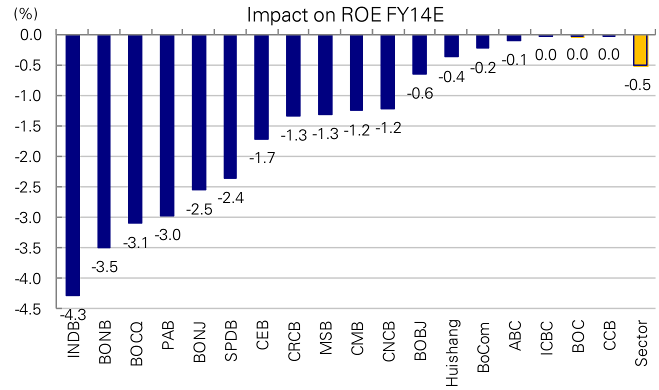
If we apply the general provision charge of 100bps on these non-standardized assets, the net profit of the listed Chinese banks might be reduced by 2.3%. BONB, INDB and PAB should be among the hardest hit (down 17.5%, 17.1% and 16.3%, respectively). The profit and ROAE impact on each of the individual banks is summarized in Figures 64 and 65.

Figure 64: FY14E NPAT might reduce by 2.3% with the application of general provision charges of 100bps



Source: Deutsche Bank estimates, company data

Figure 65: FY14E ROE might reduce by 0.5% with the application of general provision charges of 100bps



Source: Deutsche Bank estimates, company data

Local CBRC branches on the move to tighten interbank regulation

Reported by Yicai on 2 April 2014, the Sichuan and Shenzhen branches of the CBRC, together with several other provincial branches, have recently issued tighter regulations on interbank businesses of Chinese banks. Some of the key regulations include: 1) centralizing the interbank business to headquarters of commercial banks; 2) prohibiting branches and sub-branches of commercial banks to operate separate accounts in the interbank market; 3) requiring banks to set aside additional capital and provisions and to enhance maturity management, credit extension and guarantee condition; and 4) establishing special business units for interbank businesses.

Manageable risks from banks issued WMPs

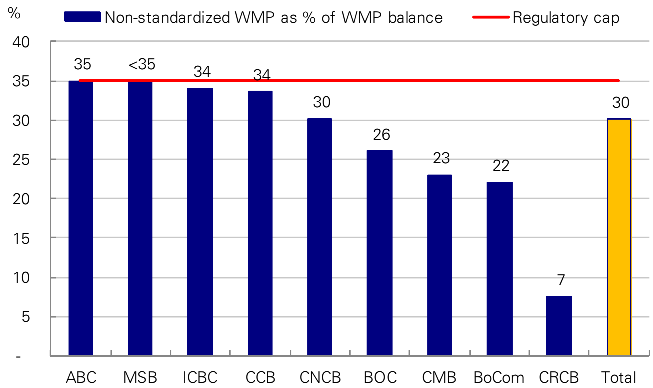
Apart from the on-balance-sheet non-standardized assets that we elaborated above, Chinese banks are also financing the shadow banking system through non-principal guaranteed wealth management products (WMPs), especially through non-standardized WMPs, which mainly consist of loans, discounted bills, letter of credit and accounts receivable.

We see limited risks arising from bank-issued WMPs, as these liabilities are tightly regulated with the introduction of No. 8 Circular issued by the CBRC in March 2013 to limit the banks' exposure to non-standardized WMPs to 35% of total WMP balance and 4% of total assets.

Limited WMP risks given banks are compliant with the No. 8 Circular

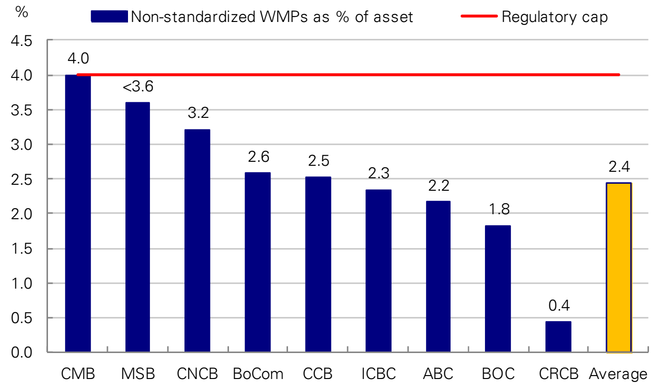
As of end 2013, the H-share Chinese banks have been all compliant with the regulatory requirements stipulated by the No. 8 Circular, with non-standardized WMPs making up 30% of total WMP balance and 2.4% of total assets. Figures 66 to 67 show the exposure to non-standardized WMPs for H-share listed banks.

Figure 66: H-share banks have met the requirement of 35% for non-standardized WMPs as a percentage of total WMP balance as of end-2013



Source: Deutsche Bank, company data

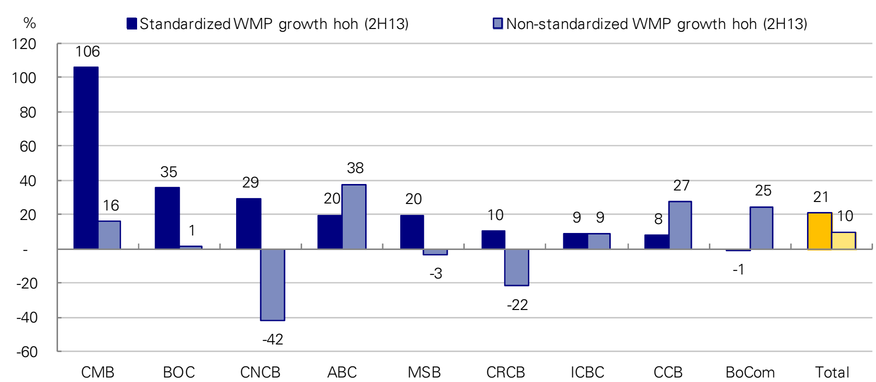
Figure 67: H-share banks have met the requirement of 4% for non-standardized WMPs as a percentage of total assets as of end-2013



Source: Deutsche Bank, company data

We believe the compliance with regulatory caps on non-standardized assets was primarily driven by faster growth of standardized WMPs at 21% hoh, compared to 10% hoh for non-standardized assets. Figure 68 illustrates the growth of both standardized and non-standardized WMPs for H-share listed banks.

Figure 68: Compliance with regulatory caps was mainly driven by faster growth of standardized WMPs at 21% hoh, compared with 10% for non-standardized WMPs



Source: Deutsche Bank, company data

Figure 69 showcases the breakdown of non-standardized WMPs by H-share listed banks, totaling Rmb1.95tr. Given the CBRC's new rules restricting the unchecked growth of non-standardized WMPs, only ABC and MSB have no remaining capacity to issue more of these products, while the other banks have the collective capacity to issue WMPs worth Rmb318bn.

Figure 69: Exposure of H-share banks to non-standardized WMPs as of end-2013

2013, RMB bn	ICBC	CCB	ABC	BOC	BoCom	CMB	CNCB	MSB	CRCB	Total
Non-standardized credit WMP	443	388	315	253	154	161	117	116	2	1,949
WMP balance	1,304	1,154	900	975	698	698	388	332	29	6,477
Total asset - 2013	18,918	15,363	14,562	13,874	5,961	4,016	3,641	3,226	502	80,065
Non-standard credit WMP										
As % of total WMP	34.0%	34%	35%	26%	22%	23%	30%	<35%	7%	30%
Non-standardized WMPs as % of asset	2.3%	2.5%	2.2%	1.8%	2.6%	4.0%	3.2%	<3.6%	0.4%	2.4%
Standardized WMPs as % of assets	4.5%	5.0%	4.0%	5.2%	9.1%	13.4%	7.4%	6.7%	5.3%	5.7%
WMP balance as % of assets	6.9%	7.5%	6.2%	7.0%	11.7%	17.4%	10.7%	10.3%	5.8%	8.1%
Remaining capacity of credit-backed WMPs										
35% WMPs	13	16	-	88	90	84	19	-	8	318
4% of assets	313	227	267	302	85	0	29	13	18	1,254

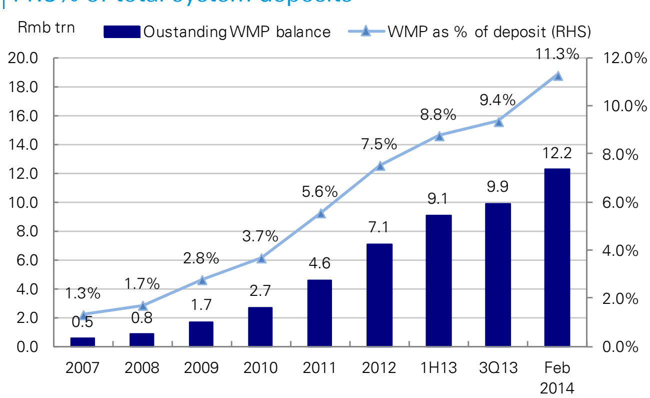
Source: Deutsche Bank, Company data

WMP balance was still growing strongly

As of February 2014, the outstanding balance of WMPs issued by all commercial banks had grown at a 2007-Feb14 CAGR of 66% to reach Rmb12.2tr, or 11.3% of system deposits, according to the CBRC.

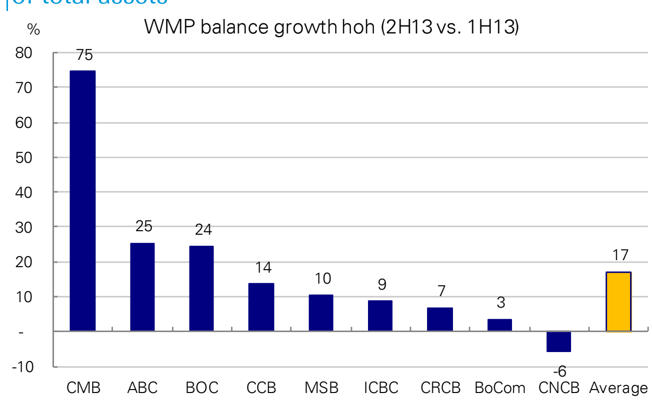
For the H-share listed Chinese banks, their total WMP balance grew by 17% hoh during 2H13 to account for 8.1% of total assets (1H13: 7.2%), as shown in Figure 72.

Figure 70: Outstanding balance of WMPs issued by Chinese banks reached Rmb12.2tr as of Feb 2013, or 11.3% of total system deposits



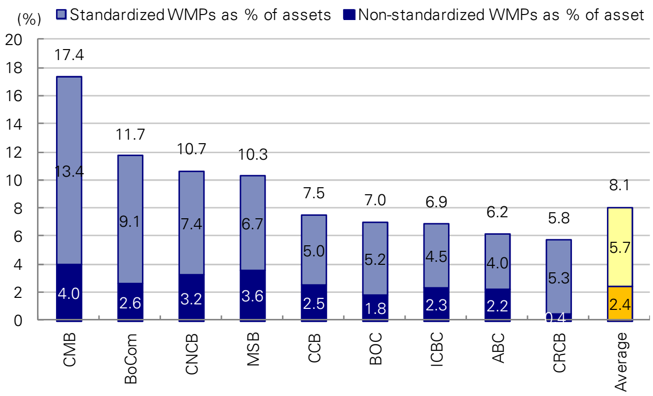
Source: Deutsche Bank, PBOC, WIND, CBRC, China Banking Association, Media report

Figure 71: Chinese banks have continued to grow their WMP balance by 17% hoh in 2H13 to account for 8.1% of total assets



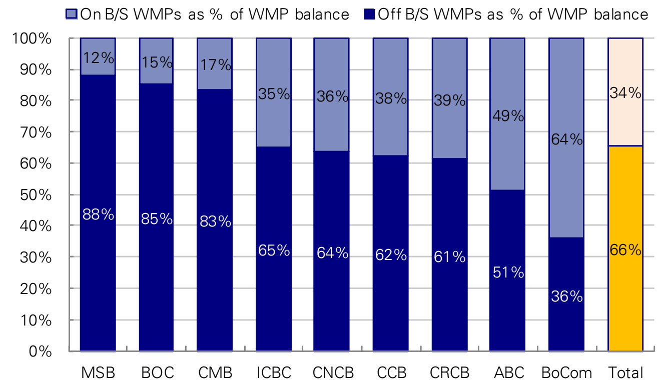
Source: Deutsche Bank, company data

Figure 72: H-share listed banks – Non-standardized and standardized WMPs as a % of total assets as of 2013



Source: Deutsche Bank, company data

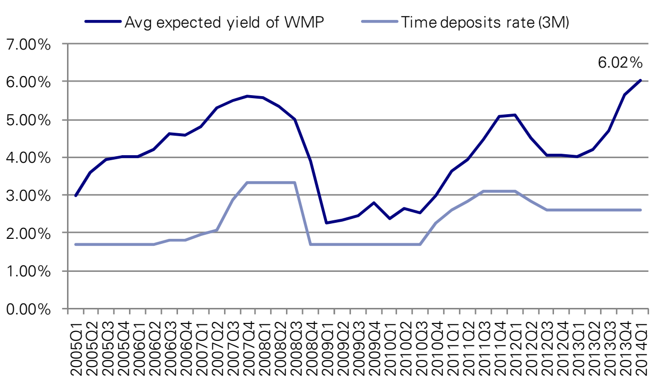
Figure 73: H-share listed banks – Breakdown of WMP balance by on- or off-B/S WMPs as of 2013



Source: Deutsche Bank, company data

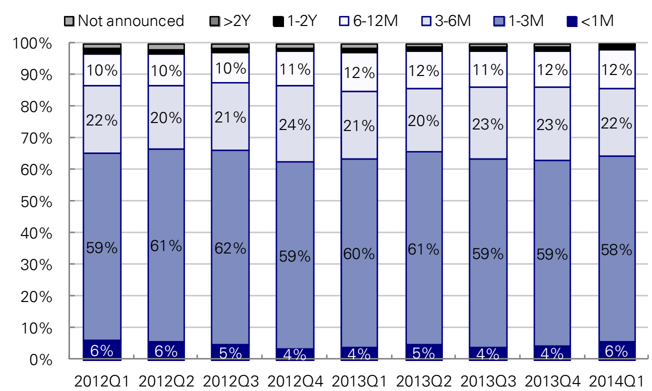
Bank WMPs generally offer higher yields than time deposits (as shown in Figure 74), and most of them are short-term products with duration less than three months (accounting for 64% of total number of WMPs issued, Figure 75).

Figure 74: Average expected yield of bank WMPs reached 6.02%, compared to 3-month time deposit rate of 2.6%



Source: Deutsche Bank, WIND, PBOC

Figure 75: Bank WMPs with duration less than 3 months accounted for 64% of total number of WMPs



Source: Deutsche Bank, WIND

Leading in asset quality race: BOC & ABC

FY13 operating results should be indicative of future trends

The 15 listed Chinese banks reported FY13 NPAT of RMB1.13tr, up 12.6% yoy, which was largely in line with the consensus estimates of RMB1.12tr. Pre-provision profits rose 13.1% yoy and credit costs edged up 1bps yoy to 55bps of average loans (excluding ABC, credit cost rose 4bps yoy on average). Net interest income grew 10% yoy, with NIM down 7bps to 2.57% mainly due to the two rate cuts and liberalization of deposit rate in mid-2012. Non-interest income was up 19.4% yoy, driven primarily by net fee income growth of 22.3% yoy. These banks reported loan growth of 13% and deposit growth of 9.8%, leading to a regulatory adjusted LDR of 68.6% (up 1.8%). On a yearly basis, operating expenses rose 10.5% yoy, with a cost/income ratio of 38.9% (FY12: 39.5%).

Figure 76: FY13 earnings review and key financials

Rmb mn	ICBC	CCB	ABC	BOC	BoCom	CMB	CNCB	MSB	CRCB	Huishang	BOCQ	SPDB	INDB	CEB	PAB	Total
Net interest income	443,335	389,544	376,202	283,585	130,658	98,913	85,688	83,033	15,703	9,603	5,179	85,177	85,845	50,862	40,688	2,184,015
Non-interest income	135,566	121,596	89,569	123,924	34,370	34,117	19,127	33,601	612	570	696	14,838	23,442	14,444	11,501	657,973
Operating income	578,901	511,140	465,771	407,509	165,028	133,030	104,815	116,634	16,315	10,173	5,875	100,015	109,287	65,306	52,189	2,841,987
Operating expenses	(204,140)	(188,185)	(198,607)	(172,314)	(66,751)	(54,475)	(40,435)	(46,494)	(7,208)	(3,386)	(2,283)	(33,418)	(37,021)	(26,388)	(25,344)	(1,106,449)
Pre-provision profits	374,761	322,955	267,164	235,195	98,277	78,555	64,380	70,140	9,108	6,786	3,592	66,597	72,266	38,918	26,845	1,735,538
Provisions	(38,321)	(42,666)	(52,126)	(23,510)	(18,410)	(10,218)	(11,940)	(12,989)	(1,181)	(435)	(536)	(13,074)	(18,188)	(4,633)	(6,890)	(255,117)
Pre-tax profit	338,537	279,806	214,174	212,777	79,909	68,425	52,549	57,151	7,916	6,399	3,057	53,849	54,261	34,421	20,040	1,483,272
Taxes	(75,572)	(64,684)	(47,963)	(49,036)	(17,448)	(16,683)	(12,832)	(13,869)	(1,902)	(1,473)	(728)	(12,649)	(12,750)	(7,667)	(4,809)	(340,065)
Attributable net profit	**262,649**	**214,657**	**166,315**	**156,911**	**62,295**	**51,743**	**39,175**	**42,278**	**5,991**	**4,926**	**2,329**	**40,922**	**41,211**	**26,715**	**15,231**	**1,133,348**
YoY growth (%)																
Net interest income	6.1%	10.3%	10.0%	10.4%	8.8%	11.9%	13.5%	7.6%	19.9%	12.1%	24.8%	16.1%	18.9%	1.2%	23.2%	10.0%
Non-interest income	21.2%	11.2%	7.8%	13.5%	22.5%	34.4%	33.9%	26.7%	9.1%	-14.5%	37.2%	54.7%	52.0%	49.6%	71.3%	19.4%
Operating income	9.3%	10.5%	9.6%	11.3%	11.4%	16.9%	16.8%	12.5%	19.5%	10.2%	26.1%	20.6%	24.7%	9.0%	31.3%	12.0%
Operating expenses	7.5%	10.0%	8.6%	7.9%	14.2%	11.9%	15.6%	6.4%	18.7%	8.1%	20.1%	9.9%	26.9%	16.7%	32.9%	10.5%
Pre-provision profits	10.3%	10.8%	10.3%	13.9%	9.5%	20.7%	17.5%	17.0%	20.2%	11.2%	30.3%	26.8%	23.6%	4.3%	29.9%	13.1%
Provisions	13.6%	11.3%	-4.6%	21.3%	26.6%	83.0%	-8.9%	39.4%	131.0%	-6.8%	123.2%	61.0%	46.9%	-20.1%	120.1%	16.3%
Pre-tax profit	9.7%	11.3%	14.0%	13.4%	6.2%	14.9%	26.3%	12.8%	12.0%	12.7%	21.5%	20.3%	17.5%	9.0%	14.2%	12.5%
Taxes	8.0%	11.8%	12.1%	17.0%	4.2%	16.8%	25.5%	12.4%	12.5%	7.2%	23.0%	21.1%	13.2%	-3.8%	19.0%	12.0%
Attributable net profit	**10.1%**	**11.1%**	**14.6%**	**12.4%**	**6.7%**	**14.3%**	**26.2%**	**12.6%**	**11.7%**	**14.4%**	**21.0%**	**19.7%**	**18.7%**	**13.2%**	**13.6%**	**12.6%**
Key ratios																
NIM (2013)	2.57%	2.74%	2.79%	2.24%	2.52%	2.82%	2.60%	2.49%	3.41%	2.63%	2.81%	2.46%	2.44%	2.16%	2.31%	2.57%
NIM (2012)	2.66%	2.75%	2.81%	2.15%	2.59%	3.03%	2.81%	2.94%	3.50%	3.03%	2.85%	2.58%	2.65%	2.54%	2.37%	2.64%
Gross loan growth	12.7%	14.3%	12.3%	10.8%	10.8%	15.4%	16.7%	13.7%	18.3%	19.3%	18.1%	14.4%	10.4%	14.0%	17.6%	13.0%
Non-int income growth	21.2%	11.2%	7.8%	13.5%	22.5%	34.4%	33.9%	26.7%	9.1%	-14.5%	37.2%	54.7%	52.0%	49.6%	71.3%	19.4%
CIR	35.3%	36.8%	42.6%	42.3%	40.4%	40.9%	38.6%	39.9%	44.2%	33.3%	38.9%	33.4%	33.9%	40.4%	48.6%	38.9%
Credit cost	0.41%	0.53%	0.78%	0.31%	0.59%	0.50%	0.63%	0.88%	0.51%	0.22%	0.64%	0.79%	1.27%	0.40%	0.85%	0.55%

Source: Deutsche Bank, company data

4Q13 results review

Thirteen listed Chinese banks reported net profit of RMB232.5bn in 4Q13, implying slower profit growth of 11.4% yoy (9M13: 12.9% yoy), as a strong NIM rebound of 9bps qoq in 4Q13 led to a 12.4% yoy increase in net interest income, which offset the slower non-interest income growth of 3.7% yoy. The sluggish non-interest income was driven mainly by trading loss on held-for-trading bond investment, given the rising bond yield in 4Q13. While operating expenses increased by 8.7% yoy, the cost-to-income ratio fell slightly to 45.9% (4Q12: 46.7%). Credit cost increased by 2bps yoy to reach 71bps of average loans to reflect an increase of 4.8% qoq in NPL balance to Rmb496bn (or NPL ratio of 0.98%, up 2.6bps qoq).

Figure 77: 4Q13 earnings review and key financials

Rmb mn	ICBC	CCB	ABC	BOC	BoCom	CMB	CNCB	MSB	CRCB	SPDB	INDB	CEB	PAB	Total
Net interest income	115,699	103,034	100,578	75,380	33,023	26,341	22,884	22,444	4,121	24,039	22,734	12,324	11,632	574,233
Non-interest income	30,728	29,225	12,301	26,678	7,476	8,860	5,114	7,856	148	3,499	6,249	4,214	3,212	145,560
Operating income	146,427	132,259	112,879	102,058	40,499	35,201	27,998	30,300	4,268	27,538	28,983	16,538	14,844	719,792
Operating expenses	(63,412)	(63,511)	(55,691)	(46,912)	(18,098)	(17,196)	(12,708)	(13,964)	(2,160)	(8,338)	(12,289)	(8,398)	(7,632)	(330,309)
Pre-provision profits	83,015	68,748	57,188	55,146	22,401	18,005	15,290	16,336	2,108	19,200	16,694	8,140	7,212	389,483
Provisions	(9,834)	(17,576)	(21,507)	(4,858)	(5,066)	(2,056)	(4,021)	(4,267)	(491)	(4,782)	(6,278)	(1,346)	(2,564)	(84,646)
Pre-tax profit	73,888	51,207	35,681	50,551	17,366	16,011	11,360	12,069	1,607	14,645	10,552	6,858	4,655	306,450
Taxes	(16,694)	(12,952)	(7,507)	(12,125)	(3,745)	(3,760)	(2,882)	(2,896)	(356)	(3,451)	(2,366)	(1,804)	(1,120)	(71,658)
Attributable net profit	**57,116**	**38,175**	**28,327**	**36,701**	**13,589**	**12,245**	**8,315**	**8,964**	**1,242**	**11,104**	**8,109**	**5,051**	**3,535**	**232,473**
YoY growth (%)														
Net interest income	8.7%	11.8%	13.8%	11.6%	6.4%	16.6%	15.8%	13.2%	16.1%	24.0%	18.2%	-0.1%	37.2%	12.4%
Non-interest income	4.1%	4.7%	-34.1%	-9.0%	6.8%	53.2%	44.4%	34.1%	-41.6%	27.7%	28.3%	31.4%	84.4%	3.7%
Operating income	7.7%	10.1%	5.5%	5.4%	6.5%	24.1%	20.1%	17.9%	12.2%	24.5%	20.3%	6.4%	45.3%	10.6%
Operating expenses	6.2%	10.9%	4.2%	1.0%	11.1%	17.1%	9.4%	11.6%	8.5%	-2.3%	29.0%	22.1%	49.1%	8.7%
Pre-provision profits	8.8%	9.4%	6.8%	9.4%	3.0%	31.6%	30.7%	23.9%	16.4%	41.3%	14.6%	-6.0%	41.5%	12.2%
Provisions	25.5%	3.9%	4.3%	-15.7%	24.4%	1858.1%	-38.0%	206.3%	129.2%	48.5%	80.5%	-44.6%	179.9%	15.3%
Pre-tax profit	7.3%	11.5%	8.3%	12.9%	-1.7%	17.6%	120.1%	2.4%	0.6%	38.9%	-5.2%	9.4%	12.5%	11.7%
Taxes	5.2%	19.4%	-5.4%	17.6%	-1.0%	20.1%	118.2%	1.6%	-9.3%	39.4%	-12.0%	5.9%	15.0%	11.5%
Attributable net profit	**7.9%**	**9.1%**	**13.3%**	**9.8%**	**-2.0%**	**16.8%**	**118.5%**	**2.4%**	**3.6%**	**37.8%**	**-3.2%**	**10.8%**	**11.7%**	**11.4%**
Key ratios														
NIM (4Q13)	2.57%	2.82%	2.92%	2.31%	2.46%	2.79%	2.59%	2.85%	3.44%	2.66%	2.43%	2.06%	2.52%	2.63%
NIM (3Q13)	2.57%	2.71%	2.77%	2.20%	2.49%	2.73%	2.62%	2.31%	3.42%	2.49%	2.35%	2.09%	2.31%	2.54%
Deposit yoy growth (%)	7.2%	7.8%	8.7%	10.1%	11.5%	9.6%	17.6%	11.4%	18.1%	13.4%	19.7%	12.5%	19.2%	9.8%
Loan yoy growth	12.7%	14.3%	12.3%	10.8%	10.8%	15.4%	16.7%	13.7%	18.3%	14.4%	10.4%	14.0%	17.6%	12.9%
Non-int income growth	4.1%	4.7%	-34.1%	-9.0%	6.8%	53.2%	44.4%	34.1%	-41.6%	27.7%	28.3%	31.4%	84.4%	3.7%
CIR	43.3%	48.0%	49.3%	46.0%	44.7%	48.9%	45.4%	46.1%	50.6%	30.3%	42.4%	50.8%	51.4%	45.9%
Credit cost	0.40%	0.82%	1.20%	0.23%	0.63%	0.38%	0.78%	1.10%	0.97%	1.09%	1.86%	0.47%	1.22%	0.71%

Source: Deutsche Bank, company data

Key operating trends

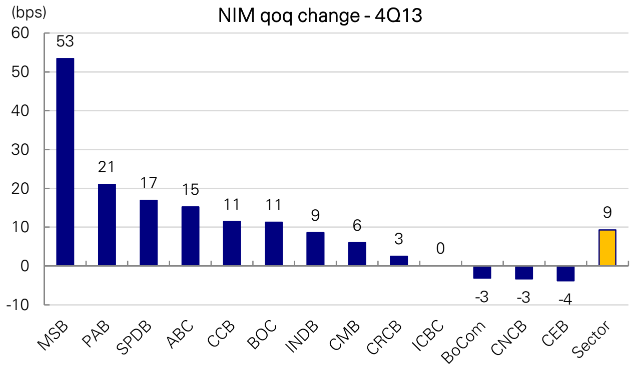
Net interest margin – benefiting from tighter liquidity in the sector

The NIM of the thirteen reported Chinese banks rose by 9bps qoq to 2.63% in 4Q13 (3Q13: 2.54%), mainly due to improved loan pricing power on tighter liquidity in the sector and slower growth in inter-bank assets (up by only 0.05% qoq) which generated lower yield than loans.

Among the listed banks, MSB and PAB posted the strongest rebound in NIM by 53bps and 21bps qoq, respectively, as they had deleveraged their balance sheets by aggressively cutting back inter-bank assets. In contrast, the NIMs of CEB and CNCB had fallen by 4bps and 3bps in 4Q13, due to rising funding cost.

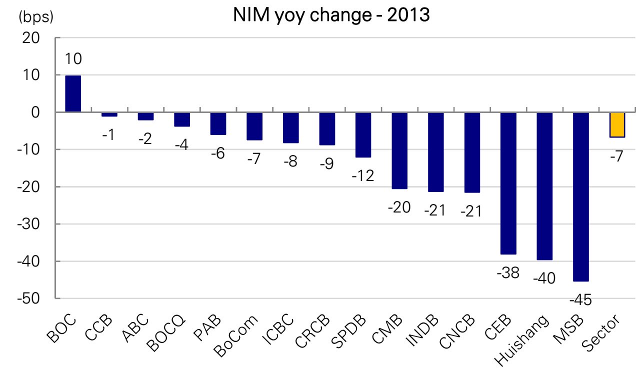
For the full year, the NIM of the thirteen listed banks had fallen by 7bps yoy to 2.57%, except for BOC, whose NIM rose up 10bps yoy. The more resilient performance of big-four banks' NIMs reaffirms our view that the bigger banks are better positioned than smaller ones, to cope with the pressure from interest rate deregulation given their stronger deposit franchise.

Figure 78: Chinese Banks – Sector NIM rose by 9bps qoq in 4Q13 to 2.63%



Source: Deutsche Bank, Company data

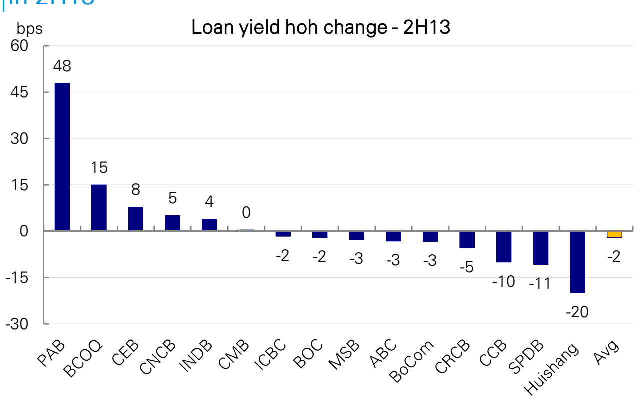
Figure 79: Chinese Banks – Sector NIM declined by 7bps yoy in 2013 to 2.57%



Source: Deutsche Bank, Company data

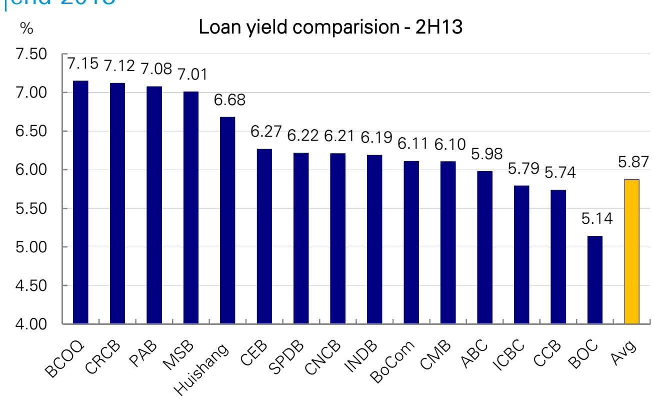
The loan yield of the thirteen listed banks dipped 2bps hoh in 2H13 to 5.87%, with Huishang and SPDB seeing the sharpest declines by 20bps and 11bps hoh due to weaker loan pricing power against their SOE-dominated corporate customers. PAB's loan yield jumped 48bps hoh in 2H13, as the bank's MSE loans and credit card receivables grew strongly by 56% yoy and 75% yoy, respectively.

Figure 80: Chinese banks – Loan yield dipped 2bps hoh in 2H13



Source: Deutsche Bank, Company data

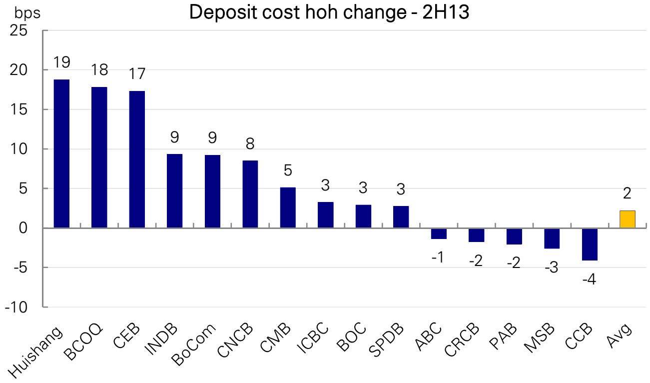
Figure 81: Chinese banks – Loan yield comparison as of end-2013



Source: Deutsche Bank, Company data

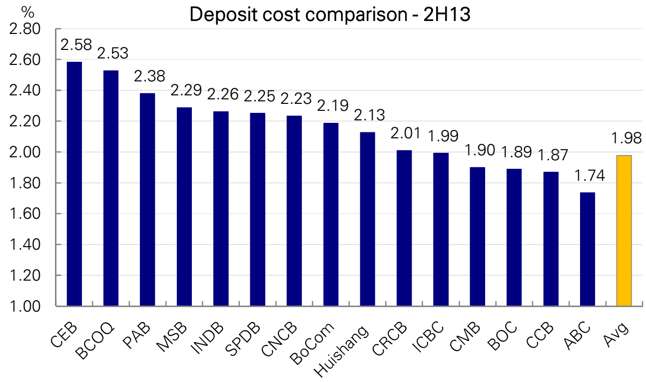
Deposit cost rose 2bps hoh to 1.98% due to rising competition for deposits. Huishang and BOCQ delivered the biggest hikes in deposit costs, up 19bps and 18bps hoh, respectively, due to their weaker deposit franchises; for Huishang specifically, rising deposit cost was due to its heavy reliance on government deposits amid slow fiscal revenue growth in Anhui province.

Figure 82: Chinese banks – Deposit cost nudged up 2bps hoh in 2H13



Source: Deutsche Bank, company data

Figure 83: Chinese banks – Deposit cost comparison as of end-2013

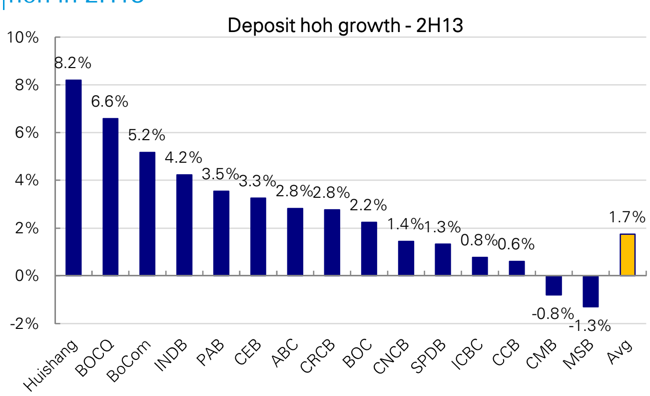


Source: Deutsche Bank, company data

Slowed deposit growth on booming MMF and smaller non-standardized assets

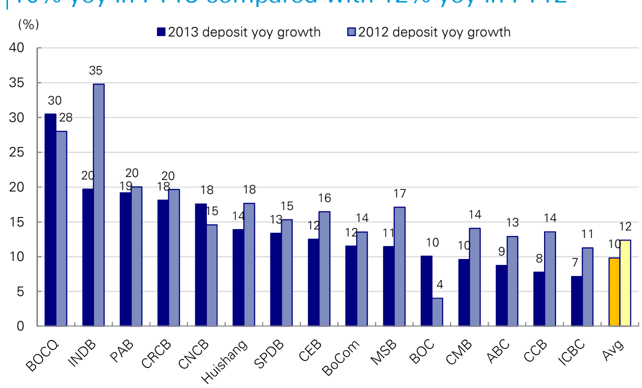
During 2H13, the thirteen listed Chinese banks grew their deposits by merely 2% hoh. Even for the full year, customer deposits rose 10% yoy for the listed banks compared with 12% in 2012, despite strong capital inflows into China. We believe the cannibalization of customer deposits was mainly premised on the strong growth of money market funds (MMFs), which grew 145% hoh in 1H13 or Rmb522bn, and the decline in non-standardized assets (down 11% hoh to Rmb3.7tr, according to our estimate), which was once a major driver of deposit growth.

Figure 84: Chinese banks – Deposit growth slowed to 2% hoh in 2H13



Source: Deutsche Bank, Company data

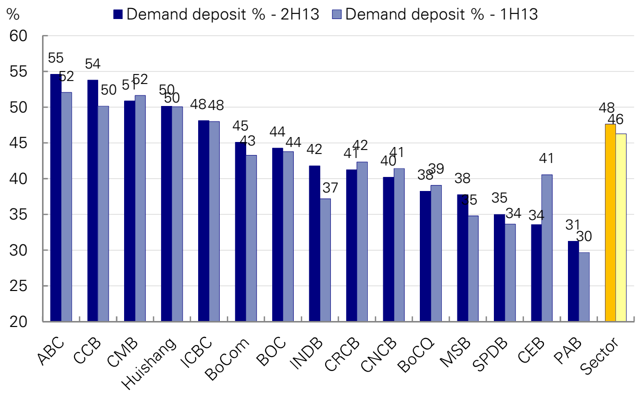
Figure 85: Chinese banks – Deposit growth slowed to 10% yoy in FY13 compared with 12% yoy in FY12



Source: Deutsche Bank, Company data

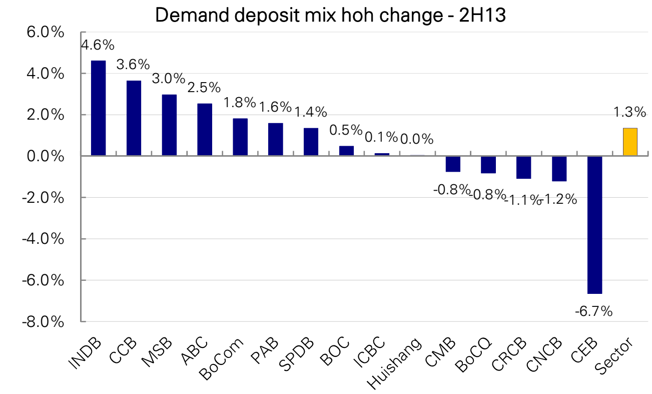
Despite slow deposit growth, demand deposit mix improved slightly by 1.3% hoh to 48% of total deposits. INDB and CCB delivered the strongest improvement of 4.6% and 3.6% hoh, while CEB's demand deposit mix declined 6.7% mainly due to adjustment of classification.

Figure 86: Chinese banks – Demand deposit mix trended up by 1.3% hoh to 48% of total deposits



Source: Deutsche Bank, Company data

Figure 87: Chinese banks – Demand deposit mix hoh change comparison

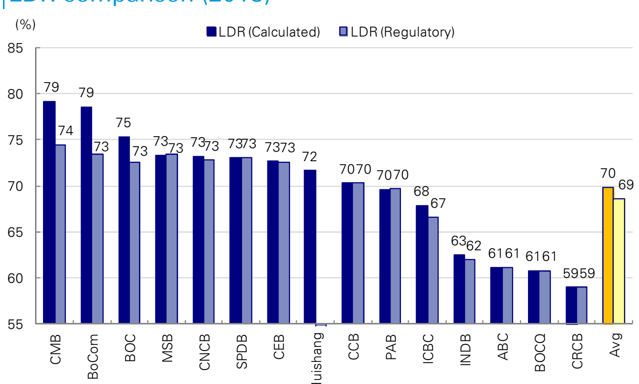


Source: Deutsche Bank, Company data
Note: The drop in CEB's demand deposit mix was mainly due to change of classifications

Regulatory LDR rose 1.8% to 69% on the back of slowing deposit growth

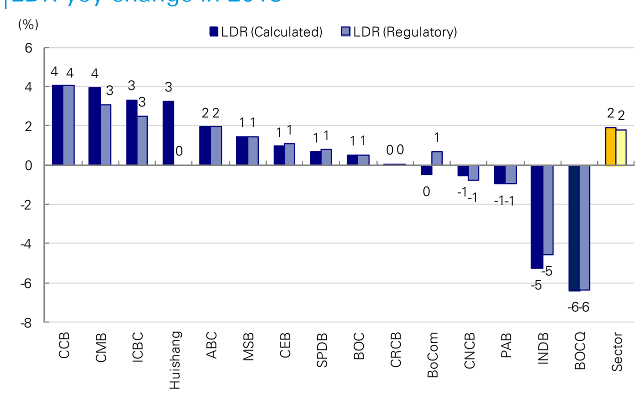
Reflecting a loan growth of 13% yoy and a deposit growth of 10% yoy in FY13, the regulatory adjusted LDR was up 1.8% to 68.6%. This ratio incorporates principal protected WMPs and negotiated deposits from insurance companies and other non-bank financial institutions.

Figure 88: Chinese banks – Calculated and regulatory LDR comparison (2013)



Source: Deutsche Bank, Company data

Figure 89: Chinese banks – Calculated and regulatory LDR yoy change in 2013



Source: Deutsche Bank, Company data

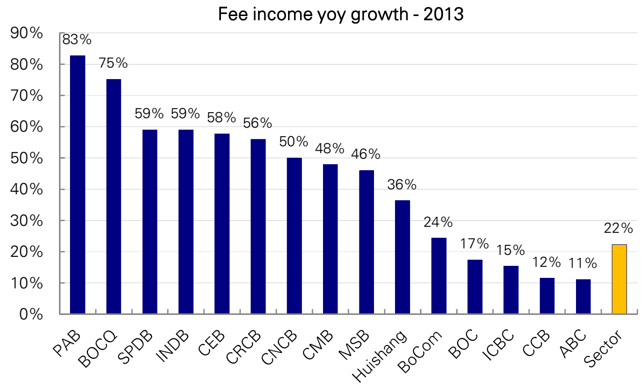
Mixed trend on net fee income growth driven by regulatory changes in 4Q

Following strong net fee income growth in 9M13 at 27% yoy, growth rate slowed to 8% yoy in 4Q13, mainly attributable to sluggish fee income growth of big-four banks which fell 4% yoy due to tighter regulatory control on financing-related fee income, while joint-stock banks' fee income growth remained strong at 46% yoy in 4Q13 due to strong growth in wealth management services. Notably, PAB posted the strongest fee income growth of 94% yoy in FY13, thanks to the cross-selling opportunities given the unlocking of synergies with Ping An Group.

Cost-to-income ratio trended lower to reflect improving efficiency

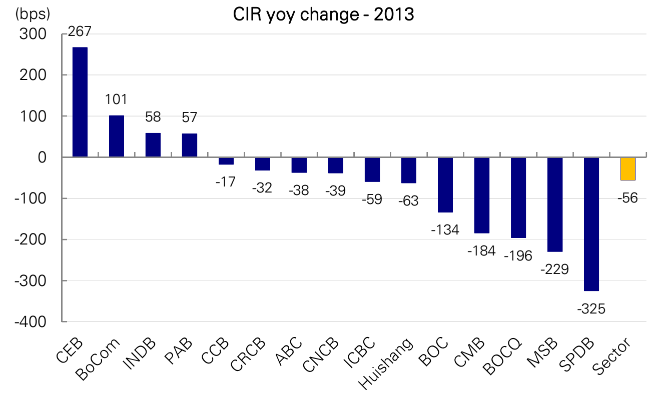
With operating expenses growth of 7.9% yoy and revenue growth of 9.8% yoy, the cost-to-income ratio declined slightly to 45.9% in 4Q13 (4Q12: 46.7%). Compared to 4Q12, SPDB (-8.3% yoy), CNCB (-4.4% yoy) and CMB (-2.9% yoy) showed the largest improvements, while CEB's CIR was up 6.5% yoy.

Figure 90: Chinese banks – Net fee income grew 22% yoy in FY13



Source: Deutsche Bank, Company data

Figure 91: Chinese banks – CIR declined by 56bps yoy in FY13

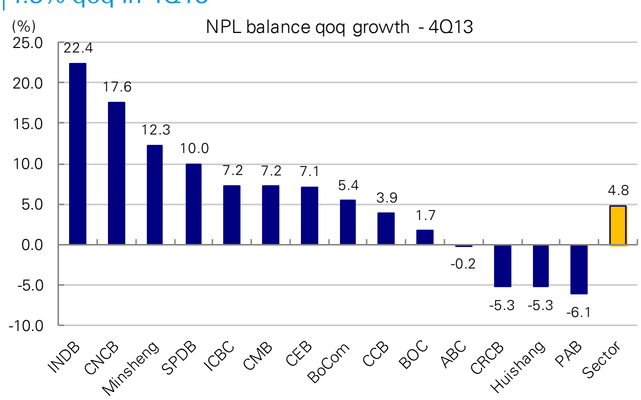


Source: Deutsche Bank, Company data

Modest asset quality deterioration with rising NPL formation and disposal ratio

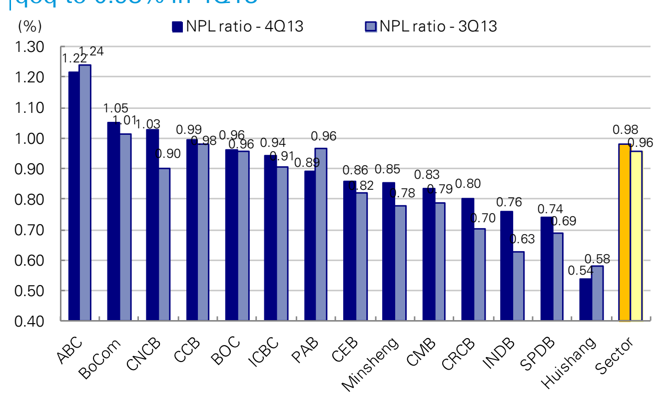
The listed Chinese banks reported a 5% qoq increase in NPL balance to account for 0.98% of total loans in 4Q13 (3Q13: 0.96%), pointing to modest deterioration in asset quality. ABC and PAB were the only two banks to witness a fall in NPL ratios, down 2bps and 7bps qoq, respectively. In addition, we notice a rising gross NPL formation ratio for listed Chinese banks at 39bps in 2013, up 23bps yoy.

Figure 92: Chinese banks – NPL balance increased by 4.8% qoq in 4Q13



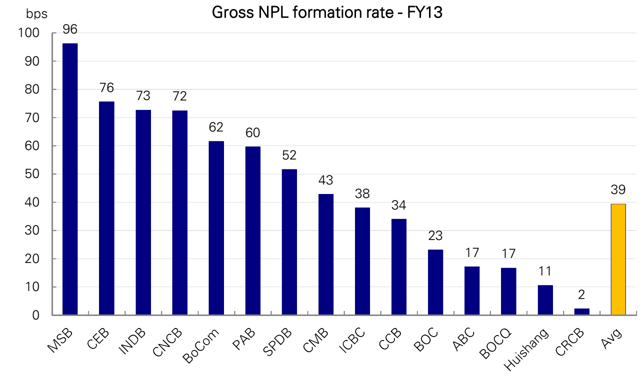
Source: Deutsche Bank, company data

Figure 93: Chinese banks – NPL ratio nudged up by 2bps qoq to 0.98% in 4Q13



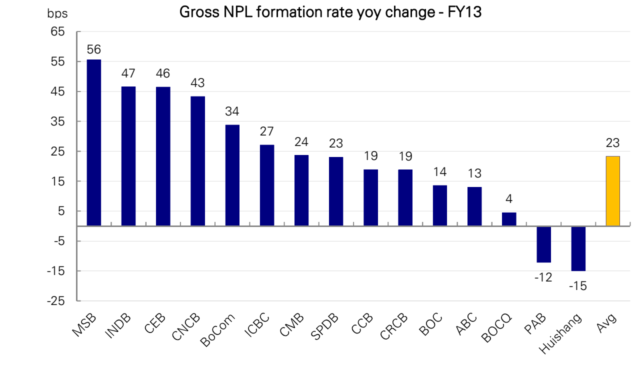
Source: Deutsche Bank, company data

Figure 94: Chinese banks – Gross NPL formation ratio comparison in 2013



Source: Deutsche Bank, company data

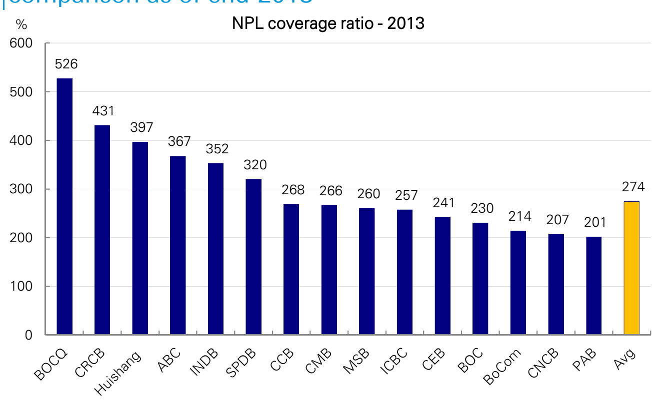
Figure 95: Chinese banks – Gross NPL formation ratio yoy change in 2013



Source: Deutsche Bank, company data

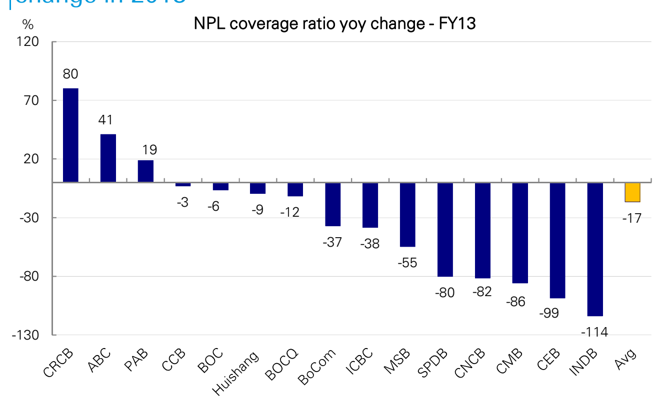
Reflecting the modest asset quality deterioration, the listed banks charged higher credit cost of 71bps in 4Q13 (up 2bps yoy). Provision-to-NPL ratio declined to 274% (3Q13: 277%), while provision-to-loan ratio slightly edged up by 3bps qoq to 2.69%.

Figure 96: Chinese banks – NPL coverage ratio comparison as of end-2013



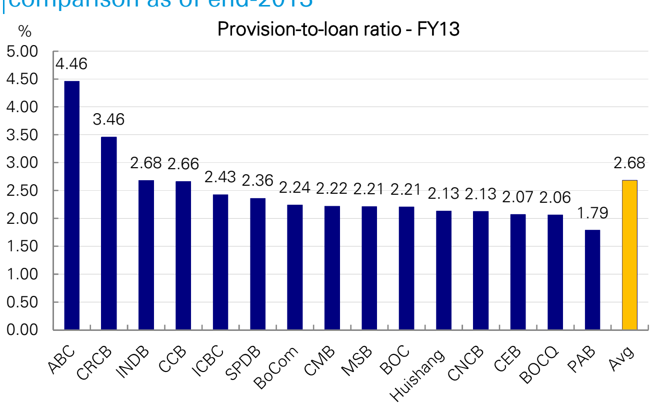
Source: Deutsche Bank, Company data

Figure 97: Chinese banks - NPL coverage ratio yoy change in 2013



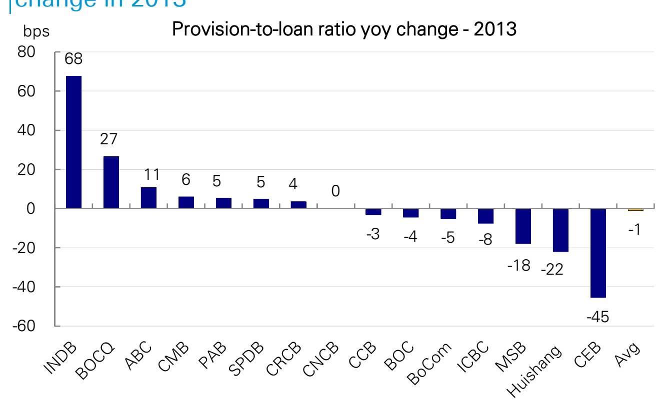
Source: Deutsche Bank, Company data

Figure 98: Chinese banks – Provision-to-loan ratio comparison as of end-2013



Source: Deutsche Bank, Company data

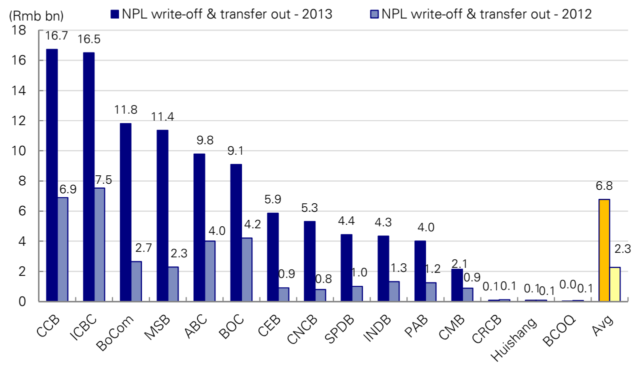
Figure 99: Chinese banks – Provision-to-loan ratio yoy change in 2013



Source: Deutsche Bank, Company data

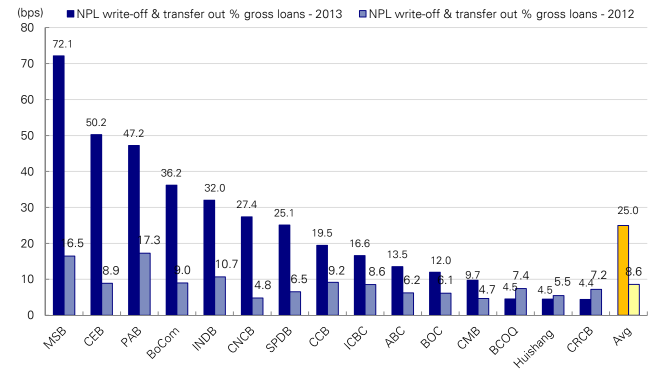
In order to contain the NPL ratio and better focus on performing loans, the listed Chinese banks increased write-off and transfer amount to Rmb102bn in FY13 (up 144% yoy) to account for 25bps of total loans (FY12: 8.6bps).

Figure 100: Chinese banks – NPL write-off/transfer in absolute amount in 2012 and 2013



Source: Deutsche Bank, company data

Figure 101: Chinese banks – NPL write-off/transfer as % of total loans in 2012 and 2013

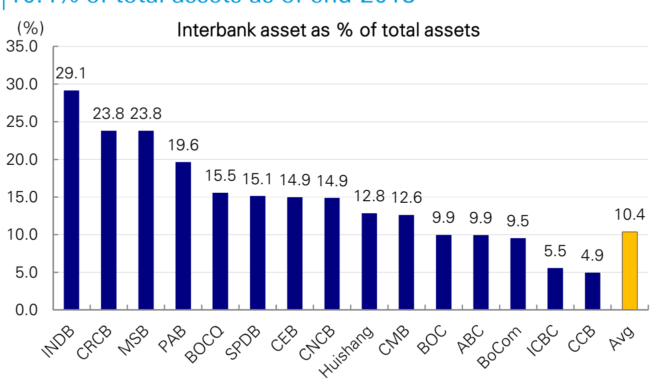


Source: Deutsche Bank, company data

Mild deleverage in inter-bank assets

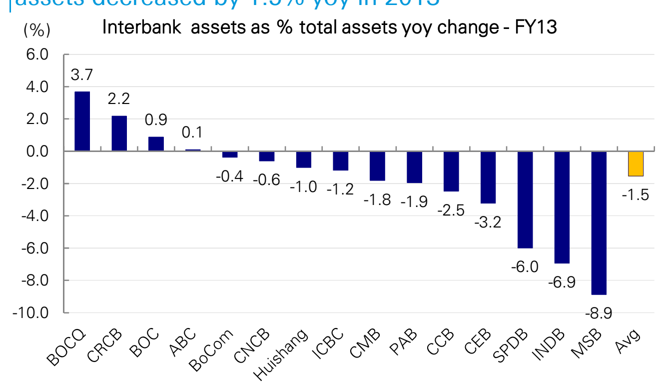
In order to better cope with the potential tighter rules on inter-bank assets, the listed Chinese banks slowed the inter-bank asset growth and reduced the inter-bank assets to 10.4% of total assets, down 1.5% yoy. MSB and INDB deleveraged their balance sheets by proactively scaling back interbank assets as a percentage of total assets by 8.9% and 6.9%, respectively.

Figure 102: Chinese banks – Interbank asset accounts for 10.4% of total assets as of end-2013



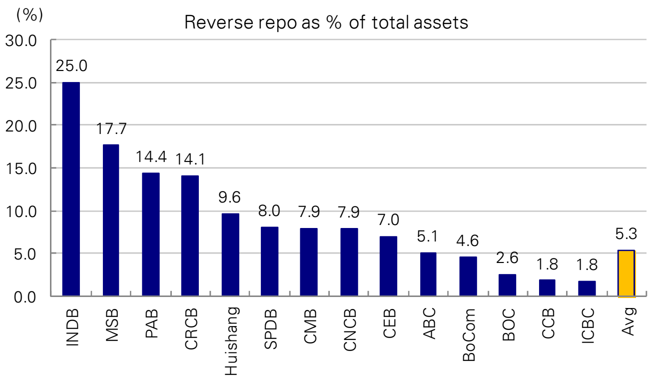
Source: Deutsche Bank, company data

Figure 103: Chinese banks – Interbank asset as % of total assets decreased by 1.5% yoy in 2013



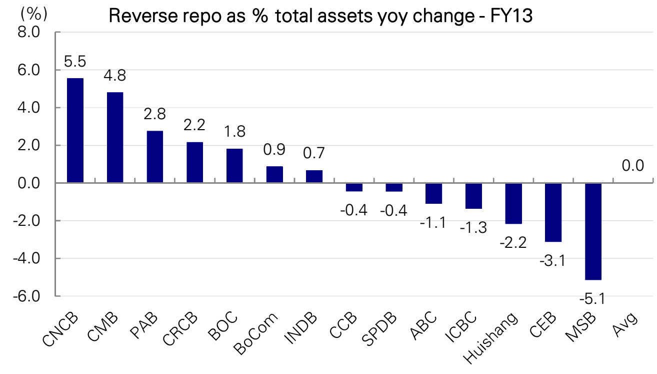
Source: Deutsche Bank, company data

Figure 104: Chinese banks – Reverse repo makes up 5.3% of total assets in 2013



Source: Deutsche Bank, company data

Figure 105: Chinese banks – Reverse repo as % of total assets was flat in 2013

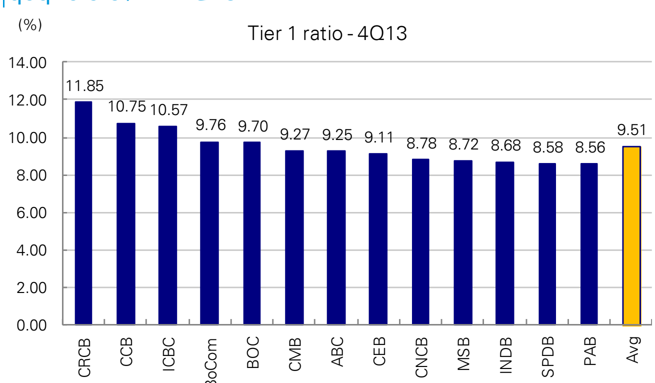


Source: Deutsche Bank, company data

Enhanced capital position and lower leverage

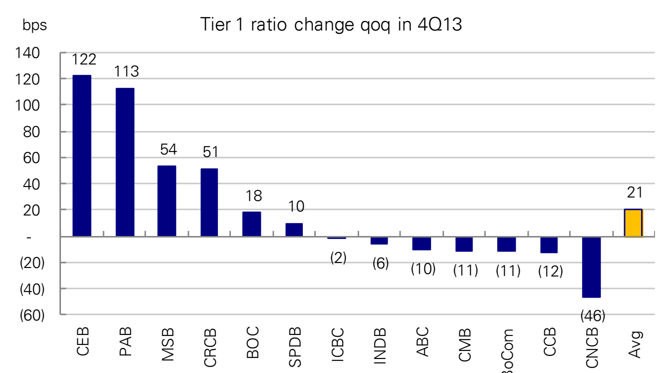
During 4Q13, the tier 1 ratio of the thirteen reported Chinese banks rose 21bps to 9.51%. If we exclude CEB and PAB, which raised fresh capital during the quarter through H-share IPO and private placement respectively, the tier 1 ratio remained largely stable, with MSB and CRCB showing the largest accretion of 54bps and 51bps due to deleverage of balance sheets and shift in asset mix toward lower-risk-weights assets. Meanwhile, total capital adequacy ratio increased by 12bps to 11.68% in 4Q13.

Figure 106: Chinese banks – Tier 1 ratio raised by 21bps qoq to 9.5% in 4Q13



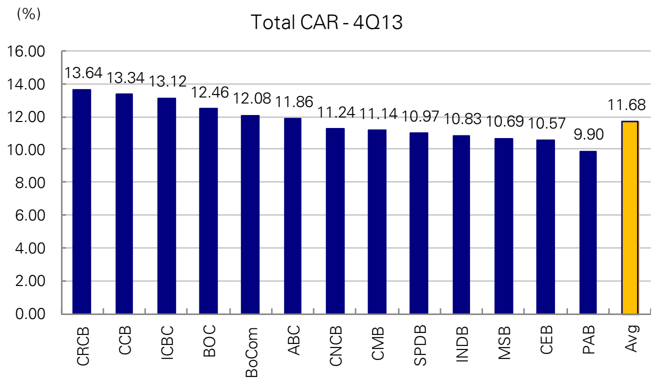
Source: Deutsche Bank, company data

Figure 107: Chinese banks – Tier 1 ratio raised by 21bps qoq to 9.5% in 4Q13



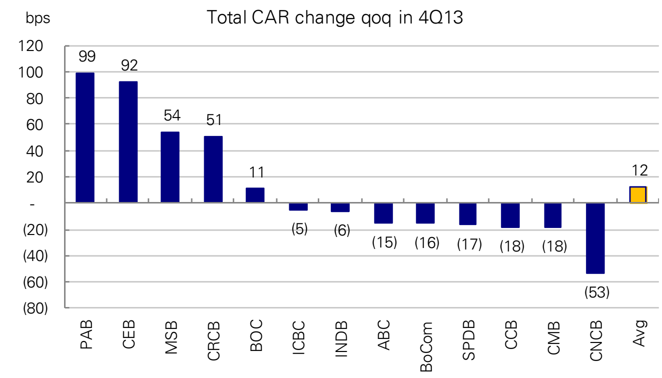
Source: Deutsche Bank, company data

Figure 108: Chinese banks – Total CAR raised by 12bps qoq to 11.7% in 4Q13



Source: Deutsche Bank, company data

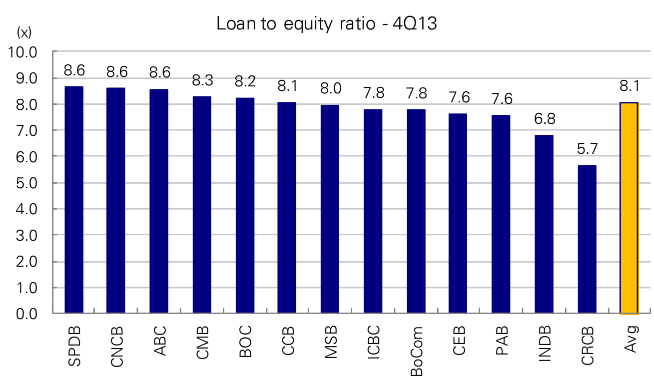
Figure 109: Chinese banks – Total CAR raised by 12bps qoq to 11.7% in 4Q13



Source: Deutsche Bank, company data

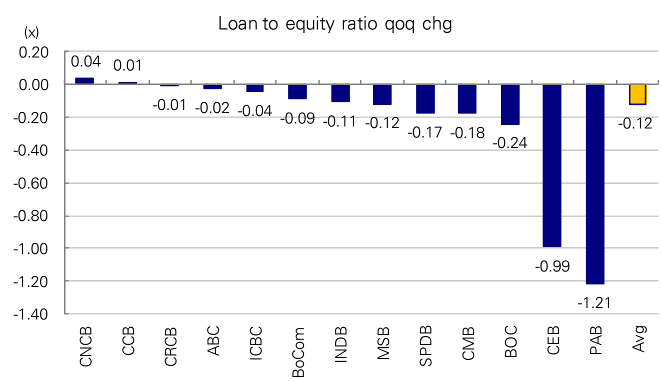
Reflecting the still robust PPOP growth of 13.1% yoy in FY13, the loan-to-equity and asset-to-equity ratios of the listed Chinese banks' leverage declined by 0.12x and 0.32x to 8.1x and 15.5x in 4Q13, respectively.

Figure 110: Chinese banks – Loan to equity ratio dipped 0.12x to 8.1x in 4Q13



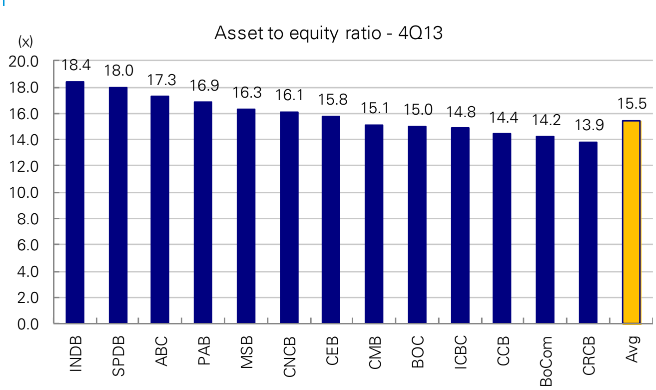
Source: Deutsche Bank, company data

Figure 111: Chinese banks – Loan to equity ratio dipped 0.12x to 8.1x in 4Q13



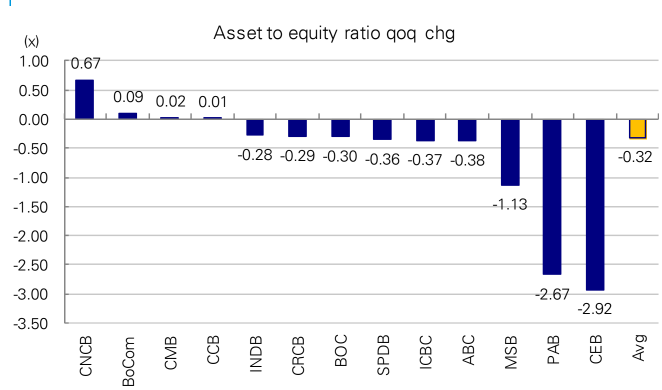
Source: Deutsche Bank, company data

Figure 112: Chinese banks – Asset to equity ratio dipped 0.32x to 15.5x in 4Q13



Source: Deutsche Bank, company data

Figure 113: Chinese banks – Asset to equity ratio dipped 0.32x to 15.5x in 4Q13



Source: Deutsche Bank, company data

Valuation and risks

Valuation of Chinese banks

We value Chinese banks using a three-stage Gordon Growth Model (PV= (ROE-g)/(COE-g)), with target prices based on 2014E book values.

On our estimates, H-share / A-share listed Chinese banks are trading at a 2014E P/B of 0.8x / 0.7x and 2014E P/E of 4.7x / 4.2x, suggesting 36% / 36% and 26% / 30% potential upside, respectively, assuming the sector trends back to its average historical valuation of 1.14x / 1.01x P/B and 5.95x / 5.52x P/E (2011-13).

For H-share banks, our top picks are BOC and ABC, and our least preferred pick is MSB. For A-share banks, our top picks are CEB and BOBJ, and our least preferred pick is BONJ.

Our valuation assumes a near-term (2014-16E) ROE of 14-18.9%, medium-term (2017-19E) ROE of 9-14.5%, and terminal ROE of 7.5-11.5%, with COE of 11-13%. In Figure 114 we highlight our valuation comparisons for the listed banks.

Figure 114: Chinese banks' valuation summary

	Ticker	Rating	TP	Price	Upside (%)	Mkt. Cap (US$mn)	P/E (x) 13E	14E	P/B (x) 13E	14E	P/PPOP 13E	14E	ROAE 13E	14E	ROAA 13E	14E	Div. Yield (%) 13E	14E
ICBC-H	1398.HK	Buy	6.80	4.76	42.9%	200,329	5.0	4.9	1.0	0.9	3.5	3.3	21.8%	20.0%	1.44%	1.38%	7.04%	7.16%
CCB-H	0939.HK	Buy	7.45	5.41	37.7%	173,876	4.9	4.9	1.0	0.9	3.3	3.1	21.4%	19.5%	1.46%	1.38%	7.10%	7.19%
ABC-H	1288.HK	Buy	4.49	3.37	33.2%	128,004	5.1	4.9	1.0	0.9	3.2	3.0	21.0%	19.6%	1.20%	1.17%	6.73%	7.13%
BOC-H	3988.HK	Buy	4.28	3.45	24.1%	118,869	4.8	4.7	0.8	0.7	3.2	3.0	17.9%	16.7%	1.18%	1.12%	7.27%	7.40%
BCOM-H	3328.HK	Buy	6.90	5.09	35.6%	46,877	4.7	4.5	0.7	0.6	3.0	2.8	15.6%	15.1%	1.11%	1.07%	6.54%	6.64%
CMB-H	3968.HK	Buy	18.97	13.90	36.5%	41,063	5.3	5.0	1.0	0.9	3.5	3.1	22.2%	19.7%	1.39%	1.32%	5.71%	6.02%
CITIC Bank-H	0998.HK	Hold	5.00	4.45	12.4%	32,491	4.2	3.8	0.7	0.6	2.5	2.2	18.5%	18.2%	1.19%	1.14%	7.25%	6.58%
Minsheng-H	1988.HK	Hold	9.82	7.74	26.9%	33,569	4.1	3.7	0.9	0.7	2.4	2.2	23.4%	21.8%	1.31%	1.42%	4.27%	4.67%
CRCB	3618.HK	Buy	5.00	3.46	44.5%	4,148	4.2	3.8	0.7	0.6	2.8	2.5	17.6%	17.5%	1.28%	1.25%	7.03%	7.70%
Huishang	3698.HK	Sell	2.92	3.50	-16.6%	4,985	6.1	5.8	1.0	0.9	4.5	4.1	18.9%	16.1%	1.39%	1.29%	5.71%	6.00%
BOCQ	1963.HK	Hold	5.44	5.00	8.8%	1,744	4.5	4.1	0.8	0.7	2.9	2.5	21.4%	18.4%	1.28%	1.20%	5.74%	4.93%
H-share sector mean							**4.9**	**4.7**	**0.9**	**0.8**	**3.2**	**3.0**	**20.5%**	**19.0%**	**1.33%**	**1.27%**	**6.82%**	**6.97%**
SPDB	600000.SS	Hold	10.31	9.73	6.0%	29,242	4.4	4.1	0.9	0.8	2.7	2.5	21.4%	19.9%	1.20%	1.11%	6.78%	7.27%
Industrial Bank	601166.SS	Hold	11.49	9.38	22.5%	28,793	4.3	3.8	0.9	0.8	2.5	2.4	22.2%	21.1%	1.19%	1.20%	4.90%	5.21%
CEB	601818.SS	Buy	3.61	2.48	45.6%	15,907	4.3	3.8	0.8	0.7	2.9	2.4	20.0%	18.5%	1.14%	1.18%	6.94%	7.93%
Ping An Bank	000001.SZ	Buy	15.71	10.80	45.5%	16,566	5.8	5.4	0.9	0.8	3.5	3.4	16.7%	16.5%	0.87%	0.90%	3.48%	3.68%
Bank of Beijing	601169.SS	Buy	9.70	7.60	27.6%	10,775	4.9	4.3	0.8	0.7	3.2	2.8	17.8%	17.9%	1.15%	1.17%	6.16%	7.06%
Bank of Nanjing	601009.SS	Hold	8.46	7.78	8.7%	3,721	5.1	4.6	0.8	0.7	3.6	3.2	17.1%	16.8%	1.20%	1.14%	5.89%	6.56%
Bank of Ningbo	002142.SZ	Buy	11.05	8.91	24.0%	4,140	5.3	4.7	1.0	0.8	3.7	3.2	19.9%	19.3%	1.18%	1.17%	3.32%	3.80%
A-share sector mean							**4.7**	**4.3**	**0.9**	**0.7**	**2.9**	**2.7**	**20.1%**	**19.2%**	**1.13%**	**1.12%**	**5.59%**	**6.10%**

Note: Closing price of Apr 1, 2014

Source: Deutsche Bank estimates, Bloomberg Finance LP

Figure 115 highlights the valuation methodology we use to derive our target prices for the listed banks under our coverage.

Figure 115: Valuation methodology for Chinese banks

	ICBC	CCB	ABC	BOC	BCom	CMB	CNCB	MSB	CRCB	Huishang	BOCQ	SPDB	INDB	CEB	PAB	BOBJ	BONJ	BONB
Stage 1 (2014E-2016E)																		
ROE	19%	18%	19%	14%	14%	18%	16%	17%	15%	16%	17%	18%	18%	17%	15%	17%	16%	18%
Growth	12%	12%	12%	9%	10%	12%	12%	13%	11%	10%	13%	12%	14%	12%	12%	12%	11%	15%
COE	11%	11%	11%	11%	11%	11%	11%	11%	12%	13%	13%	13%	12%	12%	12%	12%	13%	12%
Payout ratio	35%	35%	35%	35%	30%	30%	25%	20%	30%	35%	20%	30%	20%	30%	20%	30%	30%	18%
Stage 2 (2017E-2019E)																		
ROE	15%	13%	13%	10%	10%	14%	9%	11%	12%	12%	12%	12%	13%	13%	14%	12%	12%	14%
Growth	9%	9%	8%	5%	7%	9%	5%	8%	7%	7%	7%	8%	9%	8%	10%	8%	7%	10%
COE	11%	11%	11%	11%	11%	11%	11%	11%	12%	13%	13%	13%	12%	12%	12%	12%	13%	12%
Payout ratio	35%	35%	35%	50%	30%	35%	40%	25%	45%	40%	40%	30%	30%	40%	30%	30%	45%	30%
Terminal stage																		
ROE	11%	10%	10%	9%	9%	11%	8%	9%	10%	9%	9%	9%	10%	12%	11%	10%	9%	10%
Growth	4%	4%	4%	4%	5%	4%	3%	4%	3%	4%	4%	4%	4%	5%	5%	4%	4%	4%
COE	11%	11%	11%	11%	11%	11%	11%	11%	12%	13%	13%	13%	12%	12%	12%	12%	13%	12%
Payout ratio	60%	60%	60%	60%	50%	60%	60%	60%	65%	60%	60%	60%	60%	60%	60%	60%	60%	60%
Target P/B	1.30	1.22	1.20	0.92	0.87	1.25	0.72	0.93	0.88	0.75	0.74	0.82	0.88	1.09	1.16	0.91	0.79	1.03
Estimated value (HK$)	6.80	7.45	4.49	4.28	6.90	18.97	5.00	9.82	5.00	2.92	5.44	10.31	11.00	3.61	15.71	9.70	8.46	11.05

Source: Deutsche Bank; Currency for SPDB, INDB, CEB, PAB, BOBJ, BONJ and BONB is Rmb

Key risks for Chinese banks

Sector risks

- Downside risks: asset quality deterioration on weaker-than-expected economic growth; faster-than-expected deposit rate deregulation; and more-stringent-than-expected regulation leading to falling spreads, higher provisioning and capital requirements.
- Upside risks: faster-than-expected implementation of reform measures; better-than-expected improvement in corporate financial health; and more relaxed policy on capital and provisioning.

Additional company-specific risks

- **ICBC** – Key downside risks: rising competition that undermines its number one market position. Overseas M&A is also a key risk.
- **CCB** – Downside risks: intense competition for deposit resulting in rising funding cost and higher-than-expected operating expense growth leading to rising CIR. In addition, CCB is vulnerable to sector risks such as asset quality deterioration and policy risks translating into lower spreads, and higher provisioning and capital requirements.
- **ABC** – Key downside risks: factors leading to slower economic growth in the county areas and asset quality deterioration.
- **BOC** – Key downside risks: BOC is vulnerable to slower export growth; slower-than-expected pace of RMB internationalization; and overseas M&A.
- **BOCOM** – Key downside risks: any factor that could lead to a meaningful rise in China's interbank rates, given its relatively large exposure to interbank liabilities; and weaker-than-expected asset

quality deterioration in Yangtze River Delta, where the bank's loan book mostly concentrates.

- **CMB** – Key downside risk: rising competition that can undermine its leading position in retail banking and asset quality deterioration. Key upside risks: improvement in operating efficiency; better-than-expected NIM; and a cut in RRR.
- **CNCB** – Key downside risks: tighter-than-expected regulations on non-standardized assets; greater-than-expected increase in deposit costs negatively affecting the bank's NIM given its relatively poor retail franchise; and one-off provisions to meet the gross loan coverage ratio of 2.5%. Key upside risks: more relaxed policy on capital, liquidity management and leverage ratio.
- **MSB** – Key downside risks: MSB is vulnerable to SHIBOR volatility and the regulation on inter-bank exposures given its asset/liability structure. The bank is also vulnerable to asset quality determination and any policy changes that could result in lower loan pricing and service charges for SMEs given its loan mix. Key upside risks: better-than-expected asset quality in SME business and falling SHIBOR resulting in lower funding cost.
- **CRCB** – Key downside risks: the bank is vulnerable to policy tightening on inter-bank assets given its high interbank exposure. In addition, the high concentration in Chongqing makes the bank vulnerable to the regional economic slowdown and hard to deploy capital more efficiently in other high-growth areas. Other risks are related to execution and earnings miss.
- **Huishang** – Key upside risks: better-than-expected economy in Anhui province, leading to improvement in asset quality, especially the LGFV loans and SME loans, and stronger loan growth; stronger deposit growth to support the balance sheet expansion and mitigate the pressure of high LDR; faster fee income growth; policy-easing, including cross-region expansion and RRR cut; and less stringent regulations on non-standardized assets.
- **BOCQ:** Key upside risks: less stringent regulations on non-standardized assets, resulting in milder impact on the bank's earnings and capital; better-than-expected economy in Chongqing, leading to improvement in asset quality, especially LGFV loans and MSE loans, and stronger loan growth; faster-than-expected fee income growth. Key downside risks: sector risks including asset quality deterioration; faster-than-expected deposit rate deregulation; and more stringent regulation.
- **SPDB** – Key upside risks: stronger-than-expected development in mobile banking business; and better NIM expansion. Key downside risks: tighter-than-expected regulations on non-standardized assets; weaker-than-expected asset quality deterioration in Yangtze River Delta, where the bank's loan book mostly concentrates; and policy risks on capital.
- **INDB** – Key upside risks: softer-than-expected regulations on non-standardized assets; lower-than-expected credit cost; and stronger-than- expected development in MSE business. Key downside risks: weaker-than-expected asset quality deterioration, especially in LGFVs and real estate sector, given the bank's relatively high exposure; and policy risks on capital.

- **CEB** – Key downside risks: tighter-than-expected regulations on non-standardized assets; weaker-than-expected asset quality deterioration; and change in provisioning policy to meet the 2.5% provision to loan ratio at a faster pace.
- **PAB** – Key downside risks: tighter-than-expected regulations on non-standardized assets; weaker-than-expected asset quality deterioration in Yangtze River Delta; and execution risks in merger.
- **BOBJ** – Key downside risks: slower-than-expected economic growth in Beijing as the bank's business is concentrated in the city; weaker-than-expected asset quality deterioration, especially in Beijing's real estate market and LGFV, given its high exposure; and failure to meet the regulatory requirement on off-B/S non-standardized WMPs by end-2013.
- **BONJ** – Key upside risks: stronger-than-expected development in MSE business; and a more supportive policy on cross-region expansion. Key downside risks: tighter-than-expected regulations on non-standardized assets; weaker-than-expected asset quality deterioration in Yangtze River Delta, where the bank's loan book mostly concentrates; and more volatility in interbank rate, which should expose the bank to greater liquidity risk.
- **BONB** – Key downside risks: weaker-than-expected recovery in G3 economies and China's export growth; tighter-than-expected regulations on non-standardized assets; weaker-than-expected asset quality deterioration in Yangtze River Delta; and more volatility in interbank rate, which should expose the bank to greater liquidity risk.

Appendix A

Key credit ratios of higher risk POE corporate bond issuers

Figure 116: Key credit ratios of higher risk POE corporate bond issuers

S.No.	Bond issuer	Sector	EBIT coverage			CFO coverage			Leverage ratio (A/E)			Cash conversion days		
			2011	2012	1H13	2011	2012	1H13	2011	2012	1H13	2011	2012	1H13
POEs that reported losses in FY12 and 1H13														
1	Nanjing Iron and Steel Co., Ltd.	Steel	1.3	0.1	0.7	-7.2	-0.4	-2.9	3.5	3.9	4.0	-47	-49	-139
2	Jiangsu Zhongneng Silicon Technology Development Ltd.	Solar energy	13.1	-1.1	-1.6	-22.4	-0.6	-4.8	2.6	3.0	3.5	59	77	220
3	Sinovel Wind Group Co., Ltd.	Wind power	20.9	-4.9	-5.7	-219.8	-3.6	-16.1	2.5	2.3	2.3	651	2,195	6,703
4	Baoding Tianwei Yingli Energy Ltd.	Solar energy	-0.4	-1.7	-0.7	-12.6	-1.6	-9.8	2.0	1.8	1.9	609	1,377	3,747
5	China Rongsheng Heavy Industries	Machinery	5.6	0.9	-3.8	-11.0	-1.1	-6.0	4.1	4.0	4.2	293	309	749
6	Xianglu Petrochemicals Co., Ltd	Petrochemical	na	-1.2	-7.6	na	-2.7	-34.0	2.1	2.9	3.1	92	100	146
7	Yingli Solar (China) Co., Ltd.	Solar energy	3.0	-1.7	-0.5	-13.0	-0.9	-4.0	4.3	6.9	8.9	105	249	665
8	Zhuhai Zhongfu Enterprise Co., Ltd	Food & beverage	1.7	0.2	0.4	-31.2	-2.1	-12.5	2.6	2.8	3.0	167	166	619
9	Shanghai Chaori Solar Energy Science & Technology Co., Ltd.	Solar energy	0.8	-6.9	-0.9	-24.7	-1.9	-5.8	2.3	6.8	10.3	553	1,230	8,199
10	Fujian Shengnong Development Co., Ltd	Farming & forestry	10.4	0.7	-2.5	-115.3	-4.6	-16.8	1.4	2.0	2.2	20	12	67
11	Doosan Infracore Construction Equipment Co., Ltd	Machinery	16.2	0.6	-0.9	-109.9	-2.9	-20.2	3.0	3.0	3.5	312	645	716
12	LDK Solar Co., Ltd.	Solar energy	-5.4	-2.5	-0.5	-6.6	-0.3	-2.2	7.6	42.3	-143.2	200	967	3,854
13	Huiyin Household Appliances (Holdings) Co., Ltd	Wholesale & retail	4.3	-3.5	-6.1	-301.5	-8.5	-73.6	2.3	3.1	2.7	21	45	87
14	Shandong Best Precision Co., Ltd	Machinery	4.4	-2.4	-1.6	-1,066	-44.5	-211.8	1.8	2.2	2.8	282	961	2,965
POEs downgraded or placed on a negative watch list														
1	Pangda Automobile Trade Co., Ltd	Retail & Wholesale	2.4	0.7	1.9	-7.7	-0.3	-1.9	5.4	7.1	6.9	-15	-6	-17
2	Jiangsu Feida Group	Machinery	30.8	5.5	2.1	-109.7	-5.5	-19.8	1.6	1.6	1.6	175	272	431
3	Changjiang Jinggong Steel Building (Group) Co., Ltd	Steel	6.8	2.9	3.3	-105.3	-3.0	-23.1	2.9	3.5	3.5	49	73	103
4	Huafu Top Dyed Melange Yarn Co., Ltd.	Textile	4.7	1.6	2.4	-42.3	-1.7	-13.8	2.5	2.6	2.5	29	53	115
5	Sichuan Western Resources Holdings Co., Ltd	Mining	na	na	8.9	na	na	-244.3	1.3	1.3	1.8	396	105	223
6	Chengdu Xinzhu Road & Bridge Machinery Co., Ltd	Machinery	3.4	0.3	1.1	-73.4	-4.2	-24.8	1.9	2.0	2.0	808	1,576	1,726
7	Beijing Xiang'e Qing Group Co., Ltd.	Catering	11.2	3.5	-8.1	-433.2	-8.5	-52.7	1.4	1.8	2.1	-116	-81	-177
8	Zhejiang Hisoar Pharmaceutical Co., Ltd.	Medical & health	8.0	1.8	1.0	-322.0	-14.2	-68.6	2.0	2.7	2.9	126	138	284

Source: Deutsche Bank, company data

Appendix B

Three main types of non-standardized assets

Following the spirit of Circular No 8 put forward this March to cap banks' exposure to off-B/S wealth management products, we define on-balance sheet non-standardized credit assets as non-tradable and credit-backed assets, mainly including: 1) financial assets held under reverse repurchase arrangements (reverse repo) backed by bills or trust beneficiary rights (TBR); and 2) proprietary investments in loan-type wealth management products issued by different financial intermediates (e.g. trust companies, brokers, insurance companies).

Non-standardized assets are essentially loans extended by banks to corporate borrowers, but are booked under either interbank assets or receivables investments, instead of under loan category. We illustrate the nature and transaction structure of the three main types of such non-standardized assets below.

#1 Reverse repo backed by TBR

TBR-backed reverse repos are essentially loans offered to corporate borrowers, but these assets are recorded under interbank assets. A typical TBR-backed reverse repo transaction could involve two banks or more, a trust company and a bridge corporate.

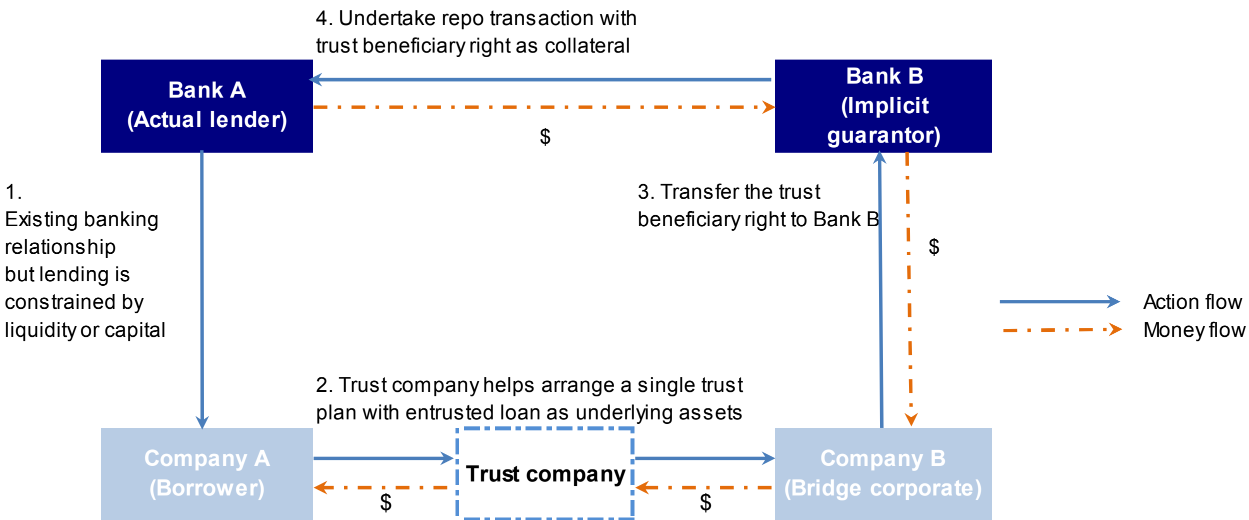
We illustrate a typical transaction flow of TBR-backed reverse repo as follows:

- Firstly, Company A is the existing customer of Bank A and is seeking loans from Bank A. However, due to constrains of liquidity (loan-to-deposit ratio close to 75% regulatory) or capital base, Bank A is not able to make loans to Company A.
- Secondly, Bank A helps bring in a trust company and a bridge corporate (Company B) to form a single trust plan with Company B lending directly to Company A in an entrusted loan arrangement.
- Thirdly, Company B transfers the trust beneficiary right of this single trust plan to Bank B and receives the payment from Bank B. The trust beneficiary right refers to the right to receive all the promised repayments (principal plus expected return) under the trust plan.
- Fourthly, Bank B undertakes a repo transaction with Bank A with the trust beneficiary right as collateral, i.e. Bank B transfers the trust beneficiary right to Bank A and promises to repurchase it back within a pre-determined period. At this moment, Bank A becomes the actual lender to Company A, backed by the repurchase agreement offered by Bank B.

In this transaction, Bank A records the credit exposure to Company A under reverse repo, i.e. interbank assets, as it looks like that Bank A bears the credit risk from Bank B, instead of the underlying borrower. In contrast, Bank B records this contingent liability under repurchase agreement as off-balance sheet liabilities.

It is a bit tricky to determine which bank bears the ultimate credit risk of the borrower. Theoretically, Bank B provides a repurchase agreement to implicitly guarantee the debt obligation of Company A; hence, it should be Bank B to bear the ultimate credit risk. However, based on our conversations with industry contacts, Bank B in our sample normally issues the repurchase agreement in an off-the-table manner. Therefore, the legal enforceability of this repurchase agreement issued by Bank B might be in question, potentially leading to mounting credit risk for Bank A.

Figure 117: A typical TBR-backed reverse repo transaction flow



Source: Deutsche Bank

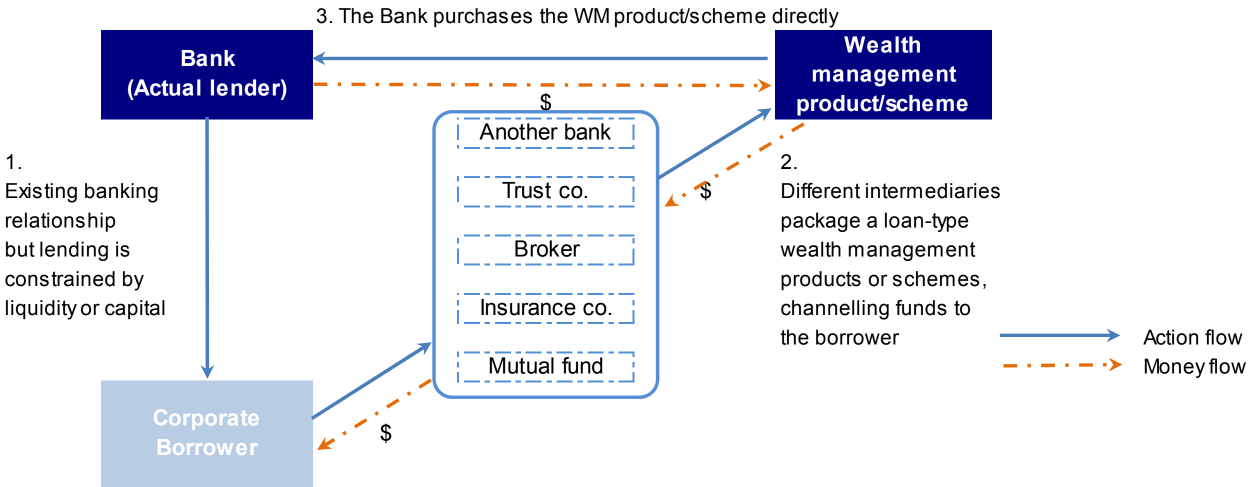
#2 Proprietary investments in loan-type wealth management products

Banks' proprietary investments in loan-type wealth management products are effectively loans offered to corporate borrowers, despite mostly being recorded under receivables investments. These loan-type wealth management products are packaged by different types of financial institutions, including trust companies, brokers, insurance companies and mutual funds' subsidiaries.

A typical transaction flow is as follows:

- Firstly, due to constraints of liquidity or capital, a bank is unable to make loans to its corporate borrower.
- Secondly, the bank helps arrange different types of intermediaries to package a wealth management product or scheme with a loan granted to the corporate borrower as the underlying asset.
- Thirdly, the bank uses its own fund to purchase the wealth management product or scheme and books it under receivables investment. At this point of time, the bank is taking the full credit risk of the underlying corporate borrower of the wealth management product or scheme.

Figure 118: Typical transaction flow of banks' proprietary investments in loan-type wealth management products



Source: Deutsche Bank

#3 Reverse repo backed by bills

Bill-backed reverse repo transactions are a bit more complicated than the previous two types of non-standardized assets. Some banks are using these transactions to make loans to corporate borrowers. But, apart from loan-type transactions, there is a notable portion of the bill-backed reverse repos that is undertaken for normal liquidity management on a day-to-day basis at Chinese banks.

In order to separate the loan-type transactions from bill-backed reverse repo, we estimate the difference between the bill-backed reverse repo undertaken by listed banks with unlisted banks (item (3) in Figure 119) and the total discounted bills balance at unlisted banks (item (6)). In theory, these two figures should be the same, given unlisted banks cannot source more funding than the discounted bills held on hands through bill-backed repo transactions with listed banks, i.e. item (3) in Figure 119 should be either equal to or less than item (6).

For the 16 A+H listed Chinese banks we cover, we estimate the total amount of loan-type bill-backed reverse repo to reach Rmb0.59tr as of 1H13, accounting for 29% of total balance of bill-backed reverse repo.

Figure 119: We estimate about 29% of bill-backed reverse repo are loan-type as of 2H13

Rmb bn	Steps	2H11	1H12	2H12	1H13	2H13
Reverse repo outstanding backed by bills at listed banks	(1)	1,124	2,187	2,319	2,987	2,012
Repo outstanding backed by bills at listed banks	(2)	115	301	265	269	100
Reverse repo backed by bills undertaken with unlisted banks	(3) = (1) - (2)	1,008	1,885	2,055	2,718	1,912
Discounted bills balance at listed banks	(4)	708	1,052	954	1,087	640
Total system discounted bills balance	(5)	1,512	2,277	2,043	2,328	1,959
Discounted bills balance at unlisted banks	(6) = (5) - (4)	805	1,225	1,090	1,241	1,320
Loan-type bill-backed reverse repo at listed banks	**(7) = (3) - (6)**	**204**	**660**	**965**	**1,476**	**593**
As a % of total reverse repo backed by bills	(8) = (7) / (1)	18%	30%	42%	49%	29%

Source: Deutsche Bank, company data, PBOC

More specifically, Chinese banks are taking advantage of the accounting loopholes at some unlisted banks, especially rural credit cooperatives (RCCs) or village banks, which do not distinguish the outright sales of a discounted bills and the bill-backed repo transaction with recourse. In a typical loan-type reverse repo transaction, the following steps could transform a discounted bill into an interbank asset (more details are illustrated in Figure 120):

- A bank sells a discounted bill to a RCC on an outright basis and purchases it back from the RCC under a reverse repo transaction with this discounted bill as collateral.
- Due to the accounting loophole, the RCC could record this bill-backed repo as an outright sale to the bank and hence remove the discounted bill off from its balance sheet.
- From the bank's perspective, it simply moves the discounted bill from loan category to interbank assets as bill-backed reverse repo.

Figure 120: Illustration on the transaction flow and impact on bank's balance sheets under both normal and loan-type bill-backed reverse repot transactions

Normal bill-backed reverse repo transaction

A listed bank | Repo with bills as collateral / $ | A unlisted bank | TOTAL

1. Before any of the transactions

A listed bank: Asset		Liab. & equity		A unlisted bank: Asset		Liab. & equity		TOTAL: Asset		Liab. & equity	
Cash	10	Deposit	0	Cash	10	Deposit	0	Cash	20	Deposit	0
Disc. Bills	0	Other liab.	10	Disc. Bills	0	Other liab.	10	Disc. Bills	0	Other liab.	20
Other assets	10	Equity	10	Other assets	10	Equity	10	Other assets	20	Equity	20
Total	20	Total	20	Total	20	Total	20	Total	40	Total	40

2. The unlisted bank discounts a bill worth of Rmb10 for a corporate

A listed bank: Asset		Liab. & equity		A unlisted bank: Asset		Liab. & equity		TOTAL: Asset		Liab. & equity	
Cash	10	Deposit	0	Cash	10	**Deposits**	**10**	Cash	20	Deposits	10
Disc. Bills	0	Other liab.	10	**Disc. Bills**	**10**	Other liab.	10	Disc. Bills	10	Other liab.	20
Other assets	10	Equity	10	Other assets	10	Equity	10	Other assets	20	Equity	20
Total	20	Total	20	Total	30	Total	30	Total	50	Total	50

3. The unlisted bank undertakes a repo transaction with the listed bank with the Rmb10 discounted bills as collateral (i.e. reverse repo for listed bank)

A listed bank: Asset		Liab. & equity		A unlisted bank: Asset		Liab. & equity		TOTAL: Asset		Liab. & equity	
Cash	**0**	Deposit	0	**Cash**	**20**	Deposit	10	Cash	20	Deposit	10
Reverse repo	**10**					**Repo**	**10**	Reverse repo	10	Repo	10
Disc. Bills	0	Other liab.	10	Disc. Bills	10	Other liab.	10	Disc. Bills	10	Other liab.	20
Other assets	10	Equity	10	Other assets	10	Equity	10	Other assets	20	Equity	20
Total	20	Total	20	Total	40	Total	40	Total	60	Total	60

Should be equal

Note: still on unlisted bank's balance sheet, as it is not an outright sale

Loan-type bill-backed reverse repo transaction

A listed bank | Outright sales of disc. bill / Repo with bills as collateral / $ | A unlisted bank | TOTAL

1. Before any of the transactions

A listed bank: Asset		Liab. & equity		A unlisted bank: Asset		Liab. & equity		TOTAL: Asset		Liab. & equity	
Cash	10	Deposit	0	Cash	10	Deposit	0	Cash	20	Deposit	0
Disc. Bills	0	Other liab.	10	Disc. Bills	0	Other liab.	10	Disc. Bills	0	Other liab.	20
Other assets	10	Equity	10	Other assets	10	Equity	10	Other assets	20	Equity	20
Total	20	Total	20	Total	20	Total	20	Total	40	Total	40

2. The listed bank discounts a bill worth of Rmb10 for a corporate

A listed bank: Asset		Liab. & equity		A unlisted bank: Asset		Liab. & equity		TOTAL: Asset		Liab. & equity	
Cash	10	**Deposit**	**10**	Cash	10	Deposits	0	Cash	20	Deposits	10
Disc. Bills	**10**	Other liab.	10	Disc. Bills	0	Other liab.	10	Disc. Bills	10	Other liab.	20
Other assets	10	Equity	10	Other assets	10	Equity	10	Other assets	20	Equity	20
Total	30	Total	30	Total	20	Total	20	Total	50	Total	50

3. The listed bank sells the Rmb10 discounted bills to the unlisted banks on a outright basis (i.e. selling off without recourse)

A listed bank: Asset		Liab. & equity		A unlisted bank: Asset		Liab. & equity		TOTAL: Asset		Liab. & equity	
Cash	**20**	Deposit	10	**Cash**	**0**	Deposits	0	Cash	20	Deposits	10
Disc. Bills	**0**	Other liab.	10	**Disc. Bills**	**10**	Other liab.	10	Disc. Bills	10	Other liab.	20
Other assets	10	Equity	10	Other assets	10	Equity	10	Other assets	20	Equity	20
Total	30	Total	30	Total	20	Total	20	Total	50	Total	50

4. Using an accounting loophole, the unlisted bank undertakes a repo transaction with the listed bank with the Rmb10 discounted bills as collateral on an outright basis, i.e. the unlisted bank removes the Rmb10 discounted bill off. The listed bank records the transaction as bill-backed reverse repo.

A listed bank: Asset		Liab. & equity		A unlisted bank: Asset		Liab. & equity		TOTAL: Asset		Liab. & equity	
Cash	**10**	Deposit	10	**Cash**	**10**	Deposit	0	Cash	20	Deposit	10
Reverse repo	**10**							Reverse repo	10	Repo	0
Disc. Bills	0	Other liab.	10	**Disc. Bills**	**0**	Other liab.	10	Disc. Bills	0	Other liab.	20
Other assets	10	Equity	10	Other assets	10	Equity	10	Other assets	20	Equity	20
Total	30	Total	30	Total	20	Total	20	Total	50	Total	50

It is not equal

Note: Rmb10 discounted bills just disappears

Source: Deutsche Bank. Note: For simplicity, we assume there are only two banks in the system, a listed and a unlisted. Changes during each step are highlighted in bold.

Appendix 1

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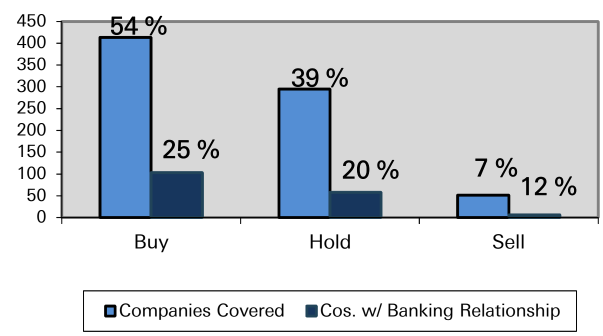
Equity rating dispersion and banking relationships



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