KPMG

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China's banking sector: Performance of listed banks and hot topics

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INTRODUCTION

China's Banking Sector: Performance of Listed Banks and Hot Topics is a KPMG publication that offers discussions of important topics and analysis of performance indicators of China's banking industry. It provides in-depth but accessible examination of the hot issues, together with their impact on and future direction of the banking sector. It also gathers considerable data to assess the financial position of China's listed banks. We believe our professional experience will help you better understand the current situation of the banking sector.

This issue (2015 Q3) focuses on current hot topics, including insights on private enterprises, network security of e-banking services, digital operations, epoch-making changes in the banking industry, and financial opportunities under the Belt and Road strategy. These topics are currently receiving more attention in the banking industry, and we hope that our discussion will help you understand these issues.

For more information, please do not hesitate to contact the KPMG professionals listed in the Contact Us section.

2015 Q3 Economy and Finance

01

Q3 Data Analysis

In the first three quarters of 2015, as the global economy remained sluggish and downward pressure on China's economy continued to mount, the Chinese government took effective control measures and deepened the reform. Though the growth rate dropped in the third quarter, China's economy still achieved a stable performance while securing progress.

In terms of demands, the growth of fixed asset investment dropped in the first three quarters. Consumption remained stable and increased slightly. The prices of consumer goods were steady. Import and export trade dropped fast compared to the previous year. The residents' income increased rapidly and the economic structure continued to improve. The service sector accounted for 51.4% of the GDP. In terms of supply, the agricultural production was good and industrial production remained stable. The initiative for mass entrepreneurship and the increase of public goods and public services laid a good foundation for rapid economic growth.

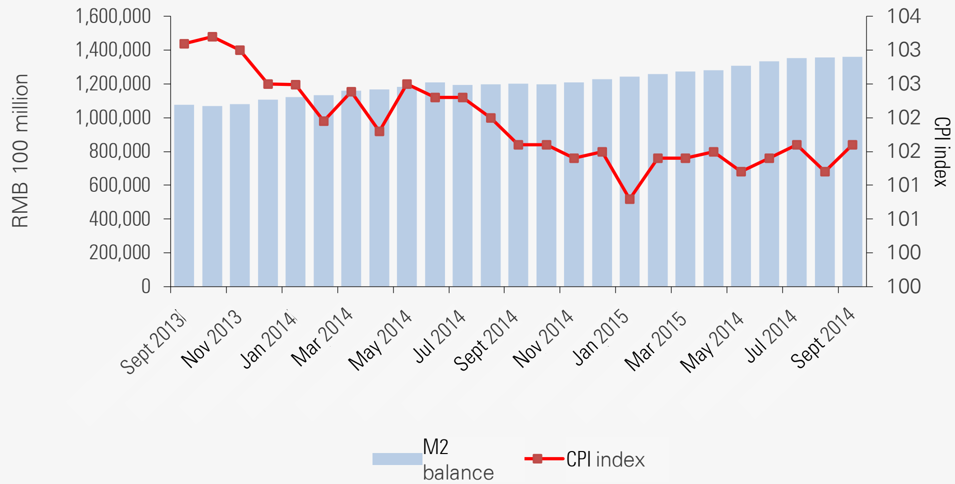
- **GDP growth slowdown in the first three quarters:** Based on preliminary calculations, China's GDP in the first three quarters of 2015 was RMB 48.7774 trillion, a YoY increase of 6.9% at comparable prices. GDP growth continued to slow down. In terms of sectors, the added value of the primary sector, the secondary sector and the tertiary sector was RMB 3.9195 trillion, RMB 19.7799 trillion and RMB 25.0779 trillion respectively, growing by 3.8%, 6.0% and 8.4% respectively.
- **Drop in import and export trade:** in the first three quarters of 2015, the total volume of import and export trade amounted to USD 2.90414 trillion, a YoY decrease of 7.9%. Export trade reached USD 1.66412 trillion, down 1.8% while import trade reached 1.24003 trillion, down 15.1%. Trade balance was USD 163.60 billion in the third quarter of 2015, a YoY increase of 6.46%.
- **Consumption continued to grow steadily:** in the first three quarters of 2015, the total retail sales of consumer goods reached RMB 21.608 trillion, a nominal increase of 10.5% (10.5% in real terms)

Overview of key macroeconomic indicators	Unit	2013Q3	2013Q4	2014Q1	2014Q2	2014Q3	2014Q4	2015Q1	2015Q2	2015Q3
GDP	YoY (%)	7.9	7.6	7.4	7.5	7.3	7.3	7.0	7.0	6.9
CPI	YoY (%)	2.5	2.6	2.3	2.3	2.2	2.0	1.2	1.3	1.4
PPI	YoY (%)	(1.3)	(1.4)	(2.3)	(1.1)	(1.8)	(3.3)	(4.6)	(4.8)	(5.0)
Industrial added value	YoY (%)	9.6	9.7	8.7	8.8	8.5	8.3	6.4	6.3	6.2
Total retail sales of consumer goods	YoY (%)	12.9	13.1	12.0	12.1	12.0	12.0	10.6	10.4	10.5
Fixed asset investment	YoY (%)	20.2	19.6	17.6	17.3	16.1	15.7	13.5	11.4	10.3
Exports	YoY (%)	8.0	7.8	(3.5)	0.9	5.1	6.0	4.6	0.9	(1.8)
Imports	YoY (%)	7.3	7.2	1.5	1.4	1.3	0.5	(17.7)	(15.5)	(15.1)
Trade surplus	$100 million	606.4	900.2	174.4	868.0	1,284.4	1,503.8	1,238.2	1,394.3	1,636.0
M2	YoY (%)	14.2	13.6	12.1	14.7	12.9	12.2	11.6	11.8	13.1
RMB loan growth	YoY (%)	14.3	14.1	13.9	14.0	13.2	13.6	14.0	13.4	15.4

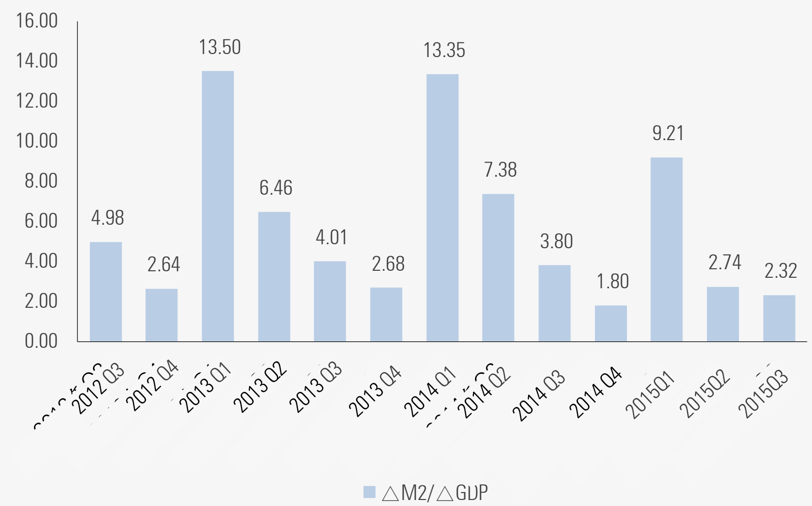
Source: Wind Info and National Bureau of Statistics of the People's Republic of China

Monetary Expansion and National Economic Output

Money Supply and Inflation Rate



Velocity of Money

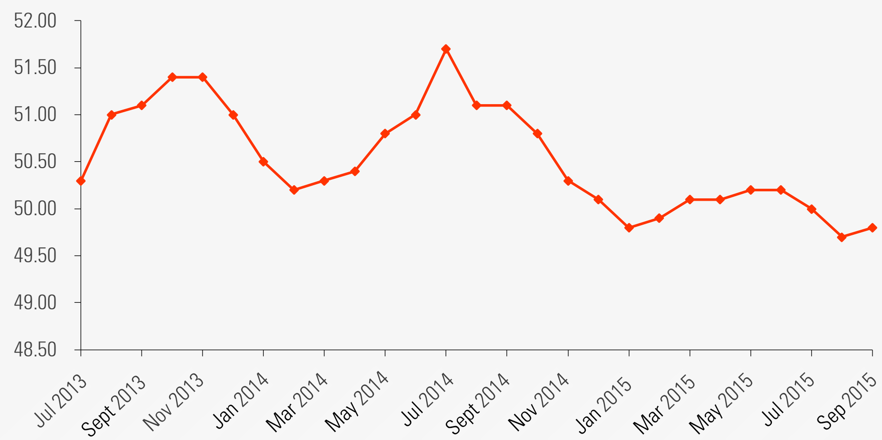


- The Consumer Price Index (CPI) grow rate YoY was 1.4% in the first three quarters of 2015. It increased by 1.5% in urban areas and 1.3% in rural areas.
- Specifically, food prices increased by 2.3% YoY; prices for tobacco, liquor and articles by 1.6%, clothing prices by 2.9%, prices for household equipment and maintenance services by 1.1%, prices for medical and personal care products by 1.8%, prices for entertainment and educational products and services by 1.5% and house prices by 0.7% while prices for transportation and communication dropped by 1.8%.
- At the end of September 2015, the broad money (M2) balance was RMB 136 trillion, a YoY increase of 13.1%. The RMB loan balance was RMB 92.1 trillion and the RMB deposit balance was RMB 133.7 trillion. In the first three quarters of 2015, the RMB loan increment amounted to RMB 9.9 trillion, representing a YoY increase of RMB 2.34 trillion while the RMB deposit increment was RMB 13 trillion, representing a YoY increase of RMB 1.9 trillion.
- At the end of September 2015, the narrow money balance was RMB 36.4 trillion, a YoY increase of 11.4%. The balance of money in circulation was RMB 6.1 trillion, a YoY increase of 3.7%. In the first three quarters of 2015, the overall financing scale reached RMB 11.9 trillion, a YoY decrease of RMB 952.2 billion compared to the previous year.
- Compared to 2014, the ratio of broad money (M2) increments to economic growth dropped in the first three quarters of 2015, indicating that the driving effects of money increments increased.

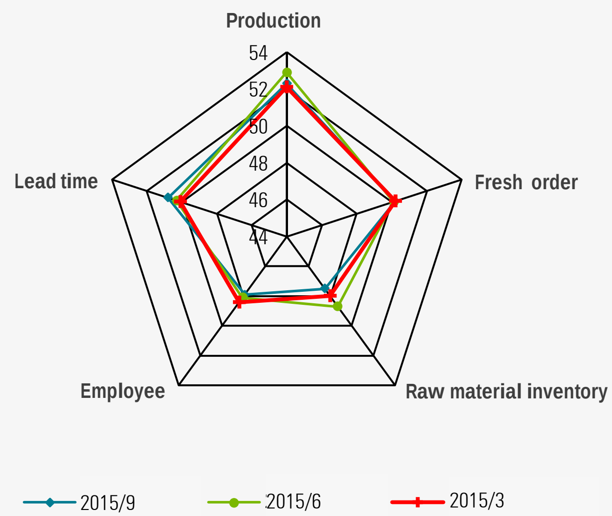
Source: Wind Info and National Bureau of Statistics of the People’s Republic of China

Operating Performance

China Manufacturing PMI



China Manufacturing PMI Sub-index



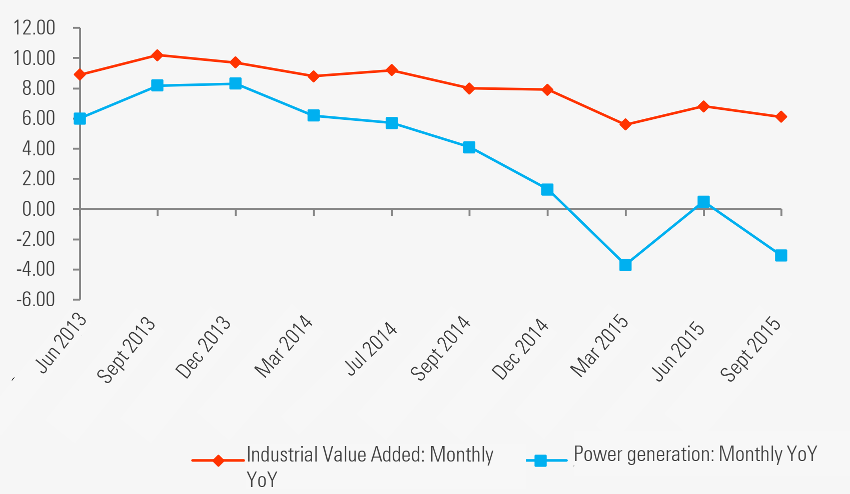
- Overall, China's economy operated steadily within an appropriate range in the first three quarters of 2015. Currently, concerns over the uncertainty of the global economy and the downward pressure on China's economy still exist.
- In the first three quarters of 2015, China's manufacturing Purchasing Manager Index first moved upwards and then declined. In the first half of 2015, it continued to increase. But due to flood disasters and the measures taken to address air pollution, the production activities of some enterprises slowed down in July and August and the PMI declined for two consecutive months. In September 2015, the PMI was 49.8%, a slight increase of 0.1% compared to the previous month. It indicated that the PMT increased slightly after having been falling for two consecutive months. In terms of company scales, large enterprises recorded a better performance than small and medium-sized enterprises. The PMI of large enterprises was again above the break-even mark and was 51.1%, an increase of 1.2% compared to the previous month. The PMIs of small and medium-sized enterprises were 48.5% and 46.8%, down 1.3% compared to the previous month. They continued to be below the break-even mark. The PMI increased slightly in September, which is contrary to the trend in the same period of the previous year. The fresh order index and the new export order index increased slightly, indicating that the demand for manufacturing products improved.

Source: Wind Info and National Bureau of Statistics of the People's Republic of China

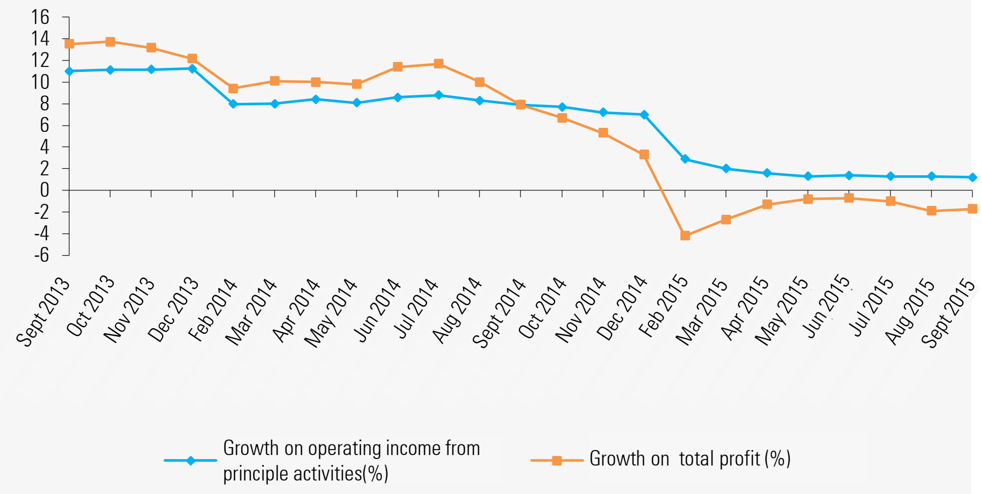
- In terms of sub-indexes, in September 2015, of the five sub-indexes comprising the manufacturing PMI, the production index, fresh order index and lead time index were above the break-even mark and increased compared to the previous month.
- The employee index average and the raw material inventory index average were still below the break-even mark.
- The fresh order index average was 50.2%, up 0.5% over the previous month. It was again above the break-even mark, indicating that the demand for manufacturing products improved.
- The employee index average was 47.9%, flat compared to the previous month. It was still below the break-even mark, indicating that the number of workers employed by manufacturing enterprises continued to drop.
- The raw material inventory index average was 47.5%, down 0.8% compared to the previous month. It was still below the break-even mark, indicating that the raw material inventory used by manufacturing enterprises continued to decline.
- The lead time index average was 50.8%, an increase of 0.2% compared to the previous month. It was above the break-even mark, indicating that the delivery of raw materials by suppliers continued to accelerate.

Operating Performance (continued)

Industrial Production



YoY Growth of Accumulative Operating Income from Principal Activities and Total Profits

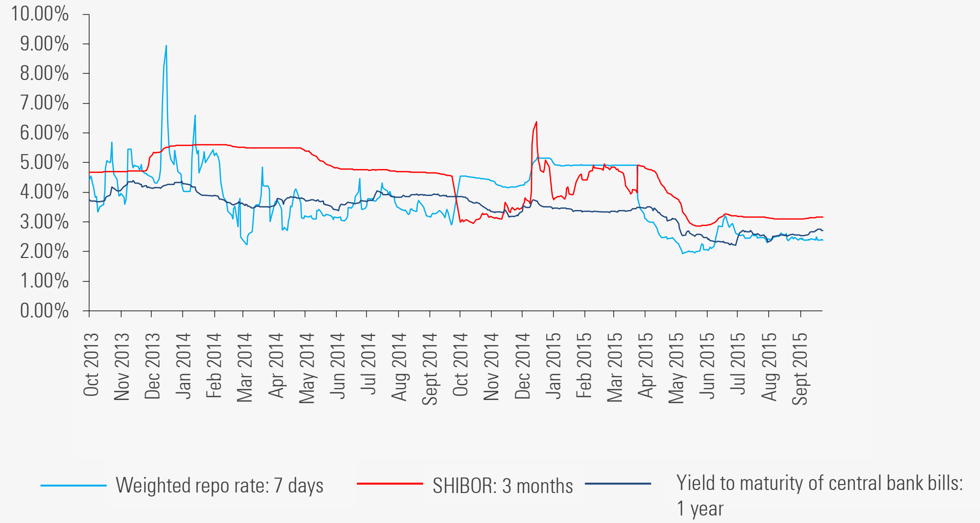


- In September 2015, the added value of the above-scale industry, calculated at comparable prices, increased by 5.7% which was 2.3% lower than the previous year. In terms of economic types, the state-owned and state-held enterprises; collective enterprises; joint-stock enterprises; and foreign-invested, and Hong Kong, Macau and Taiwan invested enterprises grew by 1.4%, 0.5%, 7.2% and 2.7% respectively.
- In September 2015, as for specific industries, the value added by the mining industry, the manufacturing industry and the electricity, heating power, gas and water production and supply industry grew by 1.2%, 6.7% and 0.7% respectively. As for specific regions, the value added by the eastern region, the central region and the western regions increased by 6.0%, 7.8% and 8.0% respectively. In September 2015, the sales-output ratio of above-scale industrial enterprises reached 98%, flat compared to the previous year.
- In September 2015, power generation fell by 3.1% year on year. In the first three quarters of 2015, power generation continued to fall with the rate fluctuating between 0 and 3.7%.
- As of September 2015, the operating income from principal activities of above-scale industrial enterprises was RMB 79.70886 trillion, an increase of 1.2%; the cost of operating income from principal activities was RMB 68.64112 trillion, a YoY increase of 1.3%, indicating that the cost grew slightly faster than the operating income. Above-scale industrial enterprises realized total profits of RMB 4.30324 trillion, a decrease of 1.7%. The profit rate of the operating income from principal activities was 5.4%. The cost of operating income from principal activities was RMB 86.1 for every RMB 100. The income arising from every RMB 100 of assets was RMB 113.3.
- In terms of industries, as of September 2015, the mining industry realised total profits of RMB 208.23 billion, a decrease of 55.5%; the manufacturing industry realised total profits of RMB 3.69344 trillion, a YoY increase of 4.1% and the electricity, heating power, gas and water production and supply industry realised total profits of RMB 401.57 billion, a YoY increase of 11.7%.

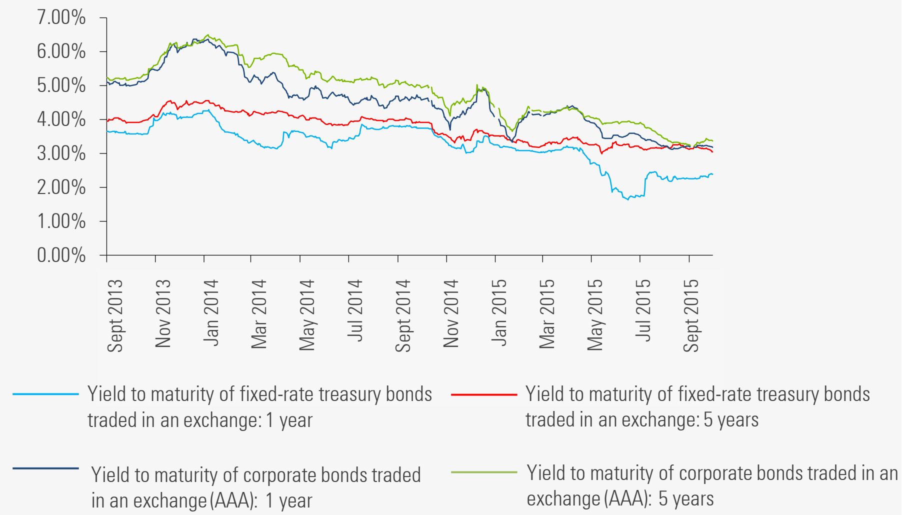
Source: Wind Info

Dynamics of Money and Bond Market Interest Rates

Money Market Rate



Bond Yield



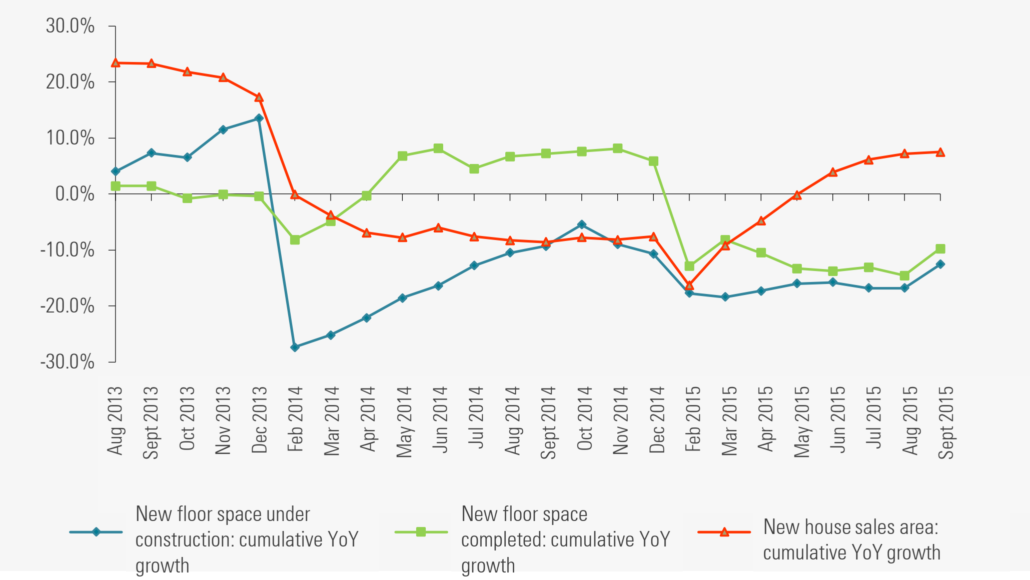
- Overall, the financial market was stable In the third quarter of 2015. Based on the published data from the People's Bank of China, the total turnover of currency market during January to September 2015 amounted to RMB 342.7 trillion, a YoY increase of 85.6%. In September, the total turnover of currency market amounted to RMB 45.8 trillion, a YoY increase of 78.9% and a MoM increase of 1.6%.
- At the end of 2015 Q3, the yield to maturity of one-year central bank bills fell significantly compared to the same period of the previous year. At the end of September 2015, it was 2.71%, down 113 basis points compared to the end of September of the previous year.
- Compared to early 2015, the overnight Shibor fell by 165.10 basis points and closed at 1.9890% at the end of September 2015; the seven-day Shibor fell by 247.59 basis points and closed at 2.4080%; and the one-month Shibor fell by 253.80 basis points and closed at 3.0910%.

- In 2015 Q3, global macroeconomic data was weaker than expected with a slow momentum in recovery. China's macro economy was on a sustainable downtrend. The inflation rate dropped below 2% and the trading volume showed a YoY decline. As a result, the yield curves of all bonds retreated.
- In 2015 Q3, the accumulated turnover of the inter-bank bond market was RMB 57.8 trillion and the average daily turnover was RMB 312.48 billion, representing a YoY increase of 104.3%; in September, the turnover of the inter-bank bond market securities was RMB 7.7 trillion and the daily average turnover was RMB 403.42 billion, a YoY increase of 122.5% and a MoM growth of 3.8%. At the end of September, the total inter-bank index was 166.83, up 0.78 basis point or 0.5% from the end of previous month.

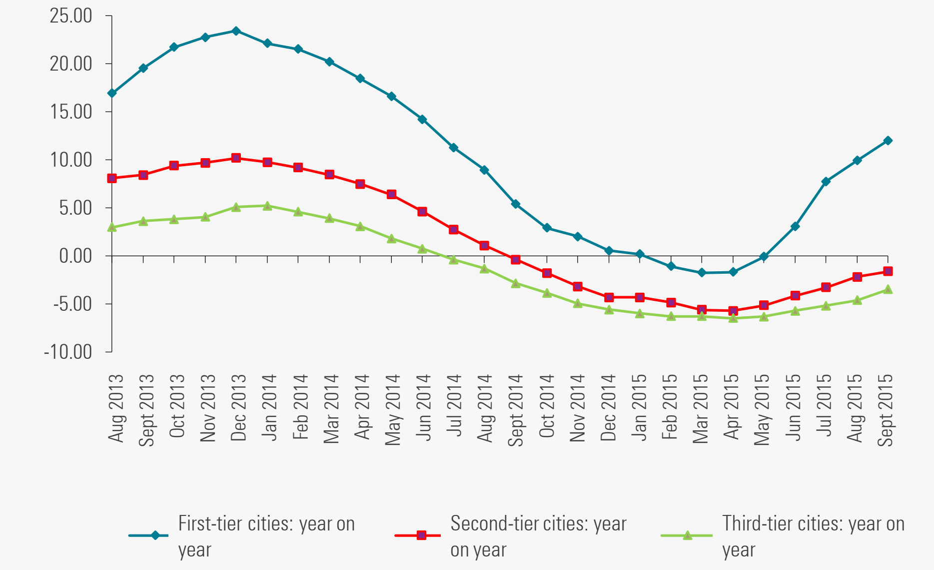
Source: Wind Info

Residential Housing

Growth of saleable area, floor space completed and new floor space under construction



Housing Price Indexes of 100 cities



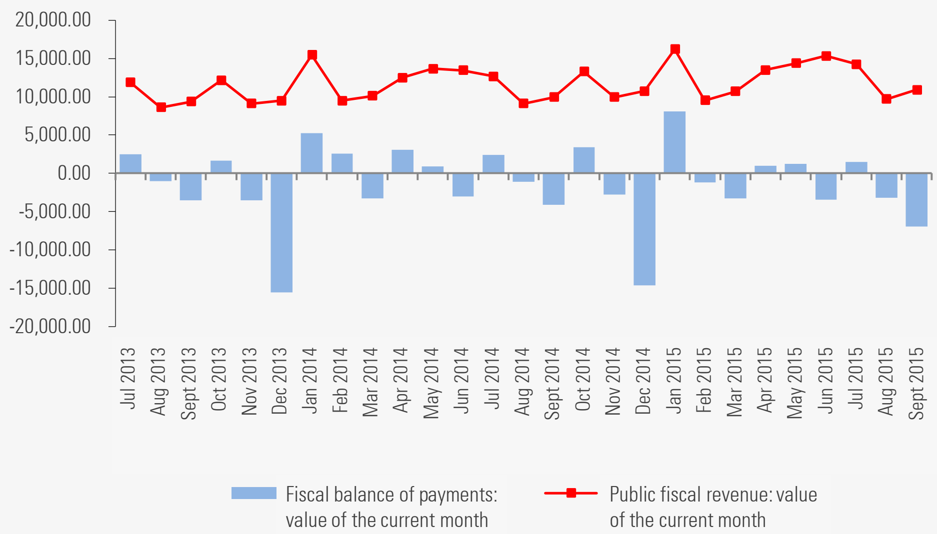
- In 2015 Q3, real estate investment amounted to RMB 7.0535 trillion, a YoY increase of 2.6% (excluding the actual growth of 4.2% from pricing factor) and a decrease of 2 percentage points from the first half of 2015, among which residential housing investment increased by 1.7%. The new floor space under construction was 11.4814 trillion ㎡, a YoY decrease of 12.6%, among which the new floor space under construction for residential housing decreased by 13.5%.
- The saleable area of commodity housing amounted to 8.2908 trillion ㎡, a YoY increase of 7.5% and a growth of 3.6 percentage points from the first half of 2015, among which the saleable area of residential housing increased by 8.2%. The sales of commodity housing were RMB 5.6745 trillion, an increase of 15.3% and the sales of residential housing increased by 18.2%. The area of land acquired by real estate developers was 1.589 trillion ㎡, a YoY decrease of 33.8%.
- The available-for-sales area of commodity housing amounted to 6.651 trillion ㎡, a YoY increase of 16.4%. The capital of real estate development enterprises in the third quarter was RMB 9.0653 trillion, a YoY increase of 0.9%.

Source: Wind Info

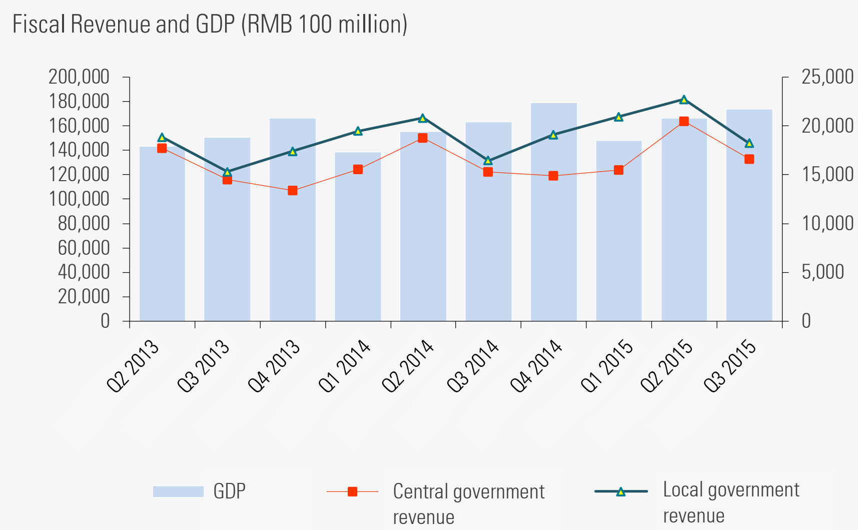
- In 2015 Q3, house prices of new commodity housing and second-hand residential housing sustained a MoM growth at a slower pace. Based on the published data from the National Bureau of Statistics, the number of cities building new commodity housing in September increased over the previous month. The house price continued to surge at a sluggish pace. Compared with last month, there were four more cities experiencing higher MoM prices of their new commodity housing with one more stayed flat. As for second-hand residential housing, there were four less cities experiencing higher MoM prices with two more stayed flat. In September, among 70 large and mid-size cities, the combined growth of their average MoM pricing of new commodity housing and second-hand residential housing declined by 0.1 and 0.2 percentage point respectively. In term of the tier of city, the house price of first-tier cities continued to have a MoM increment with slower pace of growth. The majority of second-tier cities either showed a small increase in or levelled at their house prices on a MoM basis. Only a few third-tier cities turned to an uptrend on their house prices.
- The YoY increment in the house prices of new commodity housing and second-hand residential housing is currently expanding, with more cities experiencing an increase in their house prices. In September, 12 and 15 cities experienced a price increase in their new commodity housing and second-hand residential housing respectively, a MoM increase of three and eight cities. 58 and 53 cities experienced a narrowed price drop in their new commodity housing and second-hand residential housing. First-tier cities showed a more significant YoY increment in the house price of both new commodity housing and second-hand residential housing. Second-tier cities had mixed performance. Third-tier cities experienced a price decline in both their new commodity housing and second-hand residential housing.

Government Finance

Monthly Fiscal Balances (RMB 100 million)



Fiscal Revenue and GDP (RMB 100 million)

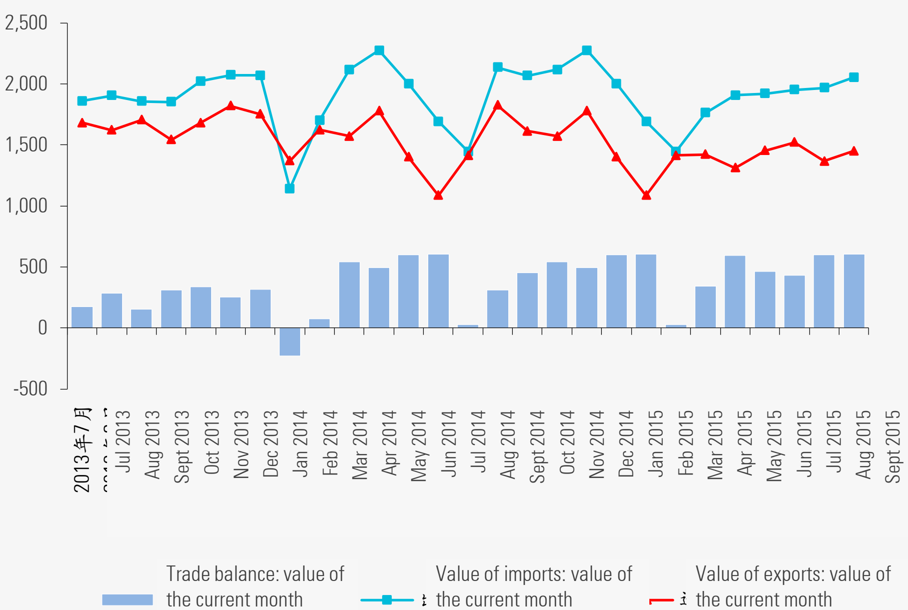


- In September 2015, national public fiscal revenue amounted to RMB 11.4412 trillion, a YoY increase of 7.6% and a drop of 0.5 percentage point in term of YoY growth rate. The central government collected RMB 5.2529 trillion, a YoY increase of 5.9% and local governments collected RMB 6.1883 trillion, a YoY increase of 9.0% and a drop of 1.1 percentage points in term of YoY growth rate. Tax income reached RMB 9.4631 trillion, a YoY increase of 4.3% and a significant drop of 3.1 percentage points in term of YoY growth rate. In summary, the increasing pressure on economic downturn, the sustainable downtrend in producer price index (PPI) and the implementation of structural tax cuts and general tax reductions led to greater pressure on the growth of central and local government revenue in 2015 Q3. National fiscal revenue grew at a mid to low pace.
- In 2015 Q3, national public expenditure reached RMB 3.2815 trillion, an increase of RMB 239.2 billion or 7.86%. The central government spent RMB 484.2 billion, an increase of 10.42%. Local governments spent RMB 2.7973 trillion, an increase of 7.39%.
- GDP amounted to RMB 48.7773 trillion in 2015 Q3, representing a YoY increase of 6.9% calculated by comparable price. In term of sector, the added value of the primary sector, the secondary sector and the tertiary sector was RMB 3.9195 trillion, RMB 19.7799 trillion and RMB 25.0779 trillion respectively, growing by 3.8%, 6.0% and 8.6% respectively. The tertiary sector took up 51.4%, a steady increase comparing to the 49.1% in 2014; the trend of economic structure transferred from industry-driven to service-driven was more obvious.
- The proportion of national fiscal revenue to GDP stabilized at around 25% in 2015 Q3, which is similar to the corresponding period in 2014.

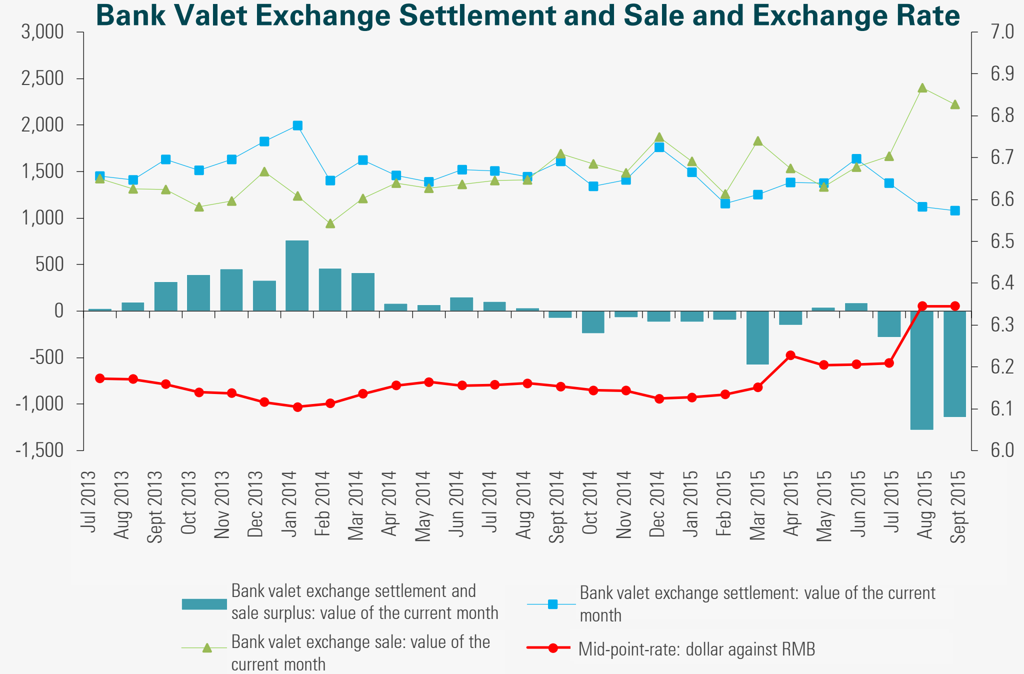
Source: National Bureau of Statistics

Foreign Trade and Exchange Rate

Import and Export Trade (USD hundred million)



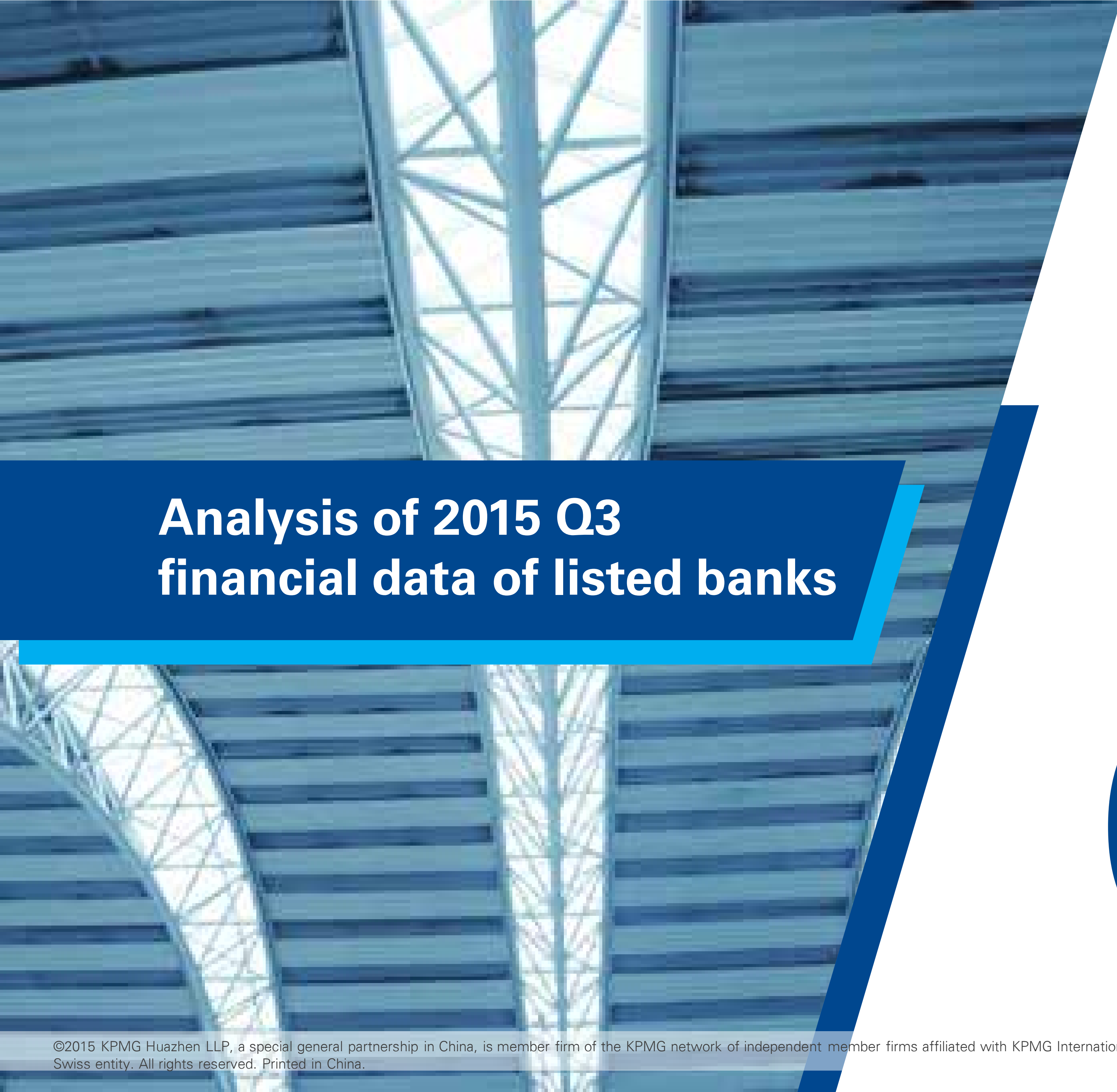
Bank Valet Exchange Settlement and Sale and Exchange Rate



- In the third quarter of 2015, the total volume of import and export trade was USD 2.90414 trillion, a YoY decrease of 7.9%.
- The volume of export trade reached USD 1.66412 trillion, a YoY decrease of 1.8% and the volume of import trade was USD 1.24003 trillion, a YoY decrease of 15.1%. The trade surplus was USD 424.09 billion.
- In September 2015, the total volume of import and export trade reached USD 350.79 billion, a decrease of 8.8%. Export accounted for USD 205.56 billion, down 1.1% and import accounted for USD 145.22 billion, a decrease of 17.7%.

- In the third quarter of 2015, bank valet exchange settlement added up to USD 1.3377 trillion, a YoY decrease of 6% excluding the effect of foreign exchange. The bank valet exchange sale reached USD 1.6392 trillion, a YoY increase of 31%. The settlement and sale contributed to a deficit of USD 301.5 billion.
- Compared to the second quarter, RMB depreciated against USD in the third quarter of 2015. The monthly average exchange rate of USD and RMB rose from 6.2060 to 6.3450.

Source: National Bureau of Statistics, Wind Info and State Administration of Foreign Exchange



Analysis of 2015 Q3 financial data of listed banks

02

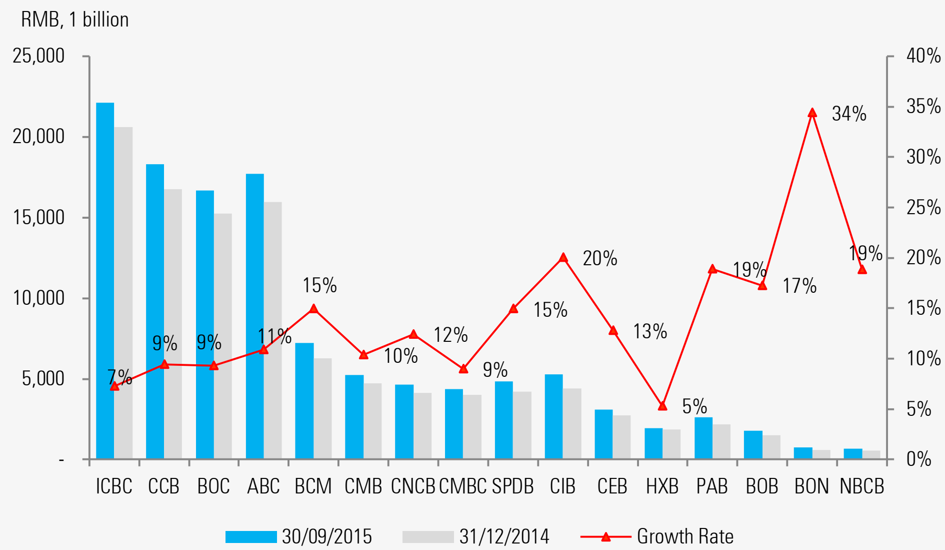
Conditions of assets — Asset scale and structure

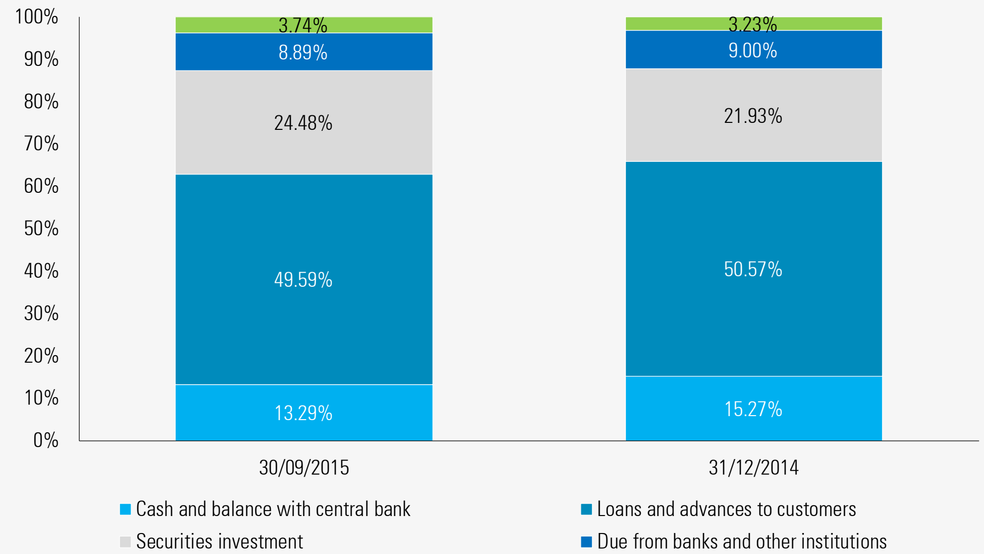
Since the beginning of 2015, banks exercised more prudence regarding credit extension and loan structure amid economic downturn and rising NPL ratio. Major banks adjusted their asset structure to enhance risk management. The growth of credit assets of listed banks slowed down while securities investments significantly increased.

In the third quarter of 2015, overall deposits grew albeit at a slower rate compared with the same period of last year. There was a widening gap between deposit and loan growth, resulting in an increase in loan-deposit rate. Given accelerated interest rate liberalization, the offers of alternatives to deposits increased, and the average deposits and loans of listed banks increased compared with the end of 2014.

In light of the challenges of slower economic growth, structural adjustment in certain industries, and cross industry competition from internet finance, the listed banks will continue to face pressure in the management and control of asset quality, as well as intensified inter-bank competition. In the third quarter of 2015, both total non-performing loan (NPL) balance and NPL ratio of listed banks were on the rise. However, the increased amount of loan loss provision was lower than that of the NPLs, as a result, the allowance to NPL ratio fell.

Conditions of assets — Asset scale and structure





In the third quarter of 2015, the total asset size of all the listed banks trended higher, thanks to increased credit assets and investments in securities.

Compared with the five major state-owned banks, some of the joint-stock commercial banks were more aggressive in pursuing expansion. The total asset size of BON recorded the highest increase of 34%, mainly due to growth in securities investments and loans and advances to customers, while the total asset size of CIB, PAB and NBCB respectively increased by 20%, 19% and 19%.

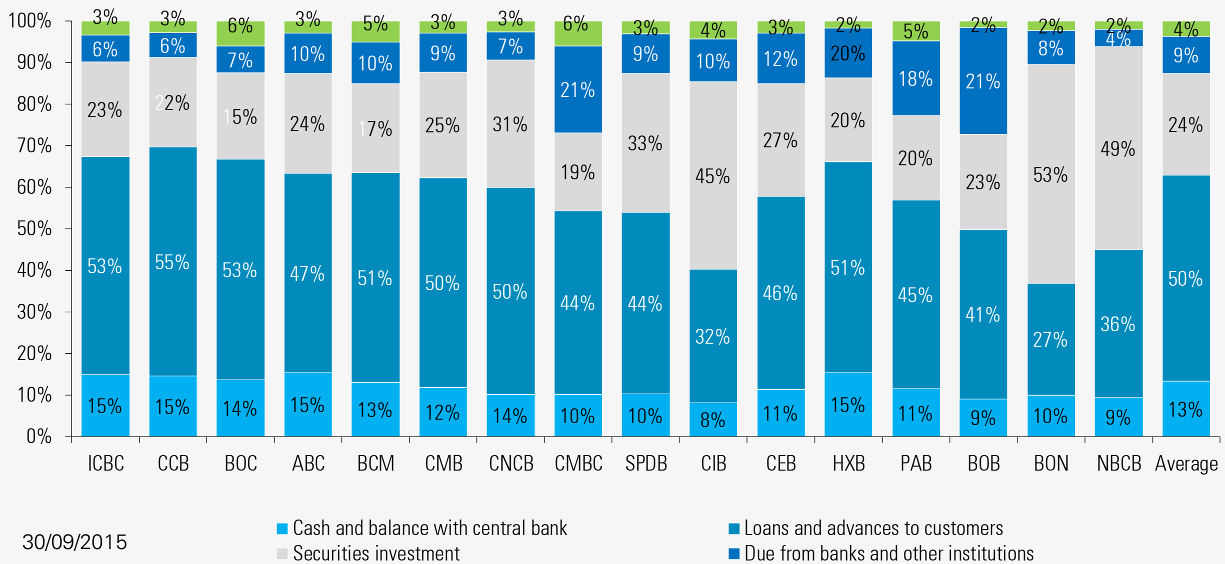
Given the expansion of operating scale, increases in credit assets and securities investments remained the key drivers for growth of total assets.

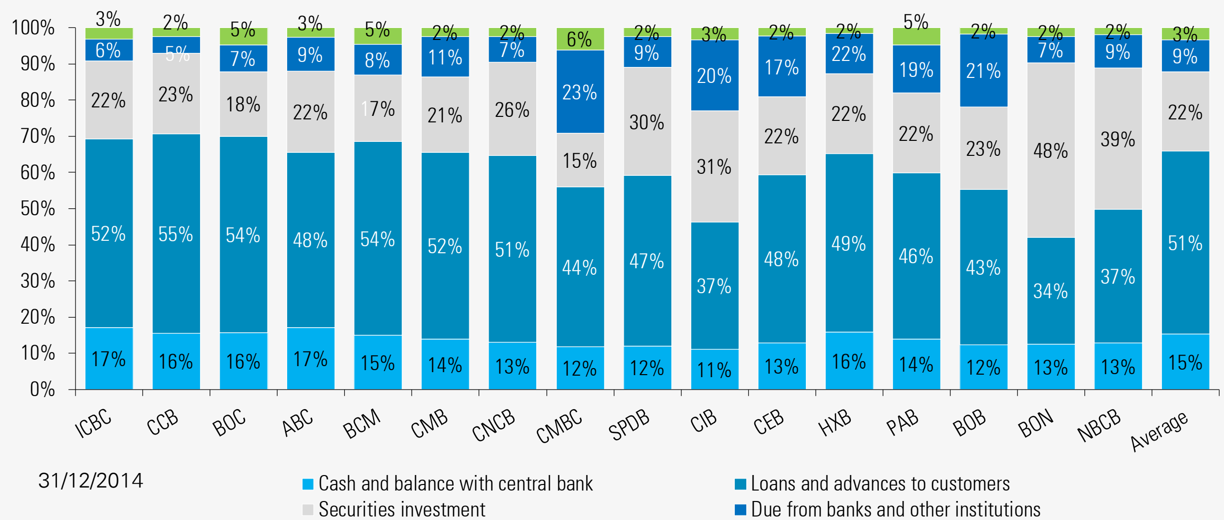
While total asset scale expanded in the third quarter of 2015, the asset structure of the listed banks changed compared with the end of last year: the ratio of securities investments increased by 2.54%; the ratio of other assets increased by 0.52%; the ratio of loans and advances to customers was down by 0.98%; the ratio of cash on hand and deposits with central bank fell by 1.98%.

Affected by the slowdown of the real economy and increased credit risk, the listed banks took the initiative in mitigating risks through measures such as raising the threshold, cutting lending and controlling credit scale for industries or areas with higher risk. At the same time, they tried to lower their risk exposures by adjusting capital lending direction and optimizing their asset structure.

Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

Conditions of assets — Asset structure





Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

Compared with the end of 2014, the average ratio of loans and advances to customers of the 16 banks fell by 0.98 percentage points to 49.59%.

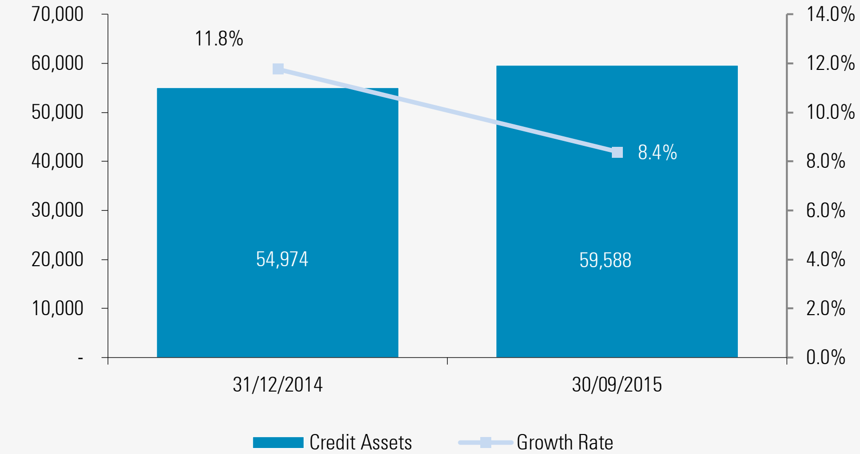
Meanwhile, compared with the end of 2014, the average ratio of securities investments of the 16 banks rose by 2.54 percentage points to 24.48%, with 13 of them experiencing an increase and 3 of them seeing a reduction in their securities investment ratio.

In the third quarter of 2015, the banking industry remained supportive of the development of the real economy and pushed forward the optimization of loan structure by regulating total loans and adjusting loan structure.

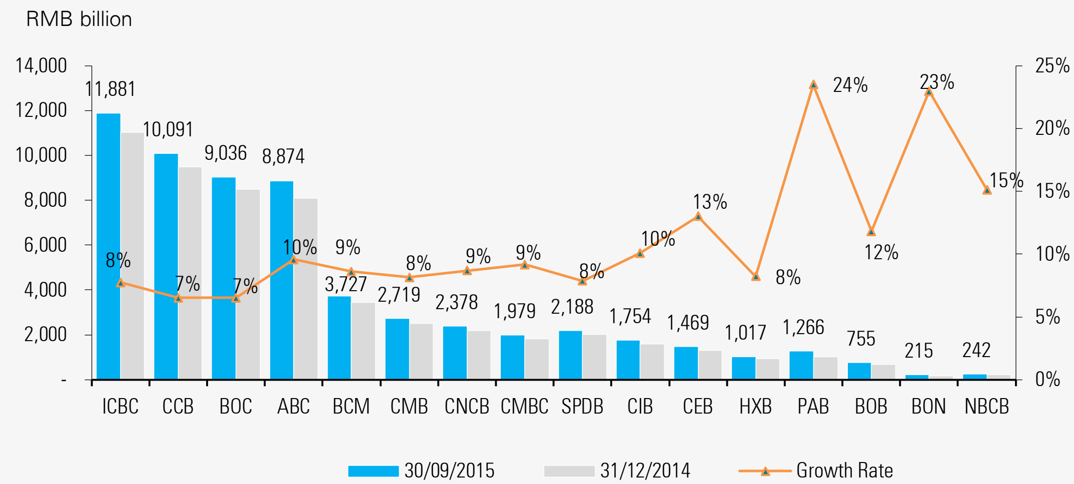
Moreover, due to the elevation of credit risk, all commercial banks adjusted their asset structure to a varying extent. The commercial banks oriented more of their capital to securities investments in order to gain higher investment performance and reinforce risk control.

Conditions of assets — Total loans

Credit Assets



Credit Assets



In the third quarter of 2015, the total scale of credit assets of the listed banks was RMB 59.59 trillion, increasing by 8.4%. The rate of year-on-year growth slightly slowed.

Since the beginning of 2015, against the backdrop of global economic slowdown, sluggish demand for loans and rising NPL ratio, the listed banks were increasingly prudent regarding total loan size, adjusted the structure of their assets and reinforced risk management.

In the third quarter of 2015, the growth rate of credit assets of the listed banks slowed down on the whole.

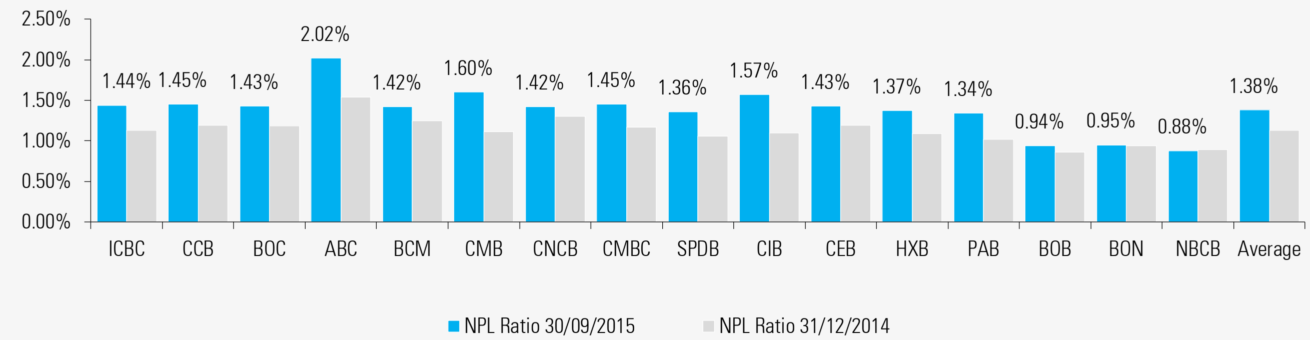
However, some of the banks with a smaller credit asset scale recorded a higher than average growth rate, including PAB and BON.

The new loans of PAB were directed to investments in infrastructural construction, low-carbon economy, off-shore financial business and strategic emerging industries. The new loans of BON were mainly granted to support the development of the real economy, small and micro businesses, San Nong (agriculture, farming and rural areas) and livelihoods projects, as well as the relending for small- and micro-sized enterprises.

Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

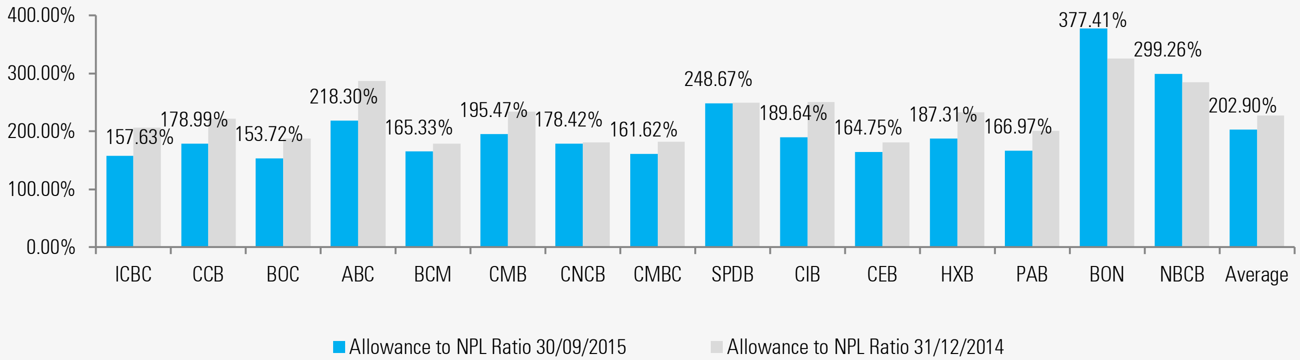
Conditions of assets —Loan quality

NPL Ratio



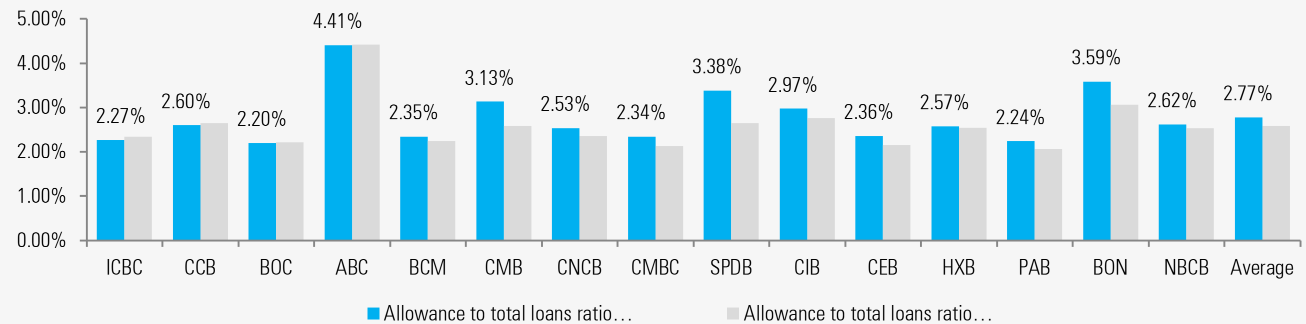
In the third quarter of 2015, the NPL ratios of most of the listed banks increased compared with those as at the end of 2014. The NPL ratio of 13 listed banks among them exceeded 1.3%. The average NPL ratio was 1.38% (2014: 1.13%), rising by 0.25 percentage points compared with the end of 2014. NBCB recorded the lowest NPL ratio, which remained flat at 0.88%, decreasing by 0.01% compared with the end of 2014. ABC recorded the highest NPL ratio of 2.02%, rising by 0.48 percentage points compared with the end of 2014.

Allowance to NPL Ratio



In the third quarter of 2015, although there are sufficient allowances for the listed banks, the increase of the NPL balance lowered the allowance to NPL ratios of the listed banks to a varying extent, with the exception of BON and NBCB. BON recorded the highest allowance to NPL ratio of 377.41%, while BOC recorded the lowest allowance to NPL ratio of 153.72%.

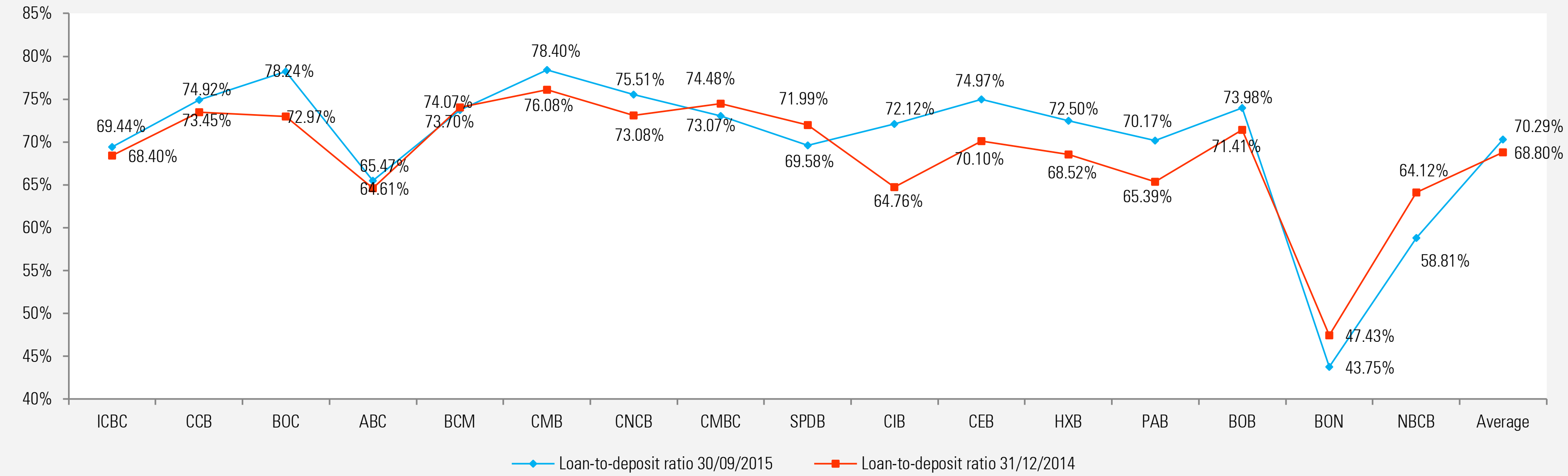
Allowance to Total Loans Ratio



The scale of the allowance to total loans ratio of the listed banks centred around 2.2% to 3.59%, except for ABC which remained at a higher level of 4.41%. The ratio for ABC remained at a high level because of high NPL ratio and high allowance to NPL ratio.

Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

Conditions of assets — Loan-to-deposit ratio



In the third quarter of 2015, the LDR for most of the listed banks increased compared with the end of 2014. Although the overall amount of loans increased in this period, the growth pace has slowed compared with the end of 2014. According to the financial statistical reports issued by the People's Bank of China, the growth rate of deposit rose by 0.5 percentage points, while the growth rate of loan rose by 1.7 percentage points compared with the end of 2014. The disparity between the growth rate of deposits and loans resulted in an increase in the loan-to-deposit ratio. CIB enjoyed the biggest growth in loan-to-deposit ratio, achieving an increase of up to 7.36 percentage points, mainly because CIB strengthened the credit scale to support the development of the real economy and the growth rate of deposit lower than that of credit. NBCB experienced the sharpest decrease of 5.31 percentage points, as it attracted more deposits than others, leading to significant higher growth rate of deposits over that of credit.

Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

Conditions of assets — Securities investment

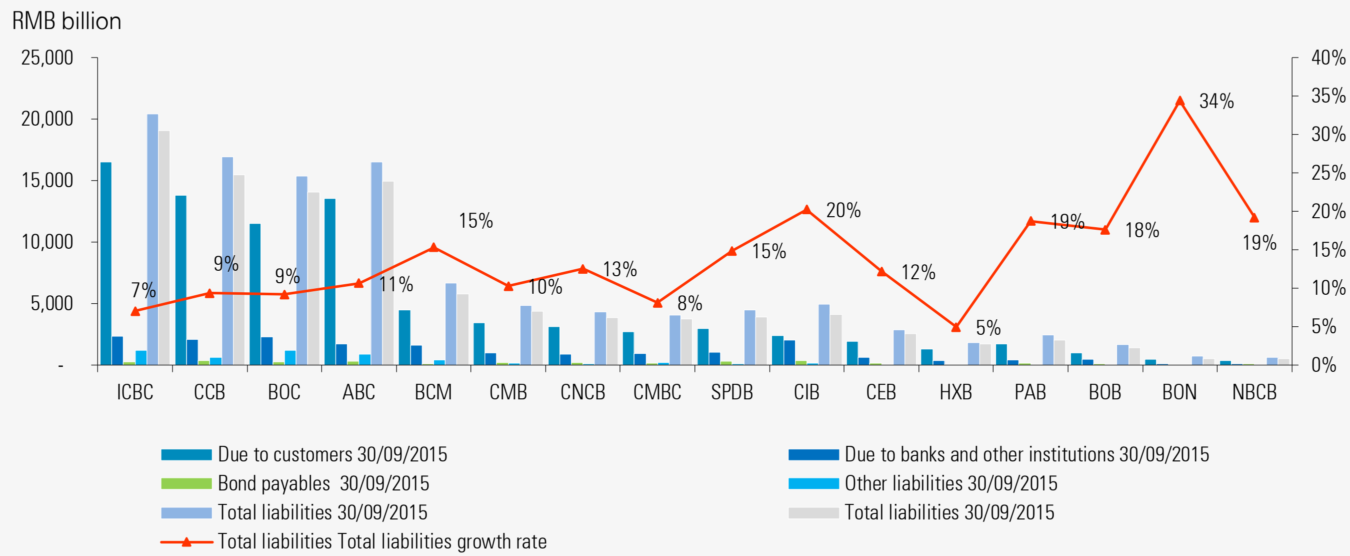
Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

During the third quarter of 2015, the listed banks increased the scale of their securities investment, as a proportion of overall asset structure by 20.36% on average compared with that as at the end of the previous year.

As for general securities investment structures, influenced by the tightening of interbank business, the listed banks moderately increased the ratio of investments classified as receivables as needed by asset-liability allocation and improvement in operating performance, to achieve a better investment portfolio and income than those of average bonds. Investment classified as receivables exceeded 50% of securities investment among CNCB, SPDB, CIB, CEB and BON.

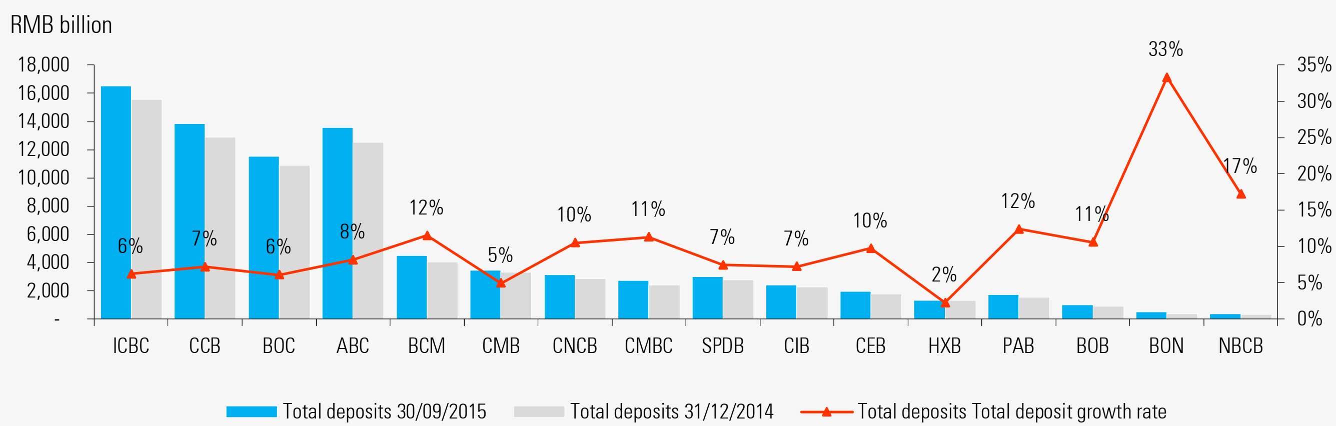
In the third quarter of 2015, the securities investment structure of the listed banks differed. The five major state-owned banks still held a high percentage of held-to-maturity investments, while other commercial banks increased the proportion of investment classified as receivables and available-for-sale financial assets to varying degrees.

Conditions of liabilities — Liability structure



In the third quarter of 2015, the total liabilities of the listed banks had an average increase of 14.07% compared to the end of 2014, showing the same trend as total assets.

Joint stock banks' liabilities grew significantly faster. BON recorded the highest increase of 34%, while CIB, PAB, BOB and NBCB had an average growth rate of 19%. The increase was mainly because of accepted deposits from customers and the increase in amounts due to banks and other financial institutions.

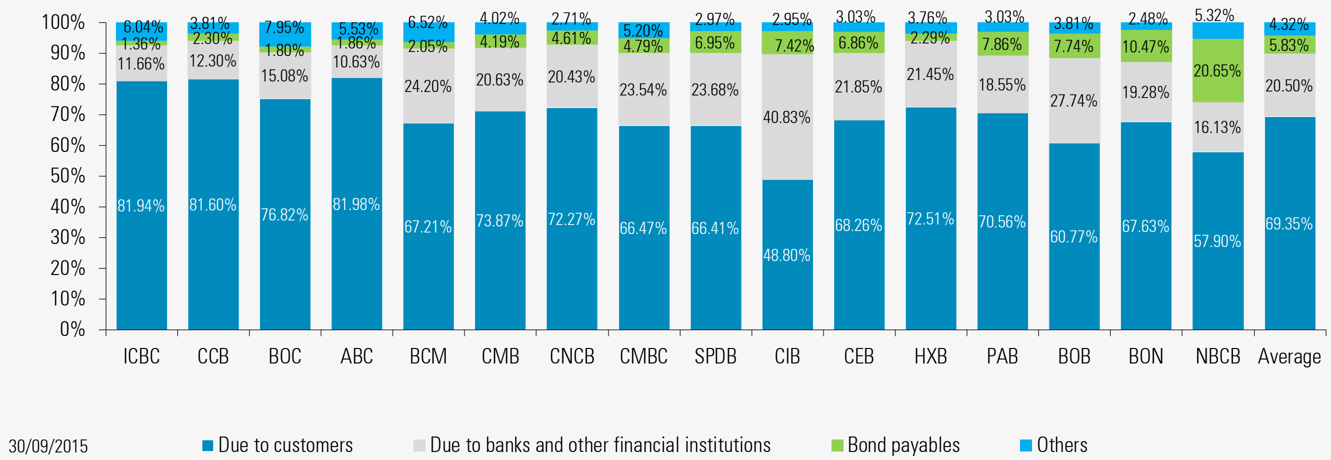


In the third quarter of 2015, the total amount of deposit reached RMB 81.59 trillion, increasing by 8% compared to the end of 2014, mainly because of capital flow during sluggish stock market. BON and NBCB recorded the highest increase in deposits, recording 33% and 17% respectively, which was largely because these two banks experienced fast expansion given ample room for development.

Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

Conditions of liabilities — Liability structure (continued)

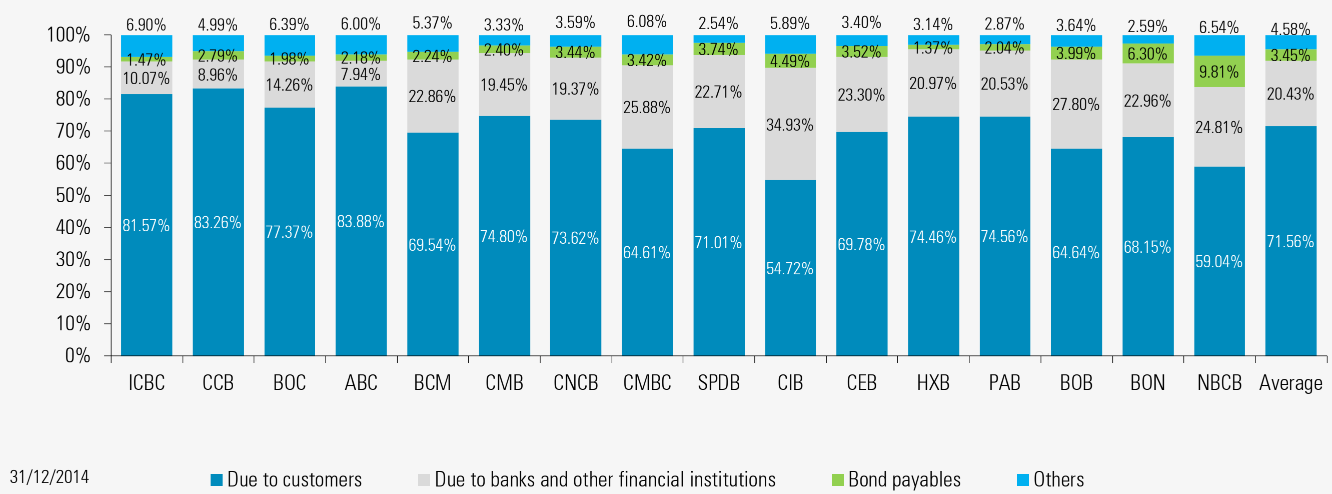
Liability structures



In the third quarter of 2015, customer deposits were the major component of the liabilities of the listed banks. The five major state-owned banks had higher growth rates, with ICBC, CCB and ABC each recording a rate of over 80%, reflecting their advantages in attracting deposits.

Joint stock commercial banks organized sources of funds based on the needs of resource allocation. Comparatively, they had a higher proportion of interbank liabilities than the big five state-owned banks, with CIB having a proportion of 40.83%.

Liability structures

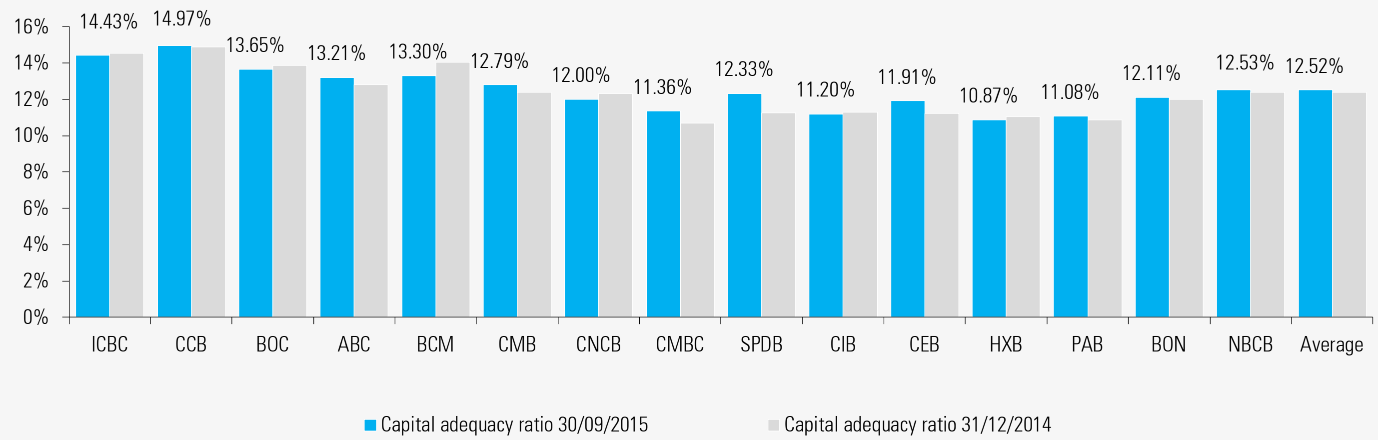


During the third quarter of 2015, the liability structure of the listed banks remained the same as the end of last year.

Hit by interest rate liberalization and vibrant internet finance, the growth of the listed banks' deposits slowed down, and there was intense rivalry for a stable funding source. In response to the complex macroeconomic environment, the listed banks will continue to improve the structure of their liability business, increase efforts in absorbing deposits and expand the channels for raising liabilities in order to develop the liability business.

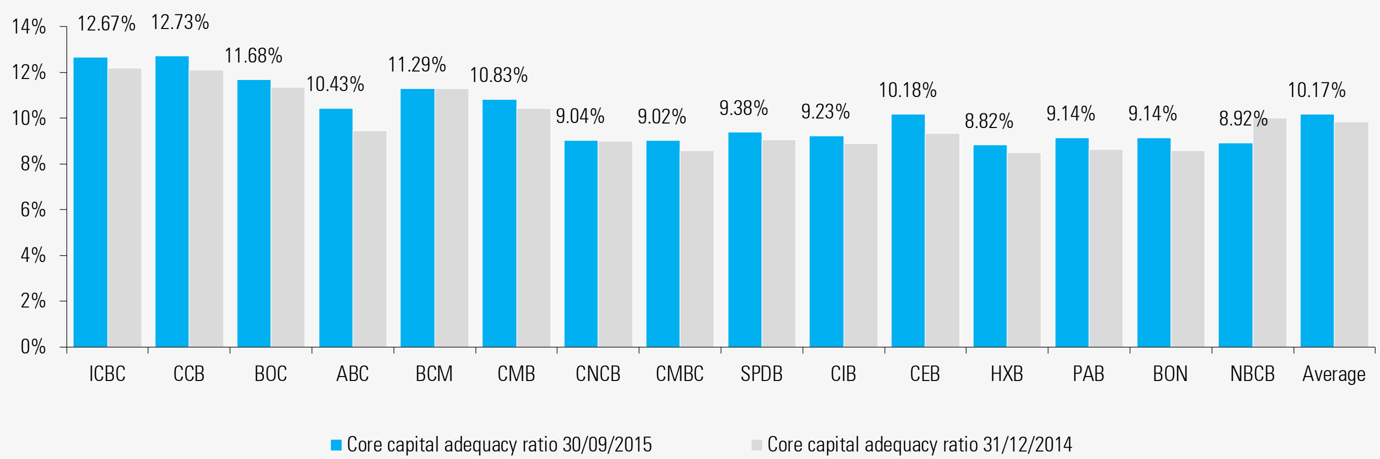
Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

Risk management — Capital adequacy ratio and Core capital adequacy ratio



As at 30 September 2015, the average capital adequacy ratio of the listed banks was 12.52%, increasing by 0.14 percentage points compared with the end of 2014. The banks adjusted the ratio based on their own circumstances to meet regulatory indicators, while taking the maximization of equity holders' interest into account and maintaining a reasonable capital leverage structure.

SPDB increased most, by 1.08 percentage points because the increase rate of average-risk-weighted assets was much lower than that of asset. And the increase of average-risk-weighted assets mainly came from the increase of credit risk-weighted assets.



As at 30 September 2015, the average core capital adequacy rate of the listed banks was 10.17%, an increase of 0.34 percentage points compared with the end of 2014.

NBCB achieved the sharpest decrease rate of 1.1 percentage points, mainly because the growth rate of average-risk-weighted assets was higher than that of tier 1 core capital.

Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

Profitability — Profitability analysis

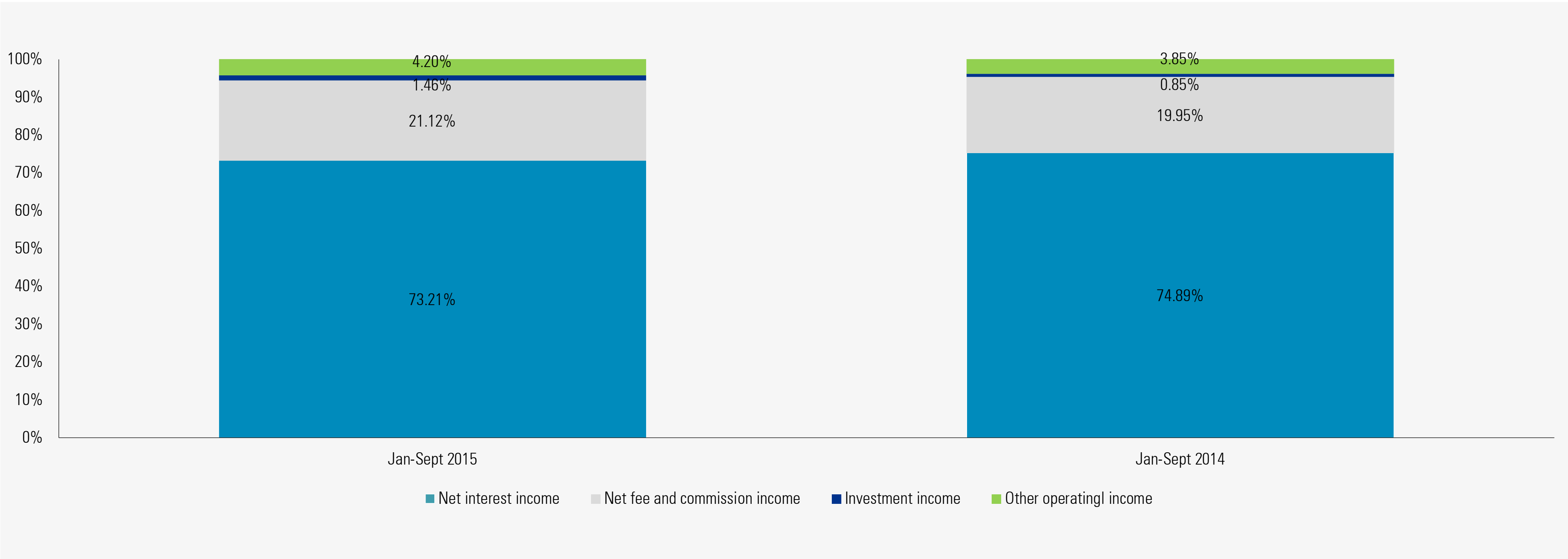
During the first three quarters of 2015, the net profits of the listed banks increased year-on-year, but the growth ratio declined, mainly thanks to accelerated growth of interest-bearing assets which lifted overall profits. Interest-bearing assets increased as the size of credit assets and the bond investment grew. The listed banks continued to strengthen their cost management, elevate asset utilization rate in order to increase profit margin.

In the meantime, affected by the macroeconomic slowdown and elevation of credit risk, both the NPL amount and NPL ratio trended higher, resulting in a higher pressure to increase provisions for impairment loss. On the other hand, the cut in interest rates since November 2014, especially the macroeconomic policy on symmetrical cut in interest rates, has made some impacts on profits of the listed banks.

In addition, the listed banks were exposed to a drop in profitability due to business expansion, increase in outlets and marketing channels, increased investments in financial innovation R&D and increased operating costs.

With the combination of these factors, though the listed banks maintained cumulative growth in net profit, their profitability decreased compared with 2014.

Profitability — Operating income and income structure analysis



The total operating income of the listed banks increased by 9.87% year-on-year during the first three quarters of 2015.

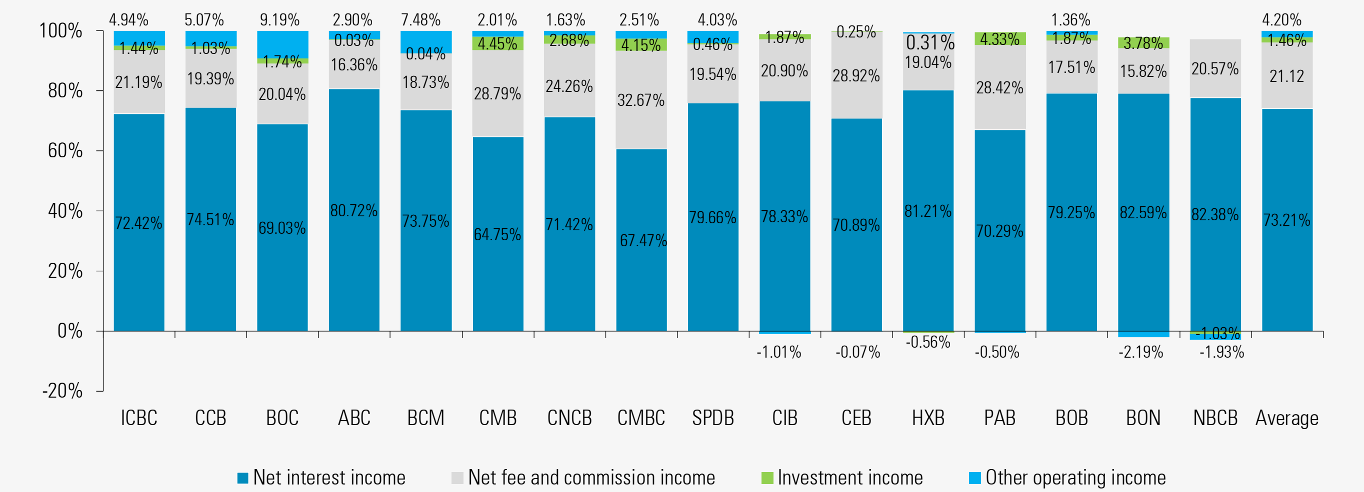
Components of operating income during the first three quarters of 2015:

- Net interest income accounted for 73.21% on average, decreasing by 1.68 percentage points year-on-year.
- Net fee and commission income accounted for 21.12% on average, increasing by 1.17 percentage points compared to the same period in the previous year.
- Investment income accounted for 1.46% on average, increasing by 0.61 percentage points compared to the same period in the previous year.
- Other operating income accounted for 4.2%, increasing by 0.35 percentage points compared to the same period in the previous year. Other operating income mainly consists of gains from changes in fair value, foreign exchange gains and other operating income.

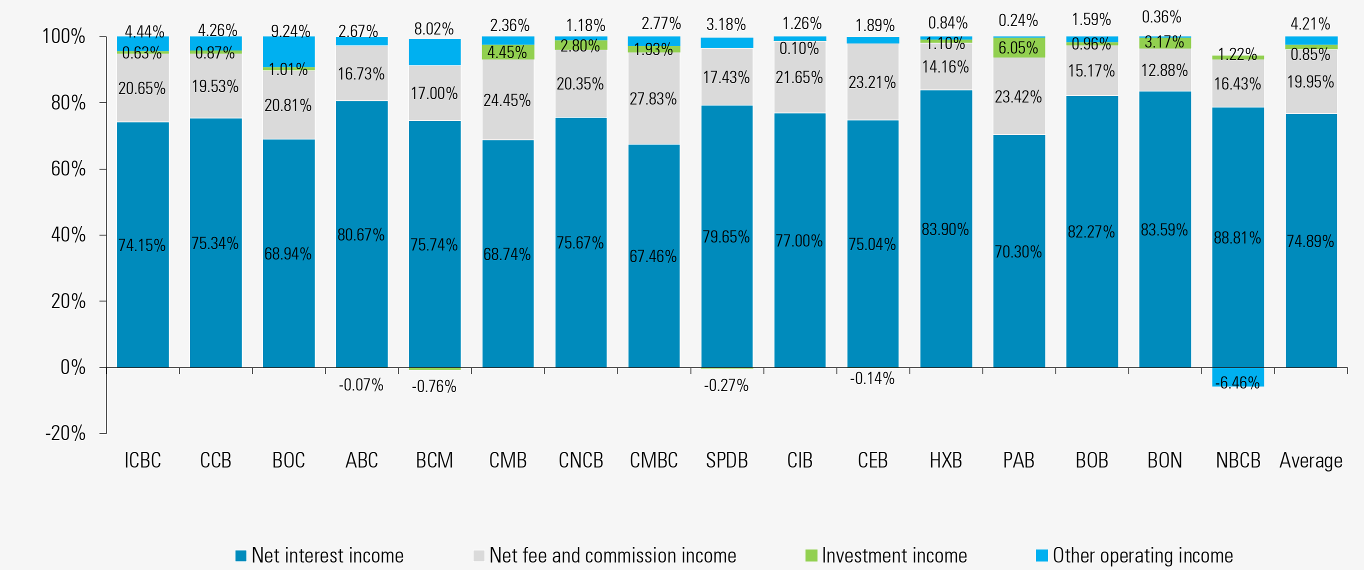
Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

Profitability — Operating income and income structure analysis (continued)

2015 operating income structure of first three quarters



2014 operating income structure of first three quarters



Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

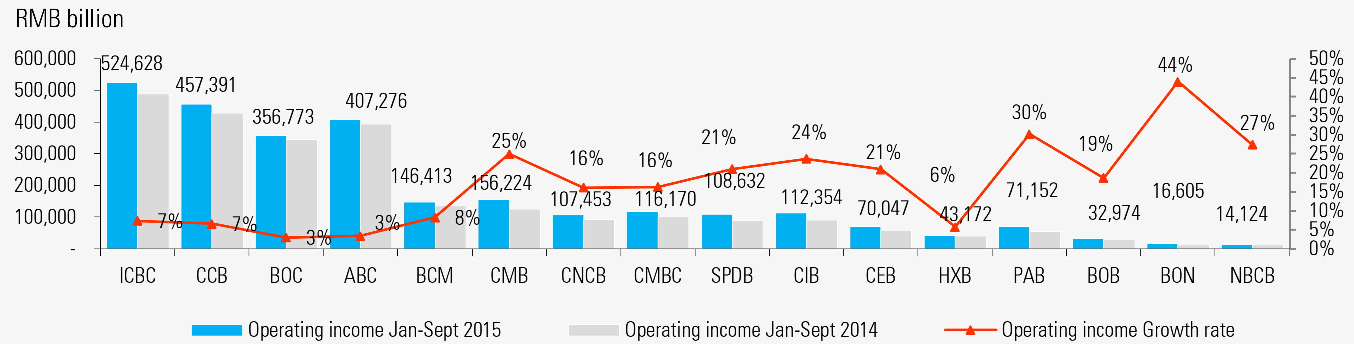
During the first three quarters of 2015, the net interest income of the listed banks accounted for 73.21% on average, while net fee and commission income and investment income accounted for 21.12% and 1.46% respectively. Net interest income was the main source of operating income for the banks.

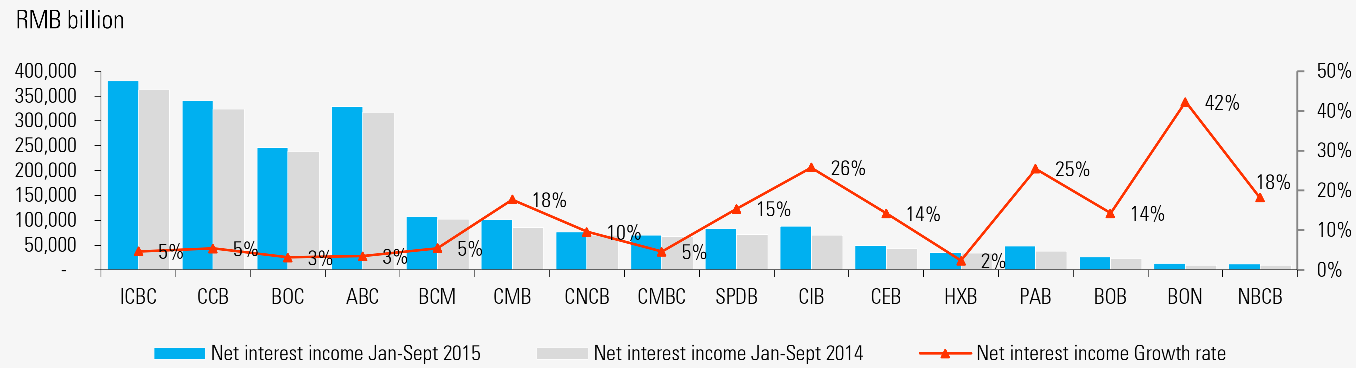
Compared to the first three quarters of 2014, the average ratio of net interest income of the listed banks had decreased, mainly due to the listed banks adjusting the income structure and reducing the reliance on interest income against the background of tightening net interest spread and net interest margin.

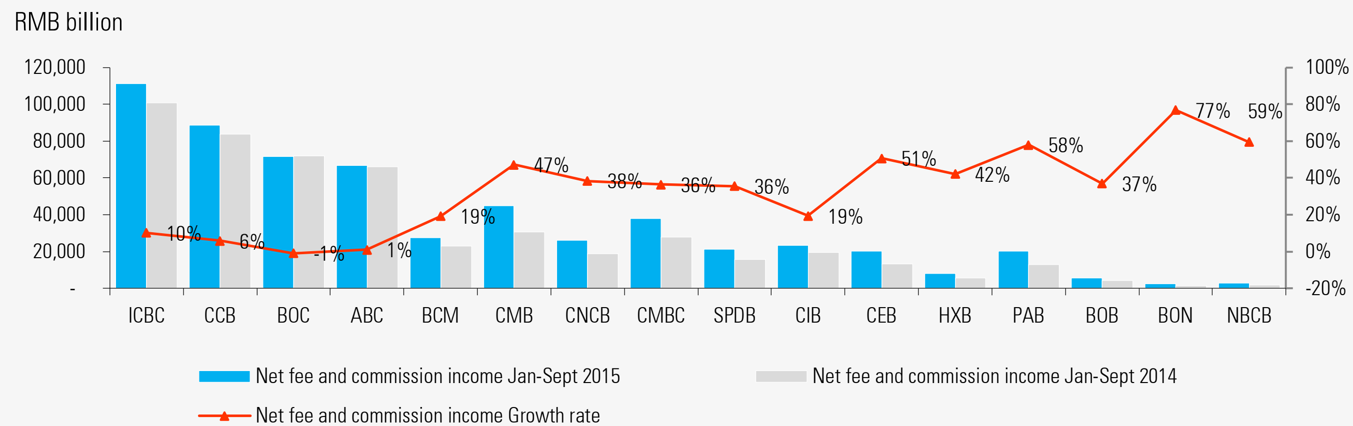
During the first three quarters of 2015, the average ratio of net fee and commission income for the listed banks increased by 1.17% compared to the same period in the previous year, mainly due to the increase in income sourced from consulting services, wealth management services, agency and commission services, bank card business and other intermediate business, which were driven by financial innovation.

During the first three quarters of 2015, the average ratio of investment income and other operating income for the listed banks increased by 0.61 percentage points and 0.10% respectively compared to the same period in the previous year. BOC and BCM had the highest proportion of other operating income among the listed banks, 9.19% and 7.48% respectively.

Profitability — Operating income and income structure analysis (continued)







Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

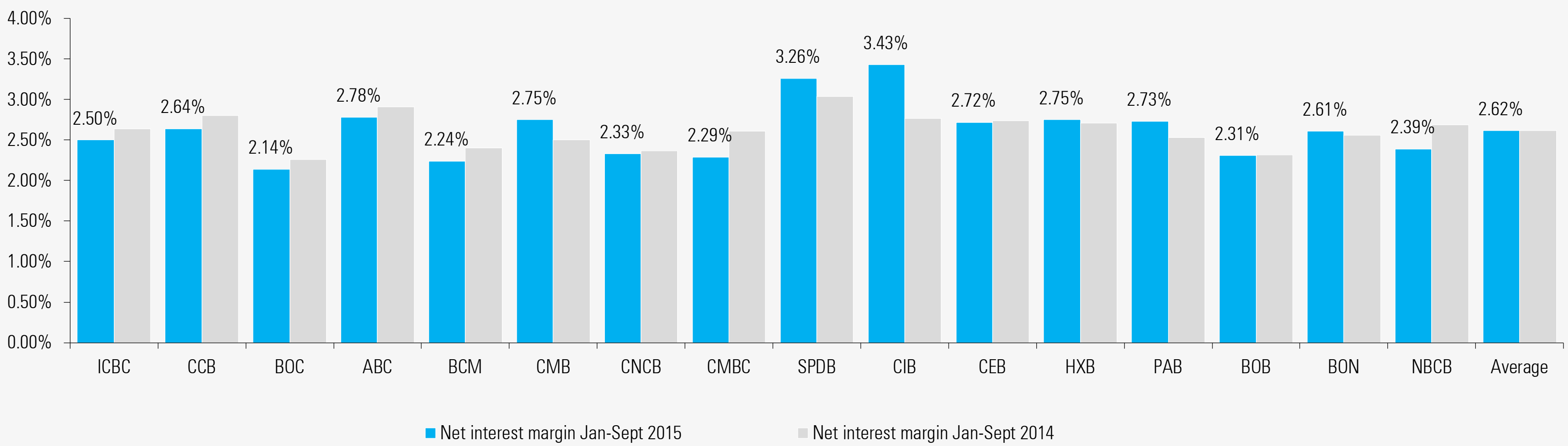
During the first three quarters of 2015, all the listed banks experienced an increase in operating income, caused by the increase in net interest income and net commission income. BON enjoyed the largest increase of 44% and PAB enjoyed an increase of 30%. In addition, the net commission income of joint stock banks grew significantly, faster than that of the major state-owned banks.

During the first three quarters of 2015, all the listed banks experienced an increase in net interest income compared to the same period in 2014. In the context of accelerating interest rate liberalization, the increase in net interest income was mainly derived from the continual growth of interest-bearing assets. The net interest income of BON and CIB increased by 42% and 26% respectively compared to the same period of 2014. The main reason behind the increase was the growth of interest-bearing assets.

During the first three quarters of 2015, except BOC, all the other listed banks experienced an increase in net commission income compared to the same period of the prior year. Though influenced by stricter fee monitoring policy, new-type financial shocks and intensive market competition, the banks proactively adjusted income structure and increased commission income by promoting financial innovation through exerting their comprehensive finance advantages and reducing the reliance on traditional business, driving the significant income increase in the investment banking business, bank cards and custody business and gold leasing business. The net commission income of BON increased by 77%, and that of NBCB and PAB increased by 59% and 58% respectively

Profitability — Net interest margin

Net interest margin



During the first three quarters of 2015, the average net interest margin was 2.62%, nearly the same as in the prior year. However, the net interest margin of the listed banks differed considerably with that of the large state-owned banks narrowing while that of most joint-stock banks and city commercial banks being on the rise. The considerable difference was mainly caused by the difference in business strategies, specifically, the performance of net interest margin of the large state-owned banks truly reflected the impacts of rate-cutting policy while for the joint-stock banks and city commercial banks, such adverse impacts were alleviated due to significant increase in non-standard assets during the first half of 2015.

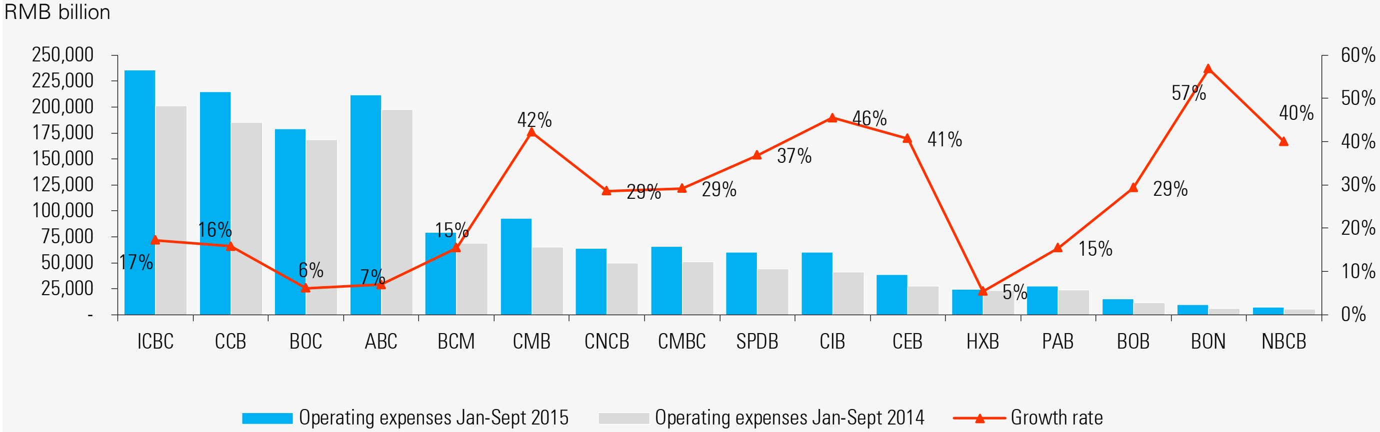
CIB and CMB recorded the largest increase of 0.66 and 0.25 percentage points respectively. The main reasons behind their increase are asset structure optimization, continuous growth of high-yielding loans like those for small entities and improvement in operating efficiency.

On the other hand, the net interest margin narrowed for the five major state-owned banks and certain joint-stock commercial banks, which was affected by loan re-pricing due to decreasing interest rate and by interest rate liberalization.

Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

Profitability — Cost control — Operating expense and cost-to-income ratio

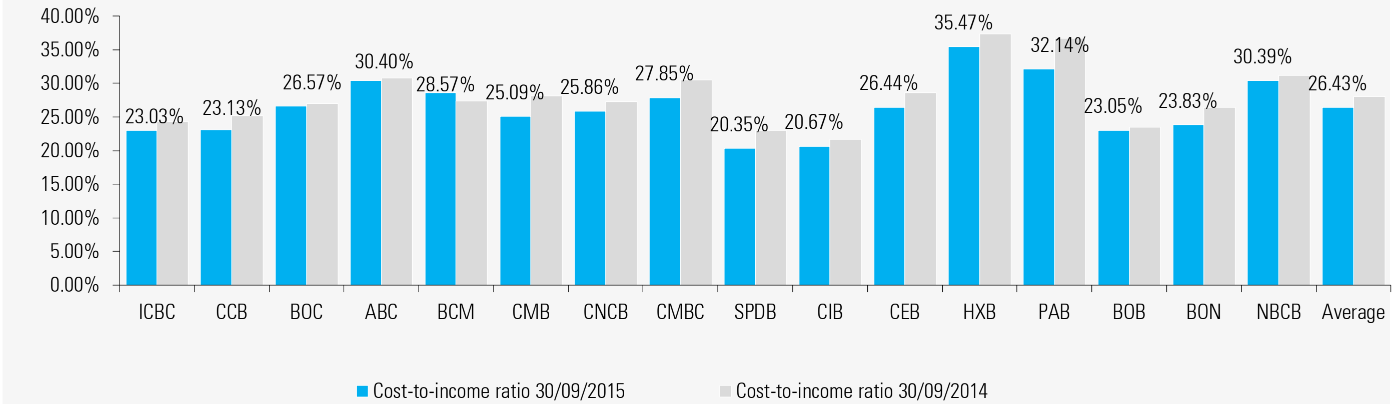
Operating expense



The operating costs of all the listed banks increased in the first three quarters of 2015. The increase in asset impairment and expansion of business scale drove the increase in their operating expense.

BON, CIB and CMB experienced the highest growth rates of 57%, 46% and 42% respectively. The main reason for the increase of the three banks was the increase in loan provision for loans and advances.

Cost-to-income ratio



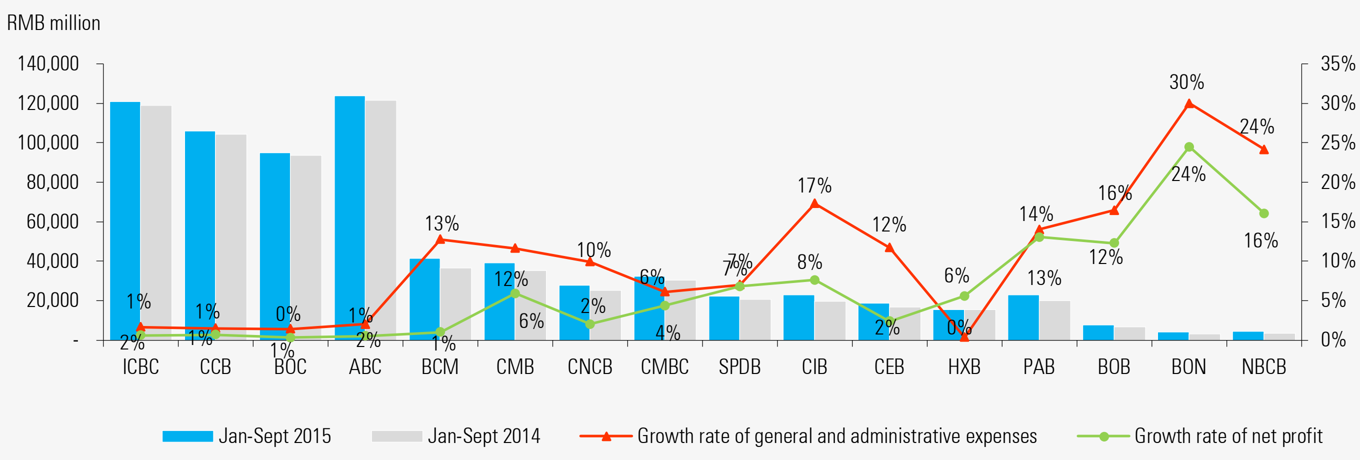
During the first three quarters of 2015, the average cost-to-income ratio of all the listed banks was 26.43%, a decrease of 1.58 percentage points compared to the same period in the prior year. PAB and CMB experienced sharp decreases of 4.56 and 3.01 percentage points, respectively, as a result of optimization in resource allocation and operating expenses management, which led to a slower increase in costs compared to that of income.

Nevertheless, considering increasingly rigorous external regulations, as well as the banks' need to remain competitive through continual innovation with respect to their products and services, whether the low cost-to-income ratio can be sustained will be a key challenge facing the listed banks' profitability.

Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

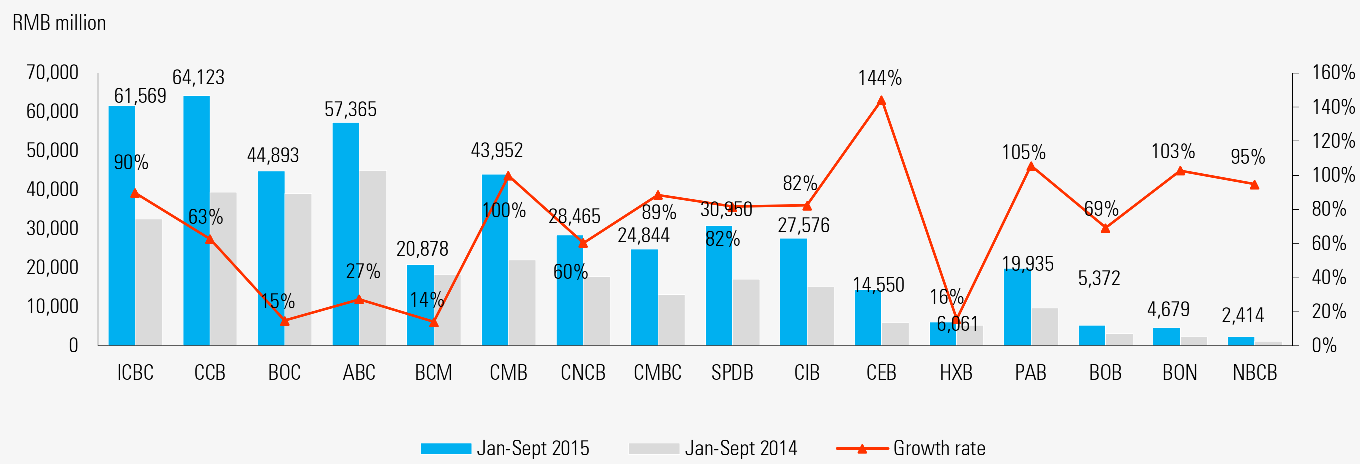
Profitability — Cost control — General and administrative expenses and impairment losses

General and administrative expenses



During the first three quarters of 2015, all the listed banks saw an average increase of 10.49% in administrative expenses. BON and NBCB experienced the highest growth rate of 30% and 24%, respectively. This was mainly due to expansion in business scale, establishment of new outlets, adjustments in business strategies and stricter control over rigid expenditure for business management.

Impairment losses



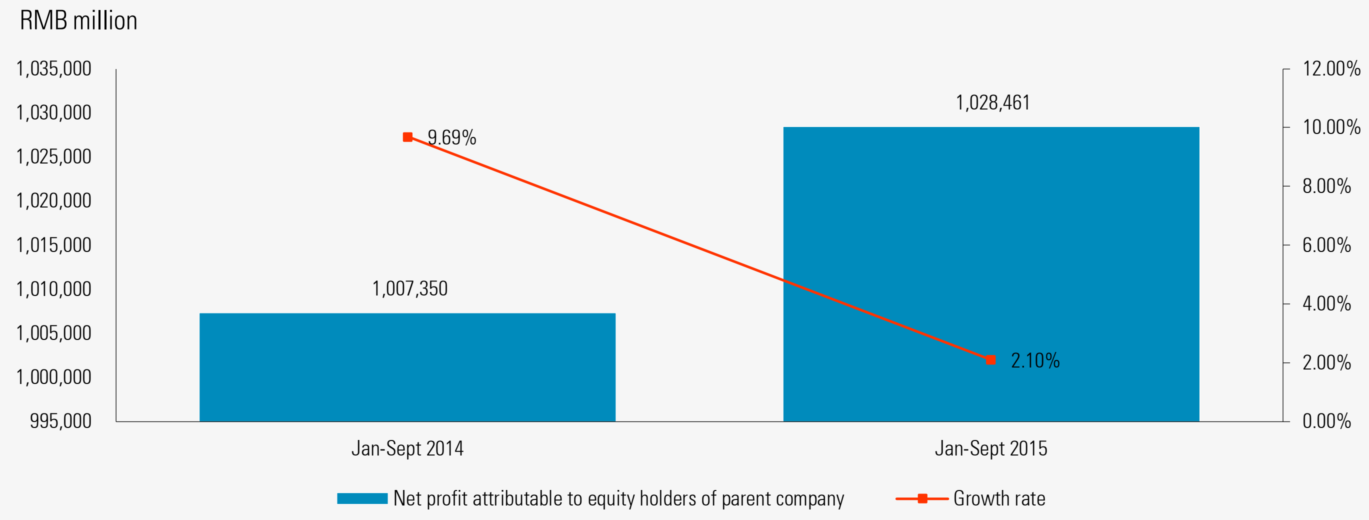
During the first three quarters of 2015, the banking industry increased loan loss provision for credit assets as a result of the build-up of downward economic pressure, decrease in asset quality, increased efforts in asset charge-off and disposal, and acceleration of provisioning for consumption.

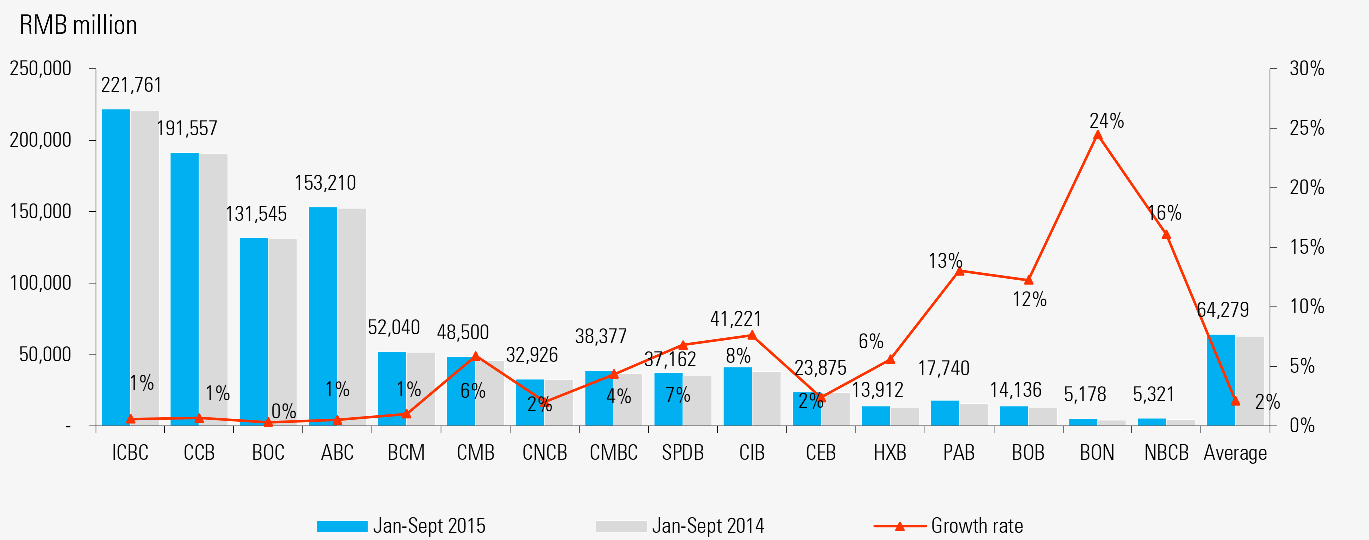
During the first three quarters of 2015, the impairment losses of all the listed banks increased by 59% on average, compared to 61% for the same period in the previous year, which reflected a stabilization of NPL exposure.

CEB and PAB experienced an increase in impairment losses of 144% and 105% respectively, as a result of the deterioration of asset quality.

Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

Profitability — Net profit attributable to equity holders of parent company





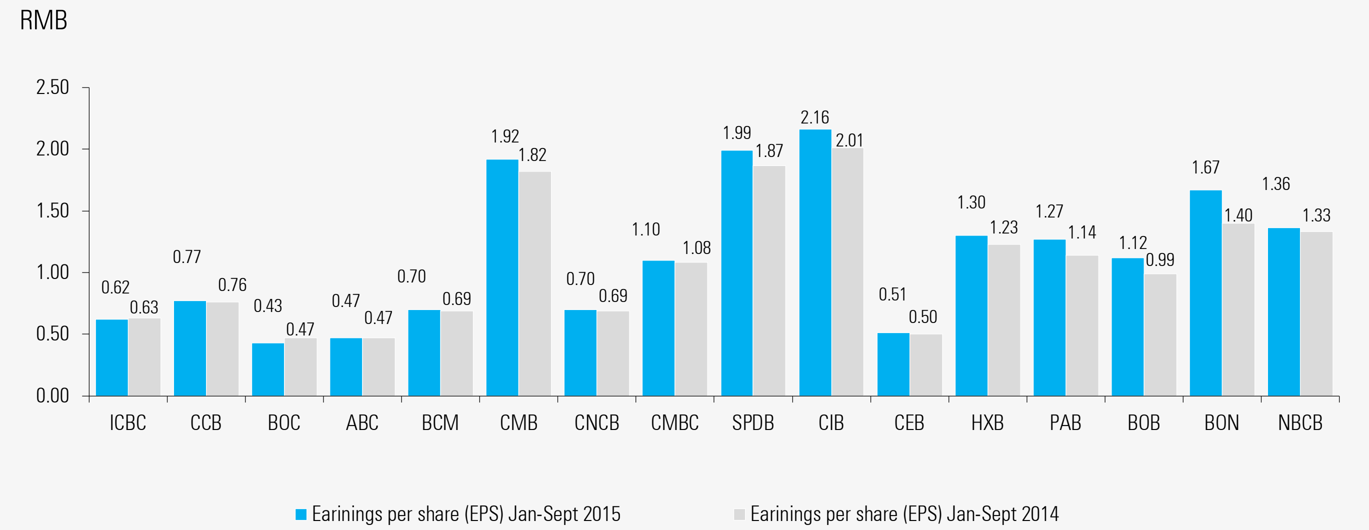
Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

Overall, the net profit attributable to equity holders of parent company experienced an increase during the first three quarters of 2015 while the growth rate was obviously slower than that of the same period in 2014, falling from 9.69% to 2.1%.

BON enjoyed the fastest growth rate of 24%, namely RMB 1,018 million, and NBCB enjoyed a growth rate of 16%, namely RMB 736 million.

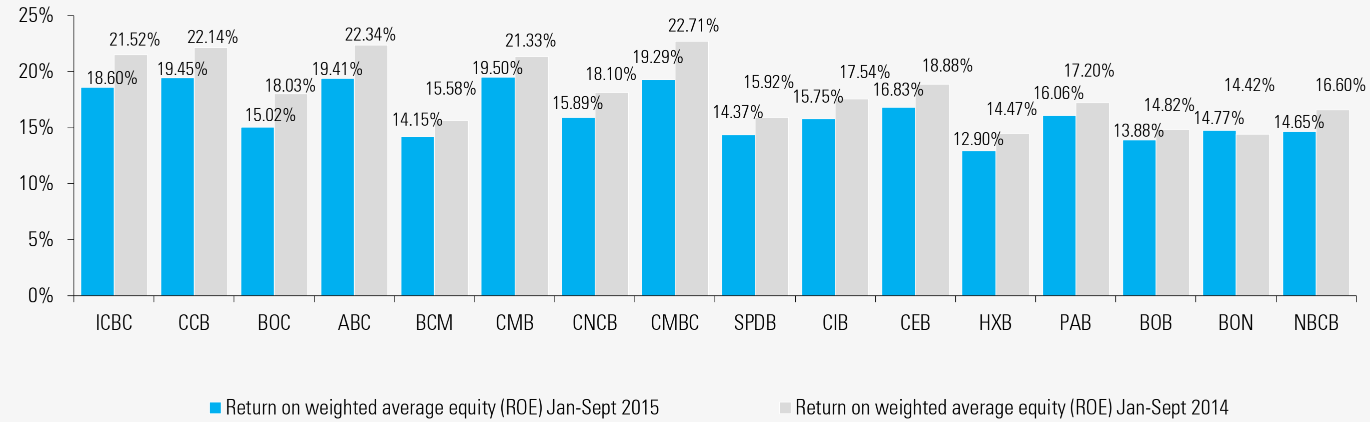
This was mainly due to the fast growth in net interest income and net fee and commission income.

Profitability — Financial performance indicators



In the first three quarters of 2015, the listed banks experienced rising earning per share (EPS), which was caused by higher income from banking business expansion.

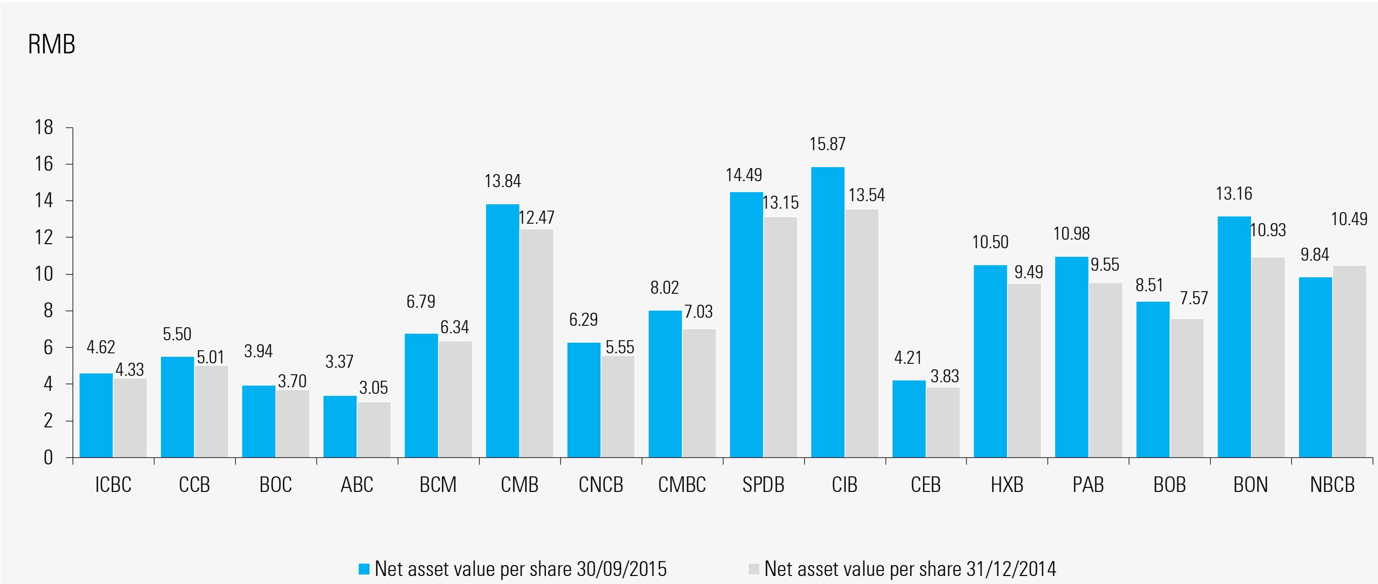
Among the 16 listed banks, BON had the highest EPS, increasing by RMB 0.27 compared to the same period in 2014, while the EPS of ICBC and BOC decreased by RMB 0.01 and RMB 0.04 respectively compared to the same period in 2014.



In the first three quarters of 2015, the return on the weighted average equity (ROE) of the listed banks decreased by 1.94% compared to the same period in 2014, mainly due to the flattening of the increase in net profit, while net assets increased continuously in line with the expansion of banking business. BOC and CMBC experienced the highest ROE decrease by 3.01 and 3.42 percentage points respectively.

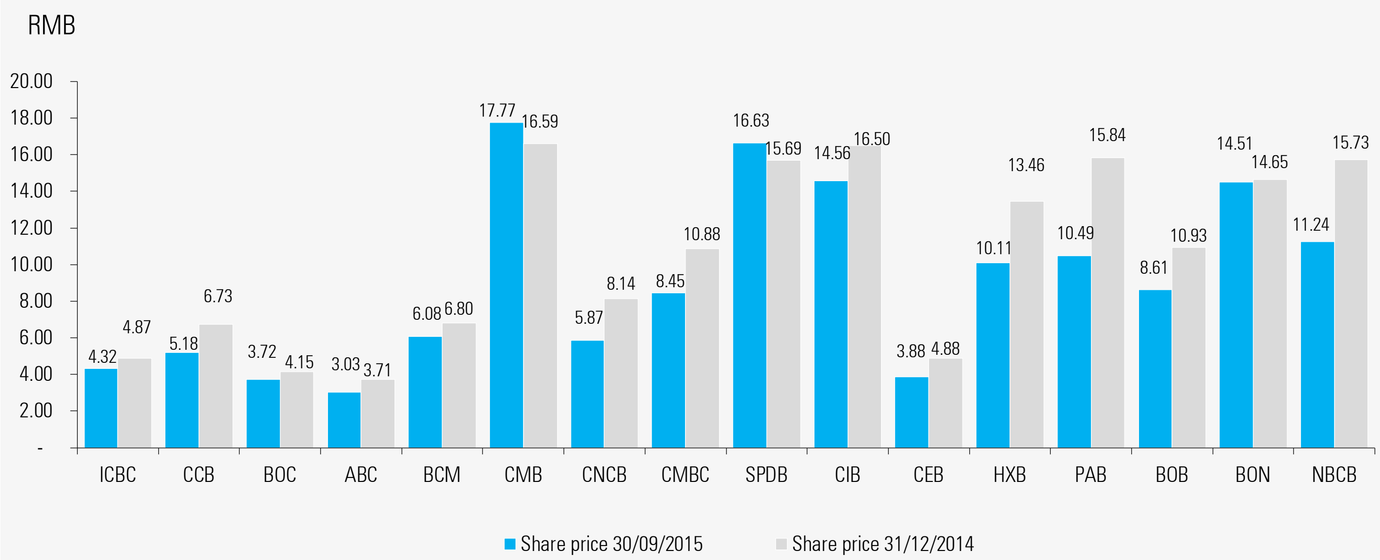
Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

Profitability — Financial performance indicators (continued)



Generally speaking, the net asset value per share of all the listed banks continued the upward trend in the third quarter of 2015, except NBCB whose slightly decreased from RMB 10.49 per share by the end of 2014 to RMB 9.84 as at September 30, 2015.

By the end of the third quarter, CIB and SPDB enjoyed the highest net asset value per share of RMB 15.87 and RMB 14.49, namely an increase of 17.21% and 10.22% respectively compared to the same period in 2014.



Sources: The banks' 2014 annual reports and 2015 Q3 reports; KPMG China research

Due to the pressure of economic downturn, cross-border competition of internet finance, and the interest rate liberalization, and influenced by considerable adjustment of the stock market in the third quarter of 2015, the share price level of all listed banks went down.

At the end of the third quarter of 2015, the stock price of most of the listed banks decreased to a varying extent. PAB experienced the sharpest decrease to RMB 10.49, 5.35% lower than that of the end of prior year; NBCB's share price dropped to RMB 11.24, 4.49% lower than that of the end of prior year; HXB's share price decreased by 3.35% compared to the end of 2014.

China's Banking Sector: Hot Topics

03

Hot topic

China's banking sector: Hot topics

Hot topic one: Private bank

At the end of June 2015, CBRC's issuance of *Guiding Opinions on Facilitating the Development of Private Banks* signified the launch of private bank application procedures and that private banks were stepping into a normalized development stage. With the first five pilot private banks that opened at the first half of 2015, more than 50 companies or consortia have submitted establishment applications to CBRC. The second batch of private banks to be launched is under intensive preparation. In order to expedite the approval process of the establishment applications, CBRC will offer an approval timeframe promise to the applicants and set up approval management ledger whereby approval or disapproval confirmation can be sent out within four months from the date of acceptance, two months shorter than the six-month approval timeframe now in effect.

Major events in the development of private banks:

2013

In June 2013, the initiative to establish private banks, financial leasing companies and consumer finance companies that were privately-owned and operated at their own risks was proposed in the executive meeting of the State Council for designing policies and measures on how the finance sector can support economic restructuring and upgrade.

In July 2013, the General Office of the State Council issued *Guiding Opinions on How the Finance Sector Supports Economic Restructuring and Upgrade*, proposing to allow private funding to establish financial institutes such as private banks that operated at their own risk.

In September 2013, CBRC issued the *Discussion Paper for Supervision and Management of Pilot Private Banks*.

In November 2013, CBRC issued *Implementing Measures for Administrative Licensing Items for Chinese-funded Commercial Banks*, signifying the completion of basic framework for the establishment of private banks.

2014

In March 2014, CBRC released a list of the first five pilot private banks, indicating a breakthrough for China's private banking reform.

In September 2014, all of the first five pilot private banks were approved to be established.

In December 2014, CBRC approved the opening of WeBank in Qianhai, Shenzhen. The bank was officially opened at the end of December.

2015

In January 2015, CBRC initiated its first structural adjustment in 12 years, thereby setting up a city bank supervision department to supervise city banks and an inclusive finance department to supervise internet finance.

In January 2015, PBOC issued *Guiding Opinions on Banking Financial Institutions' Remote Opening of RMB Accounts (Exposure Draft)* to permit individuals to remotely open accounts (settlement accounts).

In May 2015, the General Office of the State Council issued *Deposit Insurance System*, thereby laying foundations for interest rate liberalization reform, private banks experimentation, and banks competition.

In June 2015, CBRC issued *Guiding Opinions on Facilitating the Development of Private Banks*, specifying four entry criteria for private banks, including free capital investment, shareholder criterion, Initiating and establishing of private banks. Further encouraging folk capital into Banking, and providing more convenient financial services for real economy specially small and medium-sized enterprises, "three agricultural" and etc.

In June 2015, the first five pilot private banks were all approved to be established.

In July 2015, Ten ministries and commissions jointly issued *Guiding Opinions on Facilitating a Healthy Development of Internet Finance*, representing the internet finance sector entered into a standardized development stage.

Hot topic one: Private bank (continued)

Superiority

· **Ownership**
Established by private funding, private banks are market entities that unify obligations, responsibilities and interests, representing a more clarified and effective modern ownership structure;
·**Flexible operating mechanism**
Private banks are of smaller scale and thus require lower management cost and have quicker decision-making capability, more capable of satisfying the financing needs of small and micro enterprises.
·**Cost effective credit data collection**
When positioned as local banks to serve small and micro enterprises and the shareholders of the banks are major local enterprises, the private banks will have geographical advantage and information collecting advantage in reducing moral hazard and adverse selection risk arising from information asymmetry during lending; when positioned as internet banks, the private banks can leverage the internet platform to process and integrate credit data collected through the internet and build a more effective credit rating database in a cost effective manner.

Weakness

Market share, scale and creditability
Private banks are often weaker in terms of capital and assets scale and thus put at a disadvantage when competing with traditional commercial banks. As state-owned banks are secured by national credit whereas private banks are fully operated on a market-oriented principle, private banks have smaller impact on the market and less attraction to the clients, especially when related risk control measures such as the deposit insurance system is still under development.
·**Management team**
As private banks are often founded by industrial companies or internet companies, their shareholders lack experience in banking operation and will need to engage professional managers and management teams to run the banks. The difference in operating methodology between management team and shareholder (if any) will have adverse impact on the development of private banks.
·**Market limit**
As the information collecting channel and market of localized private banks are limited to local region, the banks do not have any advantage for clients outside the geographical location of the shareholders; as for the internet banks, the credit data collection is limited to active internet platform users, thus information asymmetry still poses problems for internet banks when dealing with clients other than active internet platform users. As a result, the market limitation of private banks will pose great challenges to its large scale expansion.

Opportunity

Compared with the hierarchical structure, rare promoting opportunity and salary decreasing trend in the traditional banking sector, the platform and high salary provided by internet banks and private banks will be highly attracted to professional practitioners in the traditional banking sector.
Private banks are copying the core management structure of traditional banks to build their own core management system while leveraging the government, enterprise and market resources accumulated by these professionals over the years to quickly expand the market share.

Threat

Under the trend of increasing risk tolerance and decreasing profit rate, private banks sought to avoid direct competition with traditional commercial banks by positioning themselves as providers of small and micro financial services. Though the threshold of small and micro financial business for traditional commercial banks is relatively high, the traditional commercial banks still endeavour to find new business and profit drivers by extending their operations to the lower level and actively expanding in the small and micro financial business as well as consumer market, which will give rise to a business overlap and cause direct competition with private banks.

Hot topic one: Private bank (continued)

Exploring the development direction of private banks

The newly established private banks should have differentiated positioning with traditional banks to enable complementary and diversified development. The development directions for private banks include internet finance, small and micro finance and supply chain finance.

Direction 1: Internet finance

Internet finance is a new operating model integrating internet and finance. Different from traditional banks, private banks can adopt internet banking operation under this new model without setting up service outlets and issuing bank cards whereby clients can access to bank products and services through remote channels such as computer, cell phone or telephone. Moreover, private banks can offer a more competitive deposit and loan rate and lower handling charges because of the low cost of internet platform.

➢ Operating logic of internet banking

Create application scenarios	Import data	Big data	Credit checking	Credit granting
Create application scenarios according to clients' needs to enable interaction on the internet platform	Accumulate client volume and data stream as the basis to build database	Track client behaviours in application scenarios to accumulate massive transaction and credit data	Apply internet data analysis model and cloud computing based on the database to transform behavioural data into credit information	Implement large quantity and quick credit granting based on credit information to achieve economies of scale in loan issuing, lower operating cost and cover the long-tailed market which traditional banks have difficulties to enter

Credit data sources

Credit agencies
Report information provided by clients during conducting credit businesses such as application of loan, credit card and guarantee to personal standard credit information database

Governmental departments
credit information unrelated to banking system, including ID card, cell phone service, social security, housing fund and civil adjudication

Internet companies such as payment systems and e-commerce companies
traits of internet behaviours such as transaction, payment and search of individuals or businesses

Daily life
person cell phone bill, cab calling software, utilities payment and property management charge, etc.

The core competitiveness of internet banking lies in **credit checking**。 Different from the credit data used for traditional credit checking that mainly originate from lending and borrowing operation, credit data originating from internet have more extensive data sources, richer varieties and are more timely, covering aspects such as credit card repayment, online shopping, fund transfer, wealth management, utilities payment, rental information and social relationships. Data generated from internet are real-time, traceable and easy to track, more comprehensive and accurate compared to traditional offline data collection and integration whereas the data volume is massive and trivial, posing higher demand for data storage, data mining and data analytics.

Big data and cloud computing exactly solve the above problems. Big data is able to utilize the massive fragmented data generated from social media, e-commerce platform and online lending platform and cloud computing can enhance efficiency through a secured central network and storage capability. The improved data mining technology and computing capability lay solid foundation for the fast development of internet credit checking.

Hot topic one: Private bank (continued)

➢ Internet banking case analysis – one of the first five pilot private banks: WeBank

- ❑ **Opening date:** 12 December 2014; **Place of incorporation:** Shenzhen; **Registered capital:** RMB 3 billion;
- ❑ **Shareholding structure:** Tencent 30%; Baiyeyuan(百业源) 20%; Liye Group 20%; and 7 other shareholders;
- ❑ **Business scope of founders:**
  - ✓ Tencent Holdings: IM software, online games, web portal and related value added products;
  - ✓ Baiyeyuan Investment (百业源投资): venture capital;
  - ✓ Liye Investment: Financial investment and industrial investment, including finance, electric power equipment manufacturing, energy and real estate.
- ❑ **Business model:**
  - ✓ Internet banking model: operate without counters and service outlets and cash business is not provided;
  - ✓ Small and micro finance: targeted clients are small and micro enterprises and individual consumers;
  - ✓ Asset-light: intermediary service incomes such as handling charge as main source of income;
  - ✓ Platform: operate as an intermediary platform connecting traditional financial institutions with small and micro enterprises and individual consumers through inter-bank cooperation so as to help traditional banks to find new clients and share with them the financial service profit.
- ❑ **Features:**
  - ✓ With mobile device as its main service channel, the bank provides services through cell phone APPs;
  - ✓ Supported by Tencent's technology, data and client resources and based on the concept of inclusive finance.
- ❑ **Current products and services:**
  - ✓ Weilidai(微粒贷): property guarantee is not required. Loan is issued based on face recognition technology and big data credit rating;
  - ✓ WeBank APP: wealth management; inter-bank transfer; inter-personal account transfer.

Advantages

- ✓ **Diversified operation;**
  Target small and micro enterprises and individual consumers, leverage internet technology, assess client credit based on social media data, and achieve high efficiency and low cost.
- ✓ **Strong expertise enabled by combining banking professionals and technical personnel;**
  Most of the management are from Pingan Group with rich experience in banking management and operation; and most of the product development and sales staff are from Tencent with strong internet expertise.
- ✓ **Resources and platform of Tencent**
  Tencent Credit Services is one of the eight companies that are granted with personal credit checking license. WeBank can build a personal credit database with Tencent Credit Services' data analytics and data mining function.

Challenges

- ✓ **Fierce competition**
  Some of the bank's businesses overlap with other pilot private banks;
- ✓ **Limited client base and relatively higher credit risk;**
  With small and micro enterprises and individual consumers as its main clients, the default risk is relatively higher;
- ✓ **Inadequate product innovation and few service varieties;**
- ✓ **Difficulties and risks may arise when transforming social big data to financial big data.**

Hot topic one: Private bank (continued)

Exploring the development direction of private banks (continued)

Direction 2: Small and micro finance

As small and micro enterprises often lack adequate risk resistance, transparent financial information and collaterals, traditional commercial banks may encounter problems such as high operating cost, low profit rate and uncontrollable risk when engaging in small and micro financial services. Financing difficulty and high financing cost have been two major problems for small and micro enterprises for a long time. Thus, developing small and micro finance to enable diversified operation will be a main direction for the future development of private banks.

➢ **Successful case: Zhejiang Tailong Commercial Bank**

Zhejiang Tailong Commercial Bank specializes in providing financial services to small and micro enterprises. Incorporated in 1993, the bank currently has a staff of over 6500 people and over 180 branches, with operations covering Jiangsu, Zhengjiang, Shanghai and Hubei (three provinces and one city). Tailong Bank has focused on serving small and micro enterprises since incorporation and issued over 1 million loans amounting to over RMB 500 billion to small and micro enterprises as at the end of 2014. The unique and adaptive business model secured win for the bank in the blue ocean of small and micro finance market and enabled the bank's sustainable development and realization of social responsibilities.

Marketing strategy

Precision positioning: Focus on small and micro enterprises that are unable to apply for loans for lack of collaterals; based on the principle of being close to clients, avoiding direct competition with traditional banks and prioritizing suburb, establish service outlets at the urban-rural intersection areas where few traditional commercial bank outlets are available and small and micro financing need is strong so as to satisfy the financing needs and serve small and micro enterprises; taking into account the lack of collaterals and loans being short term, frequent and urgent, provide secured loans such as "multiple persons guarantee", "supplementary guarantee" and "credit guarantee".

Community-based marketing to leverage cluster effect: Based on the principle of taking small clients by group and offering retail service by bulk, prioritize in small and micro clients concentrated areas with the same type of clients and market as well as farmer concentrated villages with service outlets as bases divided by grid to engage marketing activities to lower cost and improve marketing efficiency; in terms of risk control, doing so can effectively enhance information transparency and symmetry and lower credit risk in order to achieve market cultivation and precision management.

Focusing on channel building and clients: Most client managers charge to the market frontline to get the first hand information. Over 70% of their work day is spent on visiting clients and maintaining client relationship. Such marketing method not only helps to expand the radius of financial service, understand client needs, improve client information management system to facilitate faster loan issuing, but also deepens the understanding of market needs and enable timely adjustment of marketing strategy and product development.

Risk control measures

"Three Pin (integrity, products and collaterals) and Three Biao(water meter, electricity meter and customs declaration form)" credit checking: Three Pin stands for integrity, products and collaterals and three biao stands for water meter, electricity meter and customs declaration form. The bank obtains client's operating status and financial condition by observing its integrity, family relation and social relationship as well as product types, market outlook and manufacturing, sales and warehousing condition, and by inspecting water meter and electricity meter. Through such diversified credit checking channels, the bank can obtain in-depth understanding of the borrower to lower credit risk.

Simplified loan management: Abide by the principles of small sum, short duration and repayment before relending. The small and micro loans average less than RMB 600,000 with duration within 6 months. Loans shall be repaid before relending. Such principles enable fast reaction and preventing measures upon detection of risk.

Linking deposit with loan: Link deposit with loan and issue loans based on set product. Link client's deposit with its loans by a product of deposit balance times number of days where higher deposit product rewards higher loan quota and lower interest rate;

Develop small and micro enterprise index to enhance data management: Small and micro enterprise index refers to a information system that includes growth index, prosperity index and credit index. Growth index focuses on comparison of current and historical condition, prosperity index focuses on the future development and credit index is the core index to evaluate credit operation. Such modernized management approach will improve business efficiency and lower operating cost.

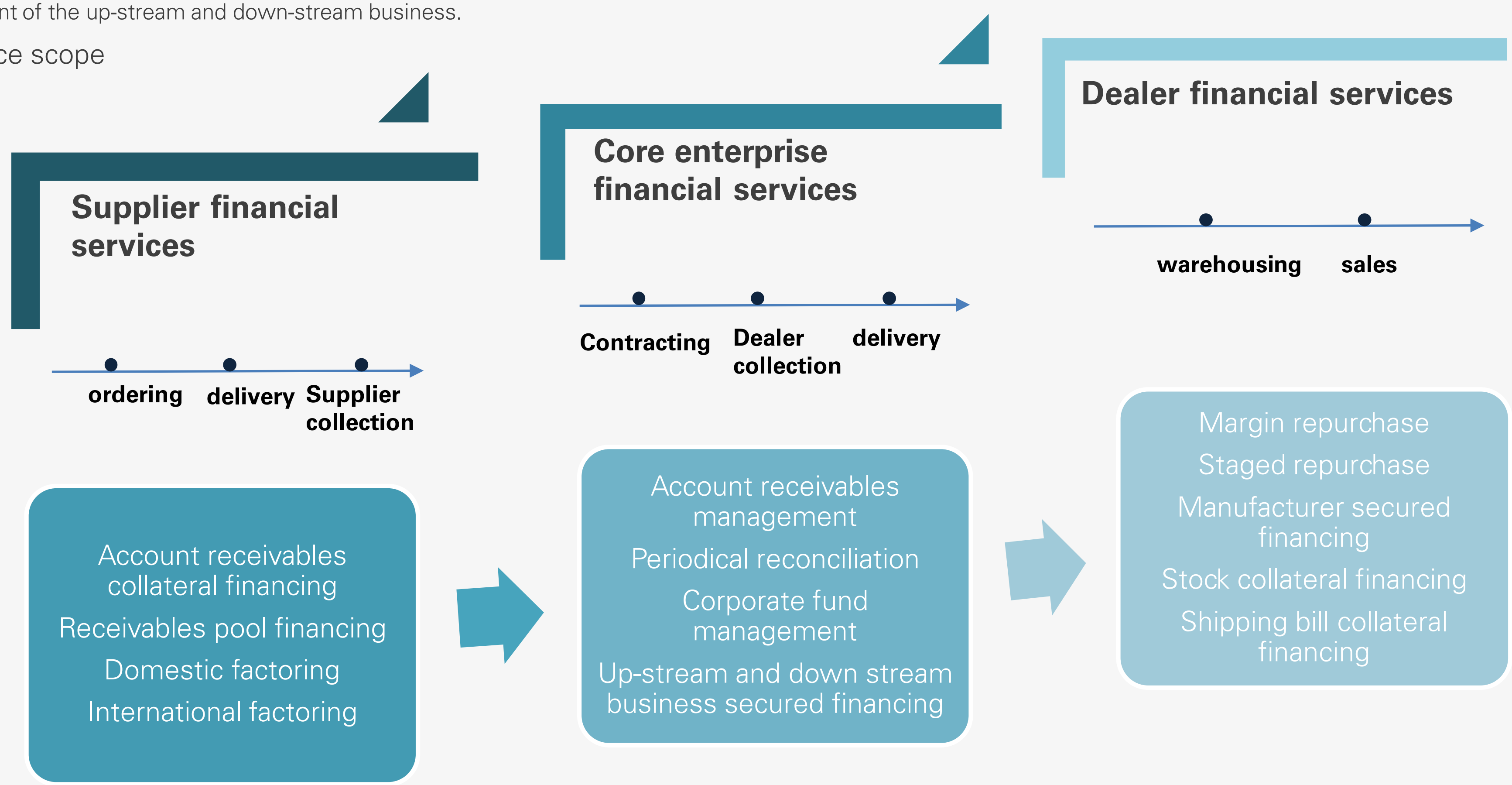
Hot topic one: Private bank (continued)

Exploring the development direction of private banks (continued)

Direction 3: Supply chain finance

Supply chain finance is essentially a financial service that manages capital flow and product flow of a whole supply chain that includes a core enterprise and its up-stream and down-stream enterprises in order to transform uncontrollable risk of a single enterprise into controllable risk of the whole supply chain and minimize risks through accessing information in multiple channels. Simply put, supply chain finance is a financing model that provides financial services to the supply chain as a whole to facilitate mutual development of the up-stream and down-stream business.

➢ Service scope



Hot topic two: Managing cyber security risks of e-banking services

Electronic banking services such as online banking, mobile banking and telephone banking have become indispensable channels for modern banks to serve their customers. In Hong Kong, many banks are constantly enhancing their electronic banking services, including improved functionality for mobile banking apps and use of social media for marketing and communication, in order to provide customers with more convenient and personalised e-banking services. As a result of the e-banking trend, the Hong Kong Monetary Authority (HKMA) revised its Supervisory Policy Manual module in relation to Risk Management of E-banking in early September, and provided new guidelines for business models and security controls in respect of online-banking, mobile-banking, ATM services, social media platforms and contactless mobile payments.

The amendment allows more flexibility for banks to offer e-banking services, including the option for customers to effect small-value funds transfers to third-party payees through Internet banking, without the need of using 2-factor authentication to re-authenticate the customer's identity. Such funds transfers should be subject to the transaction limit of no more than an aggregate rolling total value of HK$3,000 over 2 days per Internet banking account. Customers are also allowed to use mobile devices (such as smartphones or tablet computers) to conduct a wide range of transactions including funds transfers to unregistered third-party payees and small-value funds transfers.

The HKMA said that the new arrangements will make e-payments and P2P more convenient. Banks may take the opportunity to launch related services, but have to take into account their security and risks involved while providing such flexibility in order to maintain a proper balance between convenience and safety. In particular, if banks provide more than one e-banking service to their customers, they must carefully assess the risks and the extent of influence of providing cross-channel services, and must also find out if one of their online banking systems is hacked into, whether other systems will also be at stake. For instance, if customers are allowed to use one of the online banking systems to access their personal data and when the system is hacked into, whether the hackers can use the personal data retrieved to gain unauthorised access to other electronic banking platforms such as ATM or telephone banking. Under the new measures, customers who lost their mobile phones are in effect customers who lost their wallets.

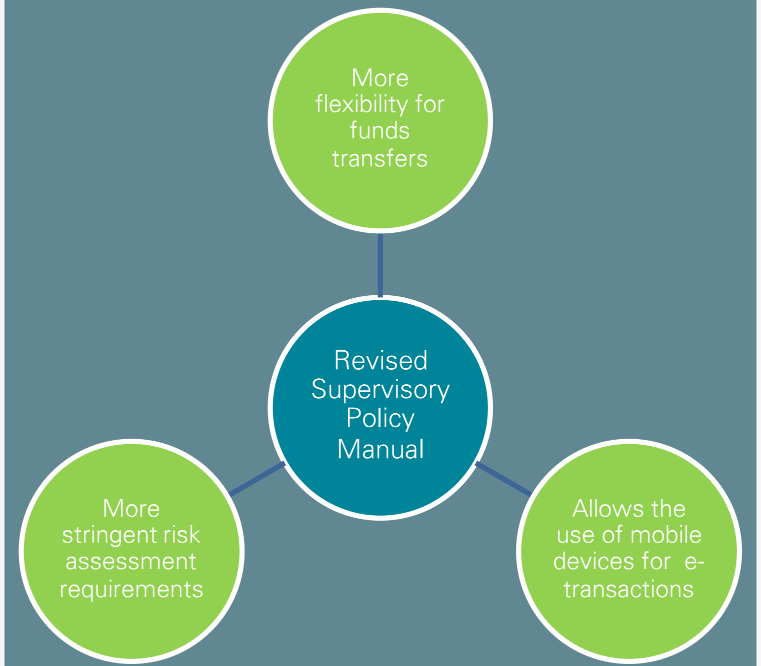


Figure 1. New Supervisory Policy Manual

Hot topic two: Managing cyber security risks of e-banking services (continued)

Also, in view of the growing number of cyber scams, the new Risk Management of E-banking sets out more specific requirements in a number of areas than the Supervision of E-banking issued by HKMA in 2004. For instance,

- Banks should identify and assess the specific risks of the mobile banking services, including security vulnerabilities associated with mobile platforms, the risk of malware or malicious Apps, the risk of loss or theft of mobile devices, and customers' insufficient security awareness when using mobile devices, and formulate relevant security measures to address these risks.

- Banks that allow customers to submit information via the Internet should assess the risks and establish appropriate controls, including ensuring that adequate encryption mechanisms are in place to protect the confidentiality and integrity of any sensitive information submitted by the customers, implementing system controls to detect and guard against malware attacks, and conducting additional checks as appropriate to validate the identity of the customers.

- As to risks associated with contactless mobile payments, banks should carefully assess the security risks, including the risk of leakage of the customer's credit card information through electronic pick-pocketing, and the risk of loss or theft of the customer's mobile device leading to fraudulent transactions. Banks should ensure their contactless mobile payments service complies with security standards issued by the banking industry associations.

- When using social media platforms, banks should ensure that legal due diligence is undertaken to ascertain that any applicable local or overseas legal or regulatory requirements have been complied with, and adequate security controls are implemented and independent assessment is performed so as to minimise the risk of intrusion into banks' systems and networks through the connections with the social media.

It should be noted that no such specific requirements were set out in the Supervision of E-banking issued by HKMA in 2004.

Hot topic two: Managing cyber security risks of e-banking services (continued)

New regulations discussed above have multiple ramifications on Hong Kong's local banks, one of which is they are required to perform compliance evaluations in accordance with new regulations on the e-banking business. In fact, over the past 12 months, authorities have promulgated numerous regulatory rules on the application of such technologies as cloud computing, client data protection and BYOD (Bring Your Own Device) technologies to the financial industry. In response to the new rules, a number of banks have appointed their internal audit departments or external advisors to holistically review related risks and their compliance. As the new Risk Management of E-banking covers many new risks absent in previous regulations and guidance, banks need a comprehensive review based on new rules to meet more extensive requirements. In addition, the formulation of Risk Management of E-banking demonstrates a more active involvement of authorities to face constantly changing technological and cyber risks. Authorities may start from here to enact more regulations and guidance in the future to elevate the industry-wide regulatory standard on financial technologies.

How can banks prepare themselves to seize the opportunity and face cyber risks?

First, we believe that top management should build and improve a bank-wide culture for cyber security, formulate specific strategies for e-banking cyber security and appoint personnel with adequate qualifications to manage such affairs.

With regard to corporate leadership and governance, banks are advised to ensure their IT departments develop and maintain a sound e-banking system in accordance with existing policies and procedures, and put in place functioning emergency recovery plans and business continuity plans (BCP) for all important e-banking systems to prepare for the risk of sudden shutdowns of systems caused by, for instance, power outage at the data centre or other technical failure preventing normal operation.

Risk management and compliance departments should keep abreast of risk changes and changes in compliance requirements, regularly formulate and update affected policies and procedures based on changes in regulatory rules and industrial practices, produce, in particular, adequate counter-measures for suspicious activities (for instance, a client uses a rarely used IP address to engage in high-risk transactions), and periodically review and ensure the compliance of all departments.

Internal audit departments should also perform independent review or audit on a regular basis to ensure the control measures undertaken by the banks can effectively reduce risks arising from e-banking systems.

Cyber risks are a challenge facing a bank as a whole. A bank should be united and empower collaboration, and forge close cooperation with the IT department and other cyber security departments to understand risks other than IT risks. Banks should also provide their employees with trainings on e-banking and cyber security, as increasing their cyber security awareness is a strong weapon in the fight against cyber-attacks. The fact that many recent cyber-attacks are done by penetrating employees' computers through various social networking technologies (such as fraudulent emails) bears testament to this need.

Hot topic three: An outlook on the digital management of China’s Banking Sector

In the past twenty or thirty years, the four core technologies of information technology, that is, computing, storage, networking and communication, have been developing rapidly, giving rise to technological climaxes succeeding one another. Today, we have ushered in a new era of more sophisticated digital technologies with mobile Internet and big data as the representatives. The development of technologies is now more a question of quality than quantity, promoting disruptive changes in all walks of life. The banking industry is no exception. The latest technologies are gradually reshaping its business model. There is no doubt that changes have to be made. But when and how to make changes is a question that the banking industry has been reflecting on for a long time.

1 When?

We believe that the breakthrough in the latest digital technologies is so great and will definitely lead to profound changes in the traditional banking industry and even the entire financial services industry. But this process will not be overnight. The reason lies in “people”, not in technologies. Throughout the history of human society, science and technology are the driving forces for the growth of productivity. But a process intervenes between the emergence of new technologies to their promotion and finally to the day when they are to exert profound impact on productivity and the relation of production. It may take a generation and even several generations. Because it is more difficult to change people’s ideas than to change technologies. As they grow older, people are less able to learn new things and their awareness for innovation becomes weaker. As a result, they are less open to the impressions of new knowledge and ideas.

As the decision makers in the economic system, the older generation has accumulated a wealth of experience and tends to adopt conservative strategies. They are less open to the impressions of new knowledge and ideas than the younger generation. Then it is not difficult to understand why the mobile Internet has been flourishing for nearly three or four years and many banks are still thinking how to build their physical retail networks. There are two reasons: first, some banks are not fully aware of the importance of Internet banking services; second, many older customers are still difficult to adapt themselves to the pattern of internet banking services. Therefore, in order to make the presence of Internet finance felt in every aspect of the traditional financial services industry, the decisions makers and customers have to be guided appropriately in the way. The impact of every kind of technology can be objectively evaluated only by taking into account the factor “people”. The life of the new generation has been integrated into the world of mobile internet. The new digital era has stamped itself on all the aspects of their work, study and life from their social intercourse, the way they look at the world, the games they play to the O2O services they enjoy. Will they go back to bank outlets queuing in order to take care of their money matters when they are forty or fifty years old and have taken control of enterprises with the majority of the wealth of the society at their disposal? It is not difficult to imagine. If we agree that it is an impossible scenario, we then come to the conclusion that the time for the new digital era to revolutionize the banking sector will wait until the rise of the new generation. The generations born in the 1960s and 1970s are now the backbones of the society. Though they can fell strongly the shock of the new digital revolution, the traditional business model of the banking industry will accompany them on the journey whether they are the major recipients or providers of financial services or the regulators of the financial services industry. Because the way they look at the world changes not as fast as technologies. Therefore, mobile internet finance is not as alarming as it is claimed to be. Old customers need the traditional business model. The changes in customer behavior, in essence, are those in their ideas and habits. The process will take some time.

Hot topic three: An outlook on the digital management of China's Banking Sector (continued)

But the changes brought by new digital technologies are so great. The parties in need of funds and those providing funds are brought so close to each other, the information dug out by dig data has never been imagined before and mobile computing allows customers to have easy access to financial services. All this will subvert the traditional business model of the banking industry. As a result, we recommend that the management of banks reflect objectively, calmly and comprehensively on the mode and rhythm of making changes in aspects of business, management, technology and concept based on their own customer base. There is no need to rush but staying inactive will be more ill-advised.

2 How?

So how are the changes to be made? Lots of analysis has been conducted, though with different focuses. One has to occupy a commanding position in order to see further. We recommend that the analysis be conducted from the perspective of the banking industry's target mode of digital management. Discussions about financial services in the new digital era, whether they are internet finance or finance internet, have been revolving around a kind of products or services to be provided for customers. This is what is to be done in the primary stage of the transformation and development of the business model. With the development of new digital technologies, the evolution of the banking industry and even the financial services sector in the future is bound to turn to a model composed of comprehensive financial services based on customers and digital management.

Customers and digital management mean that the core objective of banks in the future consists not just in selling a few services and products but in building an environment to accumulate digitalized customer assets by using information technologies through business operations or other service models. The digital profiles of customers are to be continuously refined through super data storage and supercomputing whether they are retail clients or corporate clients. A comprehensive, in-depth and accurate understanding of customer base and even each individual customer is to be acquired in this way. It will be in the power of banks to provide customized, comprehensive and intelligent financial services. The core advantage of this kind of digitalized service mode lies in the quality of services and cost control. From the perspective of services, the new digital technology revolution has provided physical and informational basis for banks to engage in fierce competition in financial services. Only by knowing and accommodating customers can banks provide satisfactory services for customers. From the perspective of costs, banks' costs include capital cost, sales cost, service cost and risk cost. The source of funds is the market with which banks can do little. So those which can reduce or amortize sales cost, service cost and risk cost to the maximum extent will win in the competition. In the digital mode, the sales, service and risk management is integrated based on data and becomes part of the customized profile. As a result, costs are reduced to the maximum extent in order to ensure the quality of services. From this point of view, the customer relationship management of the traditional financial services sector is only the initial mode of digital management. The involvement of ecommerce platforms and social media platforms is only the start of the competition. When internet and digital technologies are felt in every aspect of the activities of individuals and enterprises, the time will come for the financial services sector to embrace a real digital era.

Hot topic three: An outlook on the digital management of China’s Banking Sector(Continued)

3 A roadmap for change

Given the current status of China’s banking industry, however, there is still a long way to go to achieve the target mode and continuous revolution is required. As the banking sector is moving towards a new integrated financial industry with digital management, we suggest that the banks shall focus on the following key issues during revolution.

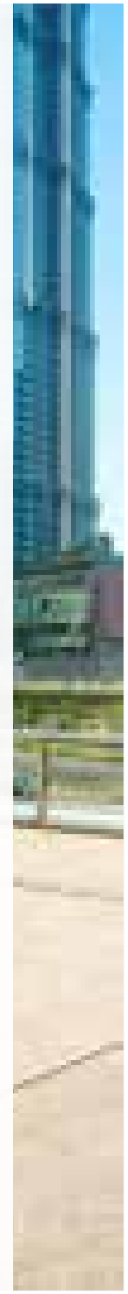
Firstly, an overall customer-oriented concept. To accurately depict a customer in a digital way requires the banks’ maximum understanding of the former. The banks shall establish a closer relationship with their customers through information technologies like internet, and to reach, understand and bind customers through continuous acquisition of various behaviour data. Traditional financial functions are divided too meticulously. Each business line and branch tend to serve customers based on its own circumstance and consider its own products and channels, rather than the customers, as the focus of operation, and therefore lack a united customer-focused management system. In the new digital era, the internet has brought the customers much more closely to the banks and service is provided entirely based on digital data of customers. Therefore, there must be an individual responsible for the customers during management and construction of the business structure, who shall keep his word and lead all customer-orientated operation.

Secondly, comprehensive and centralised data control and management. In a digital age, the priority of IT facilities in financial institutions is to capture, analyse and utilise data comprehensively, which shall also serve as the goal for the design of a hardware and software platform and system structure. But nowadays, the weakness of many financial institutions lies in decentralised data and information. Decentralised data management is exactly opposite to the digital management concept. Financial institutions shall consider centralised data control as the primary design goal when setting up any standard, establishing any process and developing any system. Centralised control and utilisation of data shall become the first strategic objective of financial management in the future, rather than just an option to optimise management.

Thirdly, integrated management of big data. To solve information asymmetry in control and management, traditional financial institutions are used to adopt measures like multiple procedures and internal control, and tend to use small structural data. However, management and control in an internet era is tightly tied with business through big data. As digital images of customers improve, data will increasingly exceed the traditional control system and become a leading force in control and management. The big data, based on behaviors and transactions, is originated from multiple channels and characterised by four features: volume variety, value and velocity. As time goes by and with the help of various data analysis techniques, description of customers by big data will become increasingly clear, leaving various risks and frauds no place to hide. Data can be fabricated but big data cannot. The big data is highly reliable because all-day, all-round data fabrication is too costly for enterprises to realise. Though traditional internal control methods will not disappear entirely, they will gradually be replaced by control methods based on information technology and data analysis due to their low efficiency and consume of time. Therefore, in promoting future management mode, financial institutions shall change their control concept from designing of traditional control points to acquisition, analysis and utilisation of big data.

4 Conclusion

Digital management is a revolution that goes down to the bone, which cannot be simply realised by development of several mobile applications or adoption of modern equipment. Operators shall change their concept from selling a product to obtaining and using data asset of a customer through omnipresent internet: data is service, data is value, and data is management. With a deep understanding and comprehensive description of customers via data, the sale of any product or making money will be achieved without effort. The revolution of new technology will eventually help financial industry return to the essence of financial services and allow financial institutions to serve their customers in a more effective way that is unique in the digital era. Financial institutions will serve as butlers for customers, utilise information technology to understand and satisfy customers’ needs, and describe and accumulate characteristics and favors of customers via digital techniques at any time to provide more thoughtful services in the future. The spring tide is coming, and the time and tide wait for no man. The leaders of financial institutions shall adhere to the concept of digital management in strategy development, organisation establishment, system selection, process design and talent cultivation, and develop future business and management based on this core objective.



Hot topic four: Data analysis brings disruptive change to banking industry

In the Bank 3.0 era, customer behaviours are changing with the impact of internet, communications and smart devices. Customers are moving from the counters toward smartphones for banking services. As banks' interaction with customers become more reliant on the online platforms, banks tend to use data to understand customer needs. Data itself has become important asset to banks. Data analysis brings disruptive change to banking services, driving the banks' business model's transformation to intelligent digital marketing, operation and risk control, and a reform in the banks' overall development and operation.

Data will become the core competency

Today, more and more customers use e-banking and mobile devices. Banks have recorded and collected a large number of information such as customer preferences and needs for data mining and analysis. For banks, staff, funds and technology can be replaced in the near future, but data that are accumulated is an irreplaceable key factor. If banks fail to use data as their strategic asset, they will fall behind in the fierce market competition and might lose their core competency in the future.

Typical areas to apply for data analysis:

- **Customer:** The bank shall collect and integrate internal and external data from customers, and develop a customer analysis map to predict the needs of customer. The bank shall provide comprehensive services for its customers by integrating the products and services;
- **Risk control:** The bank shall identify potential risks accurately on a timely basis using all types of information, including customer transactions, industry trend, regional environment and enterprise behaviours;
- **Operation:** The bank shall apply big data to optimise operational management, and identify problems arising from procedures and areas that need to be improved, in order to develop all product line.

Hot topic four: Data analysis brings disruptive change to banking industry (continued)

The status of the data analysis of domestic banks

Domestic banks realised the importance of data analysis and have already started to deploy big data solutions in retail, credit card and risk areas, and achieved effective results. Though big data is considered as important asset of banks, it’s potential value has not been utilised in:

Customer: The bank has established customer information database ECIF, but has not analysed customer behaviours, value and preferences to help transform its business model from product-oriented to customer-oriented. The bank’s insights of customers need to be improved.

Risk control: The bank has developed scoring system and risk measurement system, but still needs to make improvement in its risk warning. Traditional risk measurement relies on customer’s financial data, which lags behinds on small and micro enterprises. Applying financial data to risk control becomes a problem that banks should deal with.

Operation: In traditional business model, domestic banks have formulated a fixed system for operation and procedures. However, the Internet companies have made fundamental changes by using big data technology in core procedures such as marketing and credit granting and surpass banks in this area.

The main reasons that domestic banks have not adopted effective big data application compared with outstanding overseas banks are:

- **Staff awareness:** Big data application is not only a supplementary or supporting analysis to the existing business model, but also a key driving force for business transformation. Staffs at all levels have different understanding of the big data application and its value.
- **Data silo:** Banks have established countless information systems in its development process and its data has not been integrated. Banks have to extract and integrate data from time to time, in which database becomes a constraint factor to big data application.
- **Proficiency:** In order to gain valuable insights and actionable business strategies based on data mining, the bank shall put talents with technology, analytics techniques and business skills in place. Professional data analytics is the scarce talent in the market.
- **Corporate culture**: In the process of adopting big data, challenges will arise in the existing business strategies and procedures model, and even the performance of business department. Without support from the senior management, it might be impossible to develop effective big data application.

Hot topic four: Data analysis brings disruptive change to banking industry (continued)

Innovation in data analysis

Some domestic banks have been exploring innovative approaches in data analysis by learning from the leading practice of overseas banks and Internet companies, and consider big data as a strategy for the whole bank. They consider the result of data analysis as a key input for formulating business strategy and daily operation. Their radical measures include:

- **Integration of data base:** The bank shall formulate a data standards across the bank and collect internal and external data from different sources, including structural and non-structural data to establish a big data analysis platform, to ensure the data analysis is real-time and comprehensive. The result of data analysis shall be published and released to the front end business on a real-time basis.

- **Changes in organisational structure:** The bank shall establish big data analysis centre, and integrate resources from talents in technology department, business department, branches and management and information department, as well as introduce external talents with data analytics techniques and modelling skills. The bank shall consider delivering business value as the core evaluation indicator for the analysis centre, and organise big data briefing across the bank to integrate big data into the corporate culture.

- **Exploration in partnership**: For a starter, the Bank shall apply big data from the perspective of income generation instead of risk and operation through a series of programs featuring short duration period and easy management. As such, the Bank can work out an efficient partnership pattern between the analysis centre and the business departments. In the course of cooperation, the Bank shall insist on being value-oriented and focus on the positive interaction between maintenance department and business department, rather than the traditional model, namely, "demand + passive development". The Bank shall discuss and verify all kinds of assumptions undertaken by the business departments and conduct iterative optimisation, and turn them into factual and practical business recommendations.

- **Building knowledge system:** The Bank shall change the situation where insight was used to be limited to a certain department which is of strong analysis capability by communicating and sharing the insight from data analysis as knowledge across the Bank. To maximise the interest, the Bank shall prepare integrated business strategies, promote customer integrated marketing and provide factual basis for full services.

Hot topic four: Data analysis brings disruptive change to banking industry (continued)

Illustration of data analysis

Data analysis which is conducted from a holistic perspective will break through the limits arising from the lack of coordination among the business departments. For example:

Customer

- Sales activities management: The Bank shall manage the sales activities of each business department in a holistic approach to enhance the efficiency and effectiveness of sales activities. Such management will avoid excessive or limited contact with customers, prevent repeated non-profitable activities, facilitate profitable sales activities automatically, track and evaluate sales activities centrally. Sales activities proposed by business departments shall satisfy the requirement of minimum ROI.
- Cross product lines marketing: By analyzing data of the bank card business holders, the Bank can identify a large number of businesses that transfer the sales payment to the account under the same name in other banks. As a result, the Bank's account acts as a transfer account. No marketing activity is undertaken, as such businesses do not satisfy the AUM standards for high-end customers of private banking but fall into the category of potential customers of private banking. Analysis on transaction data of bank cards can also help identify that some sectors (e.g. children's products) see phenomenal growth for six months consecutively. Therefore, the business department can timely follow up customers from such sectors to launch marketing for cash management or financing services, etc.
- Price flexibility management: Analysis finds that customers who pursue service quality and customer experience are not sensitive towards price. Under the basis of improving customer service, a proper and unanimous increase in handling charges across businesses will not impose a negative impact on customers' loyalty.
- Analysis on assets and liabilities: Analysis shall be conducted by grouping customers. For liabilities (e.g. demand deposit), the Bank shall put its investment onto the long-term liabilities by recognizing the ones with longer term than the average behaviour and paying the interests for shorter term. As such, the funding supply strategy of assets and liabilities will be improved, while loan products will be more attractive in respect of pricing.

Risk

- Risk management of small enterprises: Except for the traditional financial data, the risk management will depend more on the behavioural data of small enterprises and their owners. Data analysis shows that the more enquiries in the Bank's credit system are, the higher rate of past due loans or default rate of small enterprises will be.
- Fraud of loan application and issuance: Through Social Network Analysis (SNA), such as sharing of phone number, conversion and transfer of money, the Bank can correlate with customers, staff, accounts, etc and consider connected graph of trade direction, recognise potential related parties and illegal intermediaries, so as to prevent credit granting from too many institutions, repeated granting and organised loans defraud.

Operation

- Sales network incentive: In respect of the incentive mechanism for account manager, as well as design, calculation and tracking of bonus payment, the Bank can cut down the cost of sales incentives, increase sales income, promote cross-marketing and reduce problems arising from customer service. The Bank can also identify the impact of incentive mechanism on account managers' behaviour, so as to promote good sales practice across the country.
- Cash addition of ATM: The Bank can optimise the routes of banknote carrier and cash addition by comprehensively considering the physical location of ATMs, transaction records, customer distribution and neighbouring facilities, so as to lower the operating cost.
- Optimisation of online banking: The Bank can understand the number of visits for each page of online banking, retention time, times of jumps, frequency of successful and unsuccessful deal by analysing the system logs to optimise the design and the trading process of online banking.

Academic Insights: Financial opportunities under the Belt and Road strategy— from the perspectives of financial constraint and financial demand

On 28 March 2015, National Development and Reform Commission (NDRC), Ministry of Foreign Affairs and Ministry of Commerce jointly issued Vision and Actions on Jointly Building Silk Road Economic Belt and 21st Century Maritime Silk Road (Vision and Actions), signifying that the initiative of Silk Road Economic Belt and 21st Century Maritime Silk Road (the Belt and Road initiative) proposed by President Xi Jinping in September and October of 2013 was officially launched as the national strategy commanding domestic and international operations. Finance as the core of modern economy, will be surely integrated into the Belt and Road strategic framework and the corresponding regional economic integration to support the implementation of the strategy. As financial institutions that support the Belt and Road initiative, Asian Infrastructure Investment Band and the Silk Road Fund also become a hot topic that draws attention on their establishment, governance mechanism and operating model. In-depth analysis of the risk and opportunity behind the Belt and Road initiative not only helps the investors to find new profit drivers, but also enables decision makers' more targeted and sustainable implementation of the strategy. Therefore, we put forth in this article the analysis of the financial opportunities under the Belt and Road initiative from the perspectives of financial constraint and financial demand, and propose policy suggestions accordingly.

Academic Insights: Financial opportunities under the Belt and Road strategy— from the perspectives of financial constraint and financial demand

1. Financial constraint under the Belt and Road initiative

As the core of modern economy, finance will be inevitably integrated into the Belt and Road strategic framework and the corresponding regional economic integration, providing essential support for the implementation of the strategy. However, the Belt and Road initiative as a new strategy for China's regional economic integration and internationalization under the New Normal, when integrated with traditional finance, will encounter the following financial constraints.

1) Risk of large-scale capital outflow

The implementation of the Belt and Road initiative will necessarily lead to a large-scale capital outflow as well as other inevitable risks as follows: Firstly, most of the countries (more than 60) along the Belt and Road are emerging or developing countries with different economic and financial development level facing challenges from political transformation, economic transition and social reform; secondly, the Belt and Road are located at the intersection of the eastern and western culture where conflicts between different belief, nationalities and races are diversified, complicated, long term and unexpected; thirdly, the Southeast Asia, South Asia, Central Asia, West Asia and Central and East Europe covered by the Belt and Road initiative are center stages of political wrangling where struggles between super powers on issues regarding Iran, Syria and Ukraine result in geopolitical differences and frequent conflicts, sometimes even change of regime; fourthly, the countries along the Belt and Road have various historical origins, economic connections and geographical relationships with China.

2) Imbalance of regional financial development

In addition to the risk of capital outflow, the Belt and Road initiative is also facing the imbalance of regional financial development, which can be summarized as follows: firstly, the domestic regional financial development imbalance. China's regional economic development still lacks balance where major differences can been seen in terms of level of industrialization, urbanization and marketization in various regions. The east, central and west of China indicates a developed, developing and less developed financial development level respectively. The imbalance of financial development can even be seen between different regions within the same province; secondly, imbalance in financial development between China and countries along the Belt and Road. Along the Belt and Road are Asian and European markets. Other than Japan, Hong Kong and Singapore where the financial markets are developed, countries and regions along the Belt and Road have less developed financial markets dominated by commercial banks strictly regulated by the governments. In addition, the less developed Asian markets may not be able to utilize required financial resources in developing high value-added and risk industries to clear risk. Compared with Asian market, the European market are more advanced in terms of financial institution, financial market, financial innovation as well as financial system and policy.

3) Constraints on Renminbi capital account convertibility

The latest statistics show that among the 40 capital transaction accounts stipulated by the International Monetary Fund (IMF), China already has 34 capital accounts that are of partially-convertible level or above, 85% of total capital accounts. However, as the internationalization level of Renminbi is still low and overseas Renminbi clearing network is yet to be established, cross-border transactions using Renminbi will encounter a lot of inconvenience. Though countries along the Belt and Road are short on cash flows, the Renminbi loans have limited attraction to them. The progress to achieve Renminbi capital account convertibility is experiencing the following constraints： the exchange rate still lacks elasticity and the pricing mechanism of central parity is yet to be improved; the supervision level is relatively low; and capital control is yet to be abolished together with some unnecessary administrative licensing items on the regulation level. In order to effectively leverage finance to support the long-term development of the Belt and Road initiative, constraints on Renminbi capital account convertibility must be abolished.

2. Financial demand of countries along the Belt and Road

Though limited by a number of financial constraints, the implementation of the Belt and Road initiative will expedite the development of new business, new operation, new technology and new business model, thereby boosting the financial demand of countries along the Belt and Road and creating great development opportunities for related financial institutions.

Academic Insights: Financial opportunities under the Belt and Road strategy— from the perspectives of financial constraint and financial demand

1) Infrastructure construction demand

The Belt and Road initiative focuses on infrastructure construction. In terms of geographical location, the regions and junctions covered by the Belt and Road initiative are mostly urban area; constrained by the level and difference in economic development, most of the countries and regions along the Belt and Road still have difficulties in smoothly connecting with each other. The table below shows a great market potential in the construction of railroad, highway, power and internet network in these areas. As China has a comparative advantage in infrastructure construction, Chinese companies can enter into the market by the following breakthrough points: firstly, transportation infrastructure, including railroad construction, highway network construction and port renovation; secondly, resources-related infrastructure, including exploration and excavation of energy and mineral resource, highway and pipeline transportation and smelting and processing; thirdly, network infrastructure, including upgrade and renovation of broadband internet network and intelligent power grid construction.

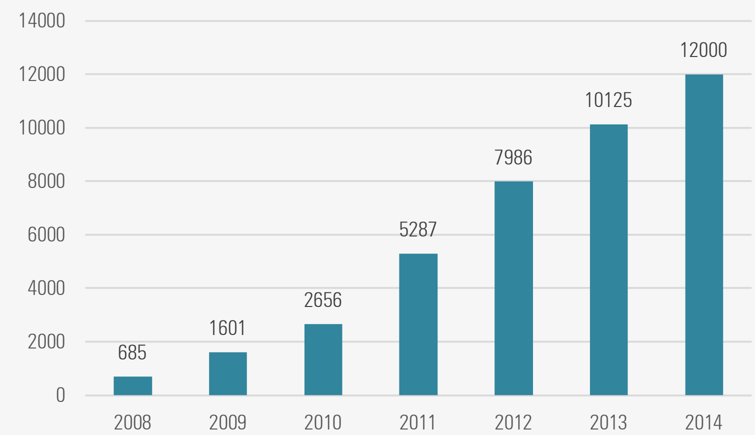
Table 1 Infrastructure construction in regions along the Belt and Road

Country / region	China	South Asia	Central Asia	Southeast Asia	West Asia
Foreign debt / GDP	7.95	22.57	31.12	28.47	26.94
Gross capital formation/GDP	48.66	29.37	28.92	22.89	23.58
Railway (kilometer)	66298	25029	4533	3652	4295
Railway / land area (kilometer/square kilometer)	0.7	1.8	0.56	0.7	1.02
Number of vehicles (per kilometer)	23	14	42	78	91
Power consumption (kilowatt-hour per capita)	3298	471	2464	2905	5819
Internet user (per hundred people)	46	20	28	35	52

2) Trade financing demand in countries along the Belt and Road

In 2014, the trade volume between China and countries along the Belt and Road amounted to over USD 1 trillion, occupying one fourth of China's total trade volume. It is expected that the annual growth rate of trade volume between China and countries along the Belt and Road will be 20%～30% in the next 10 years, representing a massive trade financing demand. China has advantage in trade financing over the countries along the Belt and Road and can provide export credit, financing under service trade account, credit insurance financing for equipment package, cross-border supply chain financing, etc. Figure 1 below shows a great development opportunity for the development financing industry represented by financial leasing.

Figure 1 Total assets of financial leasing companies (RMB hundred million)



Source: Wind Information

Academic Insights: Financial opportunities under the Belt and Road strategy— from the perspectives of financial constraint and financial demand

3) Demand for insurance service

The implementation of the Belt and Road initiative will need to consider a lot of risk factors, namely financial risks such as asset depreciation, foreign exchange restrictions and exchange rate fluctuation arising from economic turmoil or financial crisis of the host countries, and geo-political conflict risk arising from political unrest in countries along the Belt and Road. In April, CIRC issued Circular on Adjustment of Policies for Overseas Investment of Insurance Funds (the Circular), thereby giving greater autonomy to insurance institutions in fund allocation and expanding channels for insurance funds to invest overseas. The insurance industry can support the Belt and Road initiative from two aspects, namely underwriting business and insurance fund operation.

Firstly, the risk management function of insurance service can be utilized in the Belt and Road initiative. The insurance service has a risk management function that can transform individual risk into collective risk for improving the risk tolerance of the individual and public, thus is an economic compensation method that can spread risks and absorb losses. The Government Work Report of 2015 stressed that the scale of export credit insurance should be expanded and export financing of large equipment package should be insured whenever possible, thereby providing a great opportunity for the insurance industry to engage in the Belt and Road initiative. In 2014, companies underwritten by China Export & Credit Insurance Corporation, a policy-oriented insurance company, exported and invested USD 63.7 billion to countries along the Belt and Road, a year-on-year increase of 12.8%。With the pushing forward of the Belt and Road initiative, a great prospect awaits the export credit insurance business. In addition to China Export & Credit Insurance Corporation, other insurance companies are about to launch their export credit insurance business to support the Belt and Road initiative; secondly, the financing function of insurance business can support the Belt and Road initiative. Insurance fund operation is an essential supplement to underwriting business, not only as an important source of income, but also being able to contribute to major national infrastructure projects, especially when the underwriting capability is in excess. Interconnection of infrastructure is the priority of the Belt and Road initiative that requires massive funding. As at the end of 2014, China's insurance fund allocation balance was RMB 9.3 trillion, among which RMB 2.2 trillion was invested in non-traditional areas such as infrastructure debt, project, equity investment and trust investment. Going forward, China's insurance industry is expected to provide financial support in infrastructure projects related to port, logistics, aviation, industrial park construction, highway, environmental protection and water conservation, etc. in countries and regions along the Belt and Road.

4) Demand for wealth management service

In reference to the development of foreign wealth management business, the

wealth management services can be categorized as two major types, namely standardized wealth management services, private banking and home office services. Standardized services include advisory, financial planning, financial consultation, tax advisory, real estate planning, retirement planning (saving and insurance) and risk management; Private banking and home office services include asset portfolio trust, private investment fund, asset transfer planning, global market investing transaction service, project financial leasing, employee stock ownership plan, entrepreneur succession planning, collection and artwork investment service and charity (donation/foundation/trust). In the past decades, as the quality of wealth management services in Asia fell behind that in European and American market, massive foreign exchange reserve and savings in Asia flowed to European and American financial markets, rendering the financing needs for economic development in Asia hard to be satisfied, especially the financing needs for development of infrastructure and small and medium enterprises. Currently, the wealth management service demand in Asia remains strong. The implementation of the Belt and Road initiative will facilitate the regional circulation of production factors and optimize the allocation thereof, thereby driving the development of Asian wealth management business.

5) Demand for multi-layer services

The Belt and Road initiative will add momentum to China's economic development and expedite China's transformation from an industrial super power to a service super power. In this regard, the Belt and Road initiative provides a global strategic support to China's urbanization. In addition, the systematic industrial transformation of service industries such as travelling, education, culture, shopping and medical care will help in achieving a healthy, green and sustainable urbanization. From an external perspective, culture will become a key element in regional economic integration in Asia-Pacific region and an important driving force in achieving interconnection within the region. According to the Vision and Actions, the Belt and Road construction will benefit the people in countries and regions along the Belt and Road in areas such as travelling, education, culture, shopping and medical care. As China is in the deep water of economic transformation, the tertiary industry is the key to success in shifting the growth momentum from export and investment to domestic demand. The Belt and Road initiative will boost the tertiary industry, thus is of great significance to China's economic transformation.

Academic Insights: Financial opportunities under the Belt and Road strategy— from the perspectives of financial constraint and financial demand

6) Demand for internet finance service

Though internet finance is not closely related to the Belt and Road initiative on a national policy level, it is very important in terms of industrial economy, asset securitization and global asset circulation. Firstly, low income population occupies a large proportion in the overall population of countries and regions along the Belt and Road. As the under-developed financial systems are unable to satisfy the multi-layer financing needs of the dispersedly located residence, these countries and regions are fit for developing internet finance; secondly, though there is a major gap between the traditional financial system in China and those in the developed countries, the internet finance development in China is in a leading position in the world. Such case will provide a good example for the developing countries and regions along the Belt and Road, as financial constraints also exist in the traditional financial systems in these countries and regions and the management capability of these financial systems also needs to be enhanced. These countries and regions, enabled by technology instead of by management, can leverage internet finance as the breakthrough point to maximize the synergy effect of these two markets, in order to facilitate the financial development.

The internet is built on equality, openness, coordination and sharing. The promotion of a series of operating mechanisms in internet finance will not only provide a new financing source for the public, but also show the true spirit of the Chinese people to the world. The regional fund circulation in the future may give rise to internet finance companies that engage in cross-border third party payment service and cross-border P2P to realize effective allocation of resources. In terms of economic and trade cooperation, new business models such as cross-border e-commerce will have a great development opportunity and help push forward the development of modern service industries such as logistics, online payment, electronic authentication and content service. For instance, in September 2013, Chongqing Yijifu Co., Ltd. (重庆易极付公司) became the only third party payment service provider in the central and western region and the first of its kind in China to engage in pilot cross-border e-commerce foreign exchange payment service, enabling domestic companies to use Renminbi to directly conduct cross-border transactions. Such new business models will help drive the implementation of the Belt and Road initiative.

Academic Insights: Financial opportunities under the Belt and Road strategy— from the perspectives of financial constraint and financial demand

3. Conclusion and policy suggestion

1) Improve multi-layer financial service system

The Belt and Road initiative will require such a massive funding that the government alone cannot accommodate, thus fund raising mechanism must be innovated to enable diversified investment channels. Firstly, encourage private funds to participate in credit projects for the Belt and Road initiative. Optimize the profit distribution mechanism for private funds participating in the establishment of Maritime Silk Road Bank. Develop the Belt and Road equity investment fund managed by private funds through the mixed ownership reform. Secondly, expedite the policy and system design for investing and financing models such as PPP and BOT. Establish the legality of PPP and BOT model as soon as possible, legislate them when appropriate, and grant tax reduction and financial subsidy if necessary. The Planning and management departments should specifically design multiple PPP or BOT proposals for important projects in the Belt and Road construction, and initiate tender process as soon as possible to encourage more companies to apply these models. Thirdly, utilize domestic and foreign funds to support strategic development projects. Issue the Belt and Road initiative-specific bonds backed by government credit to domestic and overseas financial markets to attract foreign exchange reserve, social security, insurance and sovereign wealth fund to invest in the Belt and Road initiative.

2) Enhance financial stability and risk control

Participate in regional cooperation mechanisms to improve regional financial safety net and develop regional financial market. Enhance the function of Money and Financial Stability Commission under the EMEAP mechanism, reinforce the monitoring of macro economy, improve regional crisis management framework, facilitate the operation of Asian Bond Fund in order to further open up and develop the Asian bond market. Continue to improve and refine operating procedures of forex reserve pool under the 10+3 mechanism, explore the possibility of partial funding by the currency of the investor's own country. In addition, reinforce policy coordination and communication with each party under mechanisms such as SEACEN, the central bank governors meeting of Central Asia, the Black Sea and Balkan region as well as the central bank governors meeting of China, Japan and Korea in order to jointly maintain the stability of regional financial market. Regional regulatory cooperation with countries along the Belt and Road should be reinforced. Firstly, refine the regional regulatory coordination mechanism, strengthen communication and coordination with regulatory authorities along the Belt and Road, expand the range for information sharing, improve consistency in policy coordination and regulation on major issues, to establish effective regulatory coordination mechanism within the region. Secondly, establish the regional financial risk alert system within the region to achieve effective analysis, monitoring and alert for various financial risks, identify potential risk in a timely manner and ensure the safety and stability in regional financial operation. Thirdly, build a communication and cooperation mechanism to address cross-border risk and crisis management and enhance counter-risk measures and crisis management system to enable effective coordination and maintain regional financial stability.

Academic Insights: Financial opportunities under the Belt and Road strategy— from the perspectives of financial constraint and financial demand

3) Expedite the internationalization of Renminbi

Facilitate overseas Renminbi settlement, clearing and backflow based on market-oriented principle to push forward the internationalization of Renminbi. Firstly, continue to expand the volume and scope of currency exchange between China and neighboring countries. Secondly, implement existing Renminbi settlement agreements and negotiate to sign more Renminbi settlement agreements. Thirdly, consider to set up Renminbi clearing bank for countries with such need and expedite the establishment of Renminbi Cross-border Interbank Payment System (CIPS). Fourthly, develop Renminbi offshore market and facilitate institutes of neighboring countries to enter into China inter-bank bond market. Fifthly, enhance supporting measures to encourage using Renminbi funds to expand existing fund scale or establish mutual funds in order to facilitate Renminbi overseas investment and the internationalization of Renminbi. Sixthly, encourage domestic and overseas institutions and individuals to directly use Renminbi to conduct cross-border investment and financing and encourage domestic and overseas banks to issue Renminbi loans for cross-border projects. Lastly, push forward the construction of financial infrastructure and leverage Shanghai Pilot Free Trade Zone and related financial reform pilot zones to innovate Renminbi business.

4) Establish sound legal system

We suggest that the regulatory authorities should timely issue and improve the laws and regulations based on thorough communication with financial institutions and various companies. Firstly, specify requirements for the provision of financial services in the Belt and Road construction to regulate market behaviors of project participants; we suggest to establish the leading role of Chinese-funded financial institution in the laws and regulations and establish Renminbi as the core currency for business operation so as to align the Belt and Road construction with the national strategic goal; In addition, the Chinese companies will face issues related to intellectual property, environmental protection and labor when participating in overseas construction projects, good knowledge of host country laws and regulations and government's strong legal support are equally important in preventing negative outcomes arising from the companies' ignorance of local laws and regulation.

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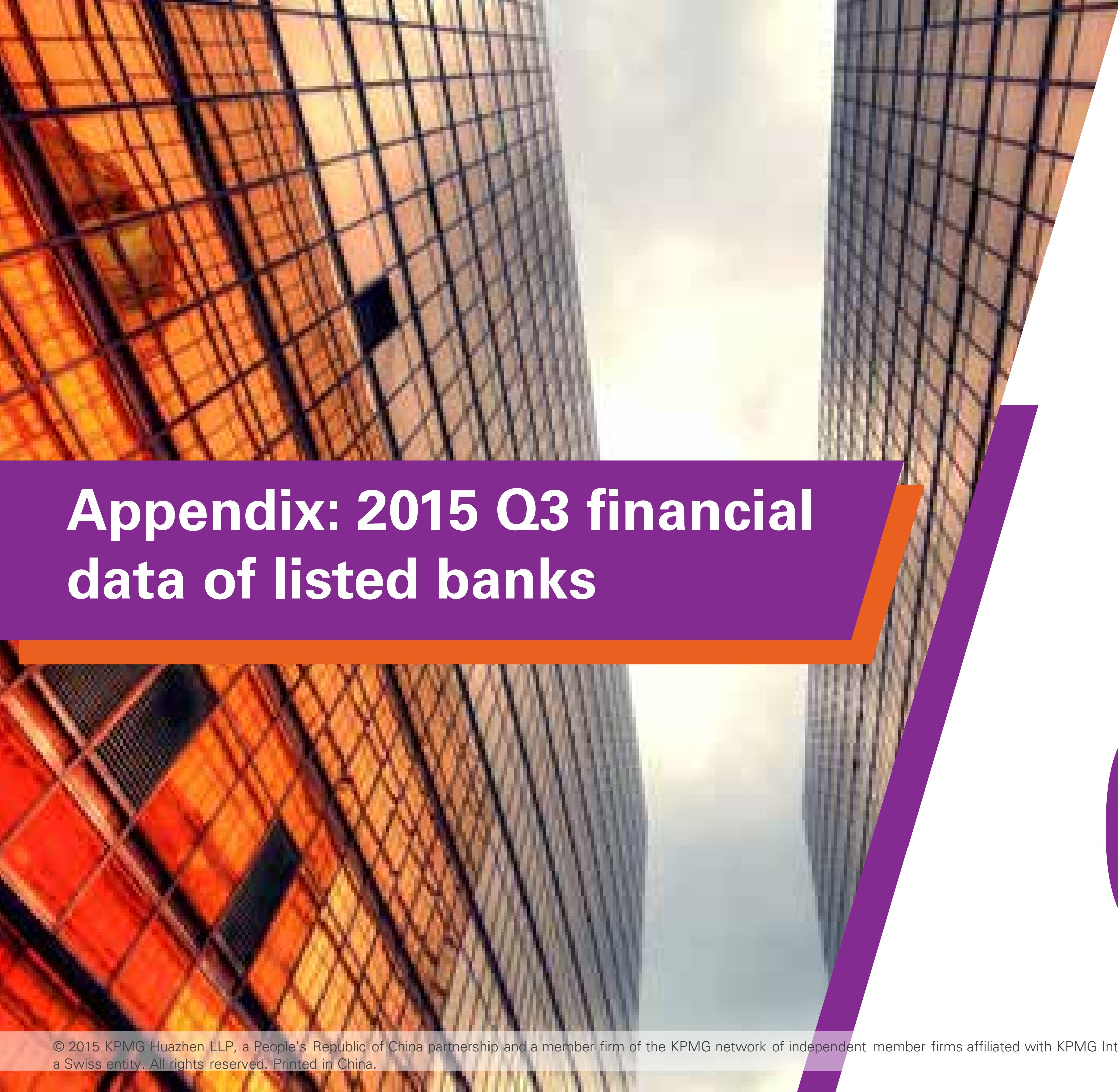

Appendix: 2015 Q3 financial data of listed banks

04

Appendix –Net profit attributable to equity holders of the parent company

RMB million	2015/01/01-2015/09/30	2014/01/01-2014/09/30	Growth rate	2015/01/01-2015/06/30	2014/01/01-2014/06/30	Growth rate	2015/01/01-2015/03/31	2014/01/01-2014/03/31	Growth rate
ICBC	221,761	220,464	1%	149,021	148,100	1%	74,324	73,302	1%
CCB	191,557	190,298	1%	131,895	130,662	1%	67,005	65,780	2%
BOC	131,545	131,133	0%	90,746	89,724	1%	45,838	45,363	1%
ABC	153,210	152,439	1%	104,315	104,032	0%	54,116	53,430	1%
BCM	52,040	51,522	1%	37,324	36,773	1%	18,970	18,690	1%
CMB	48,500	45,804	6%	32,976	30,459	8%	17,220	14,945	15%
CNCB	32,926	32,280	2%	22,586	22,034	3%	10,928	10,706	2%
CMBC	38,377	36,778	4%	26,778	25,570	5%	13,377	12,676	6%
SPDB	37,162	34,799	7%	23,903	22,656	6%	11,194	10,710	5%
CIB	41,221	38,304	8%	27,744	25,527	9%	14,790	13,363	11%
CEB	23,875	23,322	2%	16,241	15,845	2%	8,358	8,167	2%
HXB	13,912	13,177	6%	9,263	8,670	7%	4,136	3,722	11%
PAB	17,740	15,694	13%	11,585	10,072	15%	5,629	5,054	11%
BOB	14,136	12,592	12%	10,036	8,847	13%	4,986	4,522	10%
BON	5,178	4,160	24%	3,568	2,867	24%	1,773	1,420	25%
NBCB	5,321	4,584	16%	3,552	3,086	15%	1,752	1,502	17%
Total	1,028,461	1,007,350	2%	701,533	684,924	2%	354,396	343,352	3%

Source: The banks' 2013 Q3 & 2014 Q3 report, KPMG China research

Appendix – Financial performance indicator

	Return on weighted average equity（ROE）		Basic earnings per share (in RMB)（EPS）		Net asset value per share (in RMB)	
	2015/01/01-2015/09/30	2014/01/01-2014/09/30	2015/01/01-2015/09/30	2014/01/01-2014/09/30	2015/01/01-2015/09/30	2014/12/31
ICBC	18.60%	21.52%	0.62	0.63	4.62	4.33
CCB	19.45%	22.14%	0.77	0.76	5.50	5.01
BOC	15.02%	18.03%	0.43	0.47	3.94	3.70
ABC	19.41%	22.34%	0.47	0.47	3.37	3.05
BCM	14.15%	15.58%	0.70	0.69	6.79	6.34
CMB	19.50%	21.33%	1.92	1.82	13.84	12.47
CNCB	15.89%	18.10%	0.70	0.69	6.29	5.55
CMBC	19.29%	22.71%	1.10	1.08	8.02	7.03
SPDB	14.37%	15.92%	1.99	1.87	14.49	13.15
CIB	15.75%	17.54%	2.16	2.01	15.87	13.54
CEB	16.83%	18.88%	0.51	0.50	4.21	3.83
HXB	12.90%	14.47%	1.30	1.23	10.50	9.49
PAB	16.06%	17.20%	1.27	1.14	10.98	9.55
BOB	13.88%	14.82%	1.12	0.99	8.51	7.57
BON	14.77%	14.42%	1.67	1.40	13.16	10.93
NBCB	14.65%	16.60%	1.36	1.33	9.84	10.49

Source: The banks’ 2013 annual reports & 2014 Q3 report, KPMG China research

Appendix –Net interest margin

	2015/01/01-2015/09/30	2014/01/01-2014/09/30	2015/01/01-2015/06/30	2014/01/01-2014/06/30	2015/01/01-2015/03/31	2014/01/01-2014/03/31
ICBC	2.50%	2.64%	2.53%	2.62%	2.51%	2.52%
CCB	2.64%	2.80%	2.67%	2.80%	2.72%	2.81%
BOC	2.14%	2.26%	2.18%	2.27%	2.22%	2.29%
ABC	2.78%	2.91%	2.78%	2.93%	2.84%	2.96%
BCM	2.24%	2.40%	2.27%	2.39%	2.29%	2.33%
CMB	2.75%	2.50%	2.77%	2.57%	2.90%	2.65%
CNCB	2.33%	2.37%	2.32%	2.36%	2.32%	2.37%
CMBC	2.29%	2.61%	2.35%	2.62%	2.37%	2.62%
SPDB	3.26%	3.04%	2.42%	2.47%	3.04%	2.78%
CIB	3.43%	2.77%	2.44%	2.40%	3.07%	2.60%
CEB	2.72%	2.74%	2.27%	2.25%	2.63%	2.51%
HXB	2.75%	2.71%	2.63%	2.61%	2.80%	2.48%
PAB	2.73%	2.53%	2.71%	2.50%	2.73%	2.42%
BOB	2.31%	2.32%	2.38%	2.22%	2.38%	2.11%
BON	2.61%	2.56%	2.65%	2.54%	2.58%	2.45%
NBCB	2.39%	2.69%	2.39%	2.52%	2.44%	2.85%
Average	2.62%	2.62%	2.48%	2.50%	2.62%	2.55%

Source: The banks' 2013 Q3 & 2014 Q3 report, KPMG China research

Appendix – Operating income

RMB million	Net interest income	Net fee and commission income	Investment income	Other operating income	Total operating income
2015/01/01-2015/09/30	2,007,083	579,103	40,041	115,161	2,741,388
2014/01/01-2014/09/30	1,868,473	497,735	23,383	105,461	2,495,052

	Net interest income			Net fee and commission income			Investment income			Other operating income			Operating income		
RMB million	2015/01/01-2015/09/30	2014/01/01-2014/09/30	Growth rate	2015/01/01-2015/09/30	2014/01/01-2014/09/30	Growth rate	2015/01/01-2015/09/30	2014/01/01-2014/09/30	Growth rate	2015/01/01-2015/09/30	2014/01/01-2014/09/30	Growth rate	2015/01/01-2015/09/30	2014/01/01-2014/09/30	Growth rate
ICBC	379,945	362,934	5%	111,183	100,885	10%	7,570	3,067	147%	25,930	21,703	19%	524,628	488,589	7%
CCB	340,808	323,237	5%	88,686	83,801	6%	4,712	3,736	26%	23,185	18,269	27%	457,391	429,043	7%
BOC	246,280	238,775	3%	71,484	72,078	(1%)	6,212	3,492	78%	32,797	31,989	3%	356,773	346,334	3%
ABC	328,740	317,793	3%	66,612	65,920	1%	118	(260)	(145%)	11,806	10,513	12%	407,276	393,966	3%
BCM	107,975	102,380	5%	27,428	22,984	19%	61	(1,033)	(106%)	10,949	10,838	1%	146,413	135,169	8%
CMB	101,159	85,949	18%	44,977	30,564	47%	6,947	5,564	25%	3,141	2,950	6%	156,224	125,027	25%
CNCB	76,746	70,048	10%	26,068	18,835	38%	2,885	2,596	11%	1,754	1,089	61%	107,453	92,568	16%
CMBC	70,489	67,405	5%	37,952	27,810	36%	4,818	1,932	149%	2,911	2,769	5%	116,170	99,916	16%
SPDB	82,529	71,508	15%	21,222	15,647	36%	498	(240)	(308%)	4,383	2,858	53%	108,632	89,773	21%
CIB	88,008	69,954	26%	23,479	19,665	19%	2,103	87	2,317%	(1,236)	1,144	(208%)	112,354	90,850	24%
CEB	49,658	43,469	14%	20,261	13,443	51%	177	(79)	(324%)	(49)	1,097	(104%)	70,047	57,930	21%
HXB	35,058	34,248	2%	8,220	5,781	42%	(241)	447	(154%)	135	343	(61%)	43,172	40,819	6%
PAB	48,206	38,418	25%	20,223	12,797	58%	3,081	3,305	(7%)	(358)	131	(373%)	71,152	54,651	30%
BOB	26,132	22,871	14%	5,775	4,218	37%	617	268	130%	450	443	2%	32,974	27,800	19%
BON	13,714	9,639	42%	2,627	1,485	77%	628	366	72%	(364)	41	(988%)	16,605	11,531	44%
NBCB	11,636	9,845	18%	2,906	1,822	59%	(145)	135	(207%)	(273)	(716)	(62%)	14,124	11,086	27%
Total	2,007,083	1,868,473	7%	579,103	497,735	16%	40,041	23,383	71%	115,161	105,461	9%	2,741,388	2,495,052	10%

Source: The banks' 2013 annual reports & 2014 Q3 report, KPMG China research

Appendix – Operating income structure

	Net interest income %		Net fee and commission income %		Investment income %		Other operating income %	
	2015/01/01-2015/09/30	2014/01/01-2014/09/30	2015/01/01-2015/09/30	2014/01/01-2014/09/30	2015/01/01-2015/09/30	2014/01/01-2014/09/30	2015/01/01-2015/09/30	2014/01/01-2014/09/30
ICBC	72.42%	74.28%	21.19%	20.65%	1.44%	0.63%	4.94%	4.44%
CCB	74.51%	75.34%	19.39%	19.53%	1.03%	0.87%	5.07%	4.26%
BOC	69.03%	68.94%	20.04%	20.81%	1.74%	1.01%	9.19%	9.24%
ABC	80.72%	80.67%	16.36%	16.73%	0.03%	(0.07%)	2.90%	2.67%
BCM	73.75%	75.74%	18.73%	17.00%	0.04%	(0.76%)	7.48%	8.02%
CMB	64.75%	68.74%	28.79%	24.45%	4.45%	4.45%	2.01%	2.36%
CNCB	71.42%	75.67%	24.26%	20.35%	2.68%	2.80%	1.63%	1.18%
CMBC	60.68%	67.46%	32.67%	27.83%	4.15%	1.93%	2.51%	2.77%
SPDB	75.97%	79.65%	19.54%	17.43%	0.46%	(0.27%)	4.03%	3.18%
CIB	78.33%	77.00%	20.90%	21.65%	1.87%	0.10%	(1.10%)	1.26%
CEB	70.89%	75.04%	28.92%	23.21%	0.25%	(0.14%)	(0.07%)	1.89%
HXB	81.21%	83.90%	19.04%	14.16%	(0.56%)	1.10%	0.31%	0.84%
PAB	67.75%	70.30%	28.42%	23.42%	4.33%	6.05%	(0.50%)	0.24%
BOB	79.25%	82.27%	17.51%	15.17%	1.87%	0.96%	1.36%	1.59%
BON	82.59%	83.59%	15.82%	12.88%	3.78%	3.17%	(2.19%)	0.36%
NBCB	82.38%	88.81%	20.57%	16.44%	(1.03%)	1.22%	(1.93%)	(6.46%)
Average	74.10%	76.71%	22.01%	19.48%	1.66%	1.44%	2.23%	2.36%

Source: The banks' 2013 annual reports & 2014 Q3 report, KPMG China research

Appendix – Intermediate business income ratio

	2015/01/01-2015/09/30	2014/01/01-2014/09/30	2015/01/01-2015/06/30	2014/01/01-2014/06/30	2015/01/01-2015/03/31	2014/01/01-2014/03/31
ICBC	21.19%	20.65%	21.65%	22.30%	20.54%	23.17%
CCB	19.39%	19.53%	20.46%	20.96%	20.90%	21.80%
BOC	20.04%	20.81%	20.89%	22.19%	20.06%	24.13%
ABC	16.36%	16.73%	17.38%	17.95%	19.35%	19.76%
BCM	18.73%	17.00%	20.04%	17.36%	19.99%	17.08%
CMB	28.79%	24.45%	29.86%	25.39%	30.81%	25.63%
CNCB	24.26%	20.35%	24.96%	20.62%	24.81%	20.70%
CMBC	32.67%	27.83%	32.70%	28.31%	33.38%	27.90%
SPDB	19.54%	17.43%	20.78%	17.62%	22.92%	18.16%
CIB	20.90%	21.65%	20.65%	21.80%	19.24%	22.07%
CEB	28.92%	23.21%	29.77%	23.04%	29.88%	22.84%
HXB	19.04%	14.16%	18.83%	13.90%	13.99%	14.15%
PAB	28.42%	23.42%	29.46%	22.37%	26.06%	19.92%
BOB	17.51%	15.17%	18.52%	17.10%	19.11%	19.61%
BON	15.82%	12.88%	16.43%	11.98%	16.14%	12.20%
NBCB	20.57%	16.43%	19.35%	16.90%	18.57%	18.20%
Average	21.12%	19.95%	21.89%	20.99%	22.23%	20.46%

Source: The banks' 2013 Q3 & 2014 Q3 report, KPMG China research

Appendix – Operating expenses

RMB million	2015/01/01-2015/09/30	2014/01/01-2014/09/30	Growth rate	2015/01/01-2015/06/30	2014/01/01-2014/06/30	Growth rate	2015/01/01-2015/03/31	2014/01/01-2014/03/31	Growth rate
ICBC	235,754	201,084	17%	162,893	134,919	21%	84,775	67,273	26%
CCB	214,519	185,235	16%	143,094	118,554	21%	75,860	62,063	22%
BOC	178,761	168,369	6%	115,574	113,495	2%	59,213	59,321	0%
ABC	211,461	197,728	7%	141,343	132,042	7%	70,408	66,215	6%
BCM	79,281	68,650	15%	48,742	43,605	12%	24,933	20,761	20%
CMB	92,637	65,153	42%	60,997	44,245	38%	28,146	21,218	33%
CNCB	63,722	49,552	29%	39,928	32,627	22%	18,347	15,449	19%
CMBC	65,565	50,754	29%	41,597	30,801	35%	18,190	14,258	28%
SPDB	60,271	44,039	37%	39,490	29,286	35%	18,305	13,595	35%
CIB	60,230	41,384	46%	36,809	26,163	41%	15,077	11,081	36%
CEB	38,436	27,315	41%	24,063	16,749	44%	11,248	7,189	56%
HXB	24,585	23,319	5%	15,942	14,876	7%	7,349	7,284	1%
PAB	27,912	24,179	15%	18,385	15,736	17%	8,473	9,388	-10%
BOB	15,127	11,698	29%	8,745	6,824	28%	4,322	3,116	39%
BON	9,962	6,351	57%	6,306	3,844	64%	2,878	1,696	70%
NBCB	7,496	5,352	40%	4,570	3,437	33%	2,226	1,658	34%
Total	1,385,719	1,170,162	18%	908,478	767,203	18%	28,109	23,848	18%

Source: The banks' 2013 Q3 & 2014 Q3 report, KPMG China research

Appendix – General and administrative expenses

RMB million	2015/01/01-2015/09/30	2014/01/01-2014/09/30	Growth rate	2015/01/01-2015/06/30	2014/01/01-2014/06/30	Growth rate	2015/01/01-2015/03/31	2014/01/01-2014/03/31	Growth rate
ICBC	120,815	118,873	2%	79,550	78,674	1%	37,973	37,528	1%
CCB	105,784	104,254	1%	68,809	66,588	3%	32,714	31,945	2%
BOC	94,777	93,462	1%	59,533	60,010	-1%	29,106	29,845	-2%
ABC	123,794	121,332	2%	81,063	79,229	2%	40,227	39,283	2%
BCM	41,209	36,549	13%	24,506	22,620	8%	11,892	10,642	12%
CMB	39,204	35,127	12%	25,414	22,561	13%	12,252	11,151	10%
CNCB	27,787	25,282	10%	18,172	16,660	9%	9,250	8,365	11%
CMBC	32,352	30,486	6%	21,025	18,966	11%	9,126	8,364	9%
SPDB	22,109	20,665	7%	14,292	13,437	6%	6,484	7,034	-8%
CIB	22,846	19,475	17%	14,715	12,650	16%	6,539	6,066	8%
CEB	18,519	16,578	12%	12,081	10,547	15%	5,472	4,687	17%
HXB	15,313	15,260	0%	10,368	9,985	4%	4,918	4,834	2%
PAB	22,866	20,056	14%	15,005	13,055	15%	6,901	6,062	14%
BOB	7,602	6,529	16%	4,259	3,601	18%	1,997	1,520	31%
BON	3,957	3,044	30%	2,315	2,044	13%	1,105	1,010	9%
NBCB	4,292	3,457	24%	2,709	2,307	17%	1,320	1,114	18%
Total	703,226	670,429	10%	453,816	432,934	5%	13,580	13,091	4%

Source: The banks' 2013 Q3 & 2014 Q3 report, KPMG China research

Appendix – Cost to income ratios

	2015/01/01-2015/09/30	2014/01/01-2014/09/30	Growth rate	2015/01/01-2015/06/30	2014/01/01-2014/06/30	Growth rate	2015/01/01-2015/03/31	2014/01/01-2014/03/31	Growth rate
ICBC	23.03%	24.33%	-5.34%	22.33%	23.95%	-7.00%	20.96%	23.08%	-9.19%
CCB	23.13%	25.21%	-8.25%	23.23%	24.17%	-4.00%	22.03%	23.25%	-5.25%
BOC	26.57%	26.99%	-1.56%	24.85%	25.54%	-3.00%	23.97%	24.86%	-3.58%
ABC	30.40%	30.80%	-1.30%	29.57%	29.71%	0.00%	28.85%	28.86%	-0.03%
BCM	28.57%	27.39%	4.31%	25.62%	25.39%	1.00%	24.48%	23.79%	2.90%
CMB	25.09%	28.10%	-10.71%	24.40%	26.78%	-9.00%	24.14%	27.28%	-11.51%
CNCB	25.86%	27.31%	-5.31%	25.95%	26.83%	-3.00%	28.04%	28.07%	-0.11%
CMBC	27.85%	30.51%	-8.72%	27.34%	29.12%	-6.00%	25.33%	26.78%	-5.41%
SPDB	20.35%	23.02%	-11.60%	20.21%	22.76%	-11.00%	19.65%	25.48%	-22.88%
CIB	20.67%	21.65%	-4.53%	20.76%	21.52%	-4.00%	19.76%	21.44%	-7.84%
CEB	26.44%	28.62%	-7.62%	26.53%	28.16%	-6.00%	24.58%	26.13%	-5.93%
HXB	35.47%	37.38%	-5.11%	36.60%	37.85%	-3.00%	38.20%	39.42%	-3.09%
PAB	32.14%	36.70%	-12.43%	32.22%	37.59%	-14.00%	33.38%	36.33%	-8.12%
BOB	23.05%	23.49%	-1.87%	19.79%	19.76%	0.00%	18.80%	17.22%	9.18%
BON	23.83%	26.40%	-9.73%	21.20%	27.51%	-23.00%	21.82%	27.91%	-21.82%
NBCB	30.39%	31.18%	-2.53%	30.07%	31.63%	-5.00%	29.99%	31.57%	-5.00%
Total	26.43%	28.07%	-5.84%	25.67%	27.39%	-6.00%	25.25%	26.97%	-6.37%

Source: The banks' 2013 Q3 & 2014 Q3 report, KPMG China research

Appendix – Impairment losses

RMB million	2015/01/01-2015/09/30	2014/01/01-2014/09/30	Growth rate	2015/01/01-2015/06/30	2014/01/01-2014/06/30	Growth rate	2015/01/01-2015/03/31	2014/01/01-2014/03/31	Growth rate
ICBC	61,569	32,456	90%	41,951	24,167	74%	20,748	13,776	51%
CCB	64,123	39,424	63%	41,249	23,122	78%	20,005	11,557	73%
BOC	44,893	39,078	15%	28,576	27,782	3%	13,784	15,096	-9%
ABC	57,365	45,021	27%	39,321	28,939	36%	20,088	13,340	51%
BCM	20,878	18,309	14%	12,045	11,082	9%	5,923	5,563	6%
CMB	43,952	21,998	100%	29,171	16,320	79%	12,744	7,428	72%
CNCB	28,465	17,749	60%	16,691	11,617	44%	6,519	4,949	32%
CMBC	24,844	13,179	89%	15,011	7,218	108%	6,376	3,663	74%
SPDB	30,950	17,048	82%	20,292	11,706	73%	9,313	4,525	106%
CIB	27,576	15,120	82%	15,846	9,056	75%	5,569	2,810	98%
CEB	14,550	5,960	144%	8,387	3,128	168%	3,991	1,027	289%
HXB	6,061	5,234	16%	3,491	3,061	14%	1,429	1,566	-9%
PAB	19,935	9,701	105%	12,923	5,652	129%	4,751	2,067	130%
BOB	5,372	3,175	69%	3,034	1,906	59%	1,592	948	68%
BON	4,679	2,307	103%	3,123	1,164	168%	1,369	386	255%
NBCB	2,414	1,240	95%	1,348	700	93%	647	340	90%
Total	457,626	286,999	59%	292,459	186,620	57%	8,428	5,565	51%

Source: The banks' 2013 Q3 & 2014 Q3 report, KPMG China research

Appendix – Total assets

RMB million	Cash and balances with central bank		Loans and advances to customers		Securities investments		Interbank assets		Other assets		Total assets	
	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31
ICBC	3,273,308	3,523,622	11,610,463	10,768,750	5,039,814	4,433,237	1,420,374	1,251,238	760,958	633,106	22,104,917	20,609,953
CCB	2,667,037	2,610,781	10,091,195	9,222,910	3,939,542	3,727,869	1,118,205	788,737	505,396	393,833	18,321,375	16,744,130
BOC	2,278,906	2,391,211	8,837,177	8,294,744	3,460,414	2,710,375	1,089,956	1,130,211	1,005,565	724,841	16,672,018	15,251,382
ABC	2,724,711	2,743,065	8,482,659	7,739,996	4,261,708	3,575,630	1,723,018	1,489,285	517,414	426,176	17,709,510	15,974,152
BCM	939,642	938,055	3,639,712	3,354,787	1,537,758	1,162,876	720,244	525,033	369,510	287,548	7,206,866	6,268,299
CMB	616,953	654,785	2,633,672	2,448,754	1,329,212	986,902	489,449	525,051	153,006	116,337	5,222,292	4,731,829
CNCB	469,535	538,486	2,317,329	2,136,332	1,429,932	1,068,126	314,697	297,936	121,645	97,935	4,653,138	4,138,815
CMBC	444,377	471,632	1,932,309	1,774,159	818,882	598,164	917,094	927,756	262,185	243,425	4,374,847	4,015,136
SPDB	492,380	506,067	2,113,767	1,974,614	1,609,087	1,253,918	457,161	360,444	150,234	100,881	4,822,629	4,195,924
CIB	429,398	491,169	1,701,725	1,549,252	2,380,429	1,358,737	545,653	864,726	232,193	142,515	5,289,398	4,406,399
CEB	351,074	354,185	1,433,869	1,271,430	835,491	588,544	376,631	459,731	89,750	63,120	3,086,815	2,737,010
HXB	299,393	292,248	991,110	916,105	391,502	409,925	235,789	204,910	32,321	28,440	1,950,115	1,851,628
PAB	297,223	306,298	1,182,226	1,003,637	526,675	481,436	466,437	291,446	126,499	103,642	2,599,060	2,186,459
BOB	161,699	188,007	730,084	654,718	409,440	349,041	458,561	307,310	28,015	25,361	1,787,799	1,524,437
BON	77,009	71,768	207,080	169,346	404,752	276,141	63,316	41,609	18,039	14,287	770,196	573,151
NBCB	61,101	70,954	235,464	204,750	320,763	217,112	27,413	50,393	13,762	10,904	658,503	554,113
Average	15,583,746	16,152,333	58,139,841	53,484,284	28,695,401	23,198,033	10,423,998	9,515,816	4,386,492	3,412,351	117,229,478	105,762,817

Source: The banks’ 2013 annual reports & 2014 Q3 report, KPMG China research

Appendix –Total asset structure

	Cash and balances with central bank %		Loans and advances to customers %		Securities investment %		Interbank assets %		Other assets %	
	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31
ICBC	14.81%	17.10%	52.52%	52.25%	22.80%	21.51%	6.43%	6.07%	3.44%	3.07%
CCB	14.56%	15.59%	55.08%	55.08%	21.50%	22.26%	6.10%	4.71%	2.76%	2.35%
BOC	13.67%	15.68%	53.01%	54.39%	20.76%	17.77%	6.54%	7.41%	6.03%	4.75%
ABC	15.39%	17.17%	47.90%	48.45%	24.06%	22.38%	9.73%	9.32%	2.92%	2.67%
BCM	13.04%	14.97%	50.50%	53.52%	21.34%	18.55%	9.99%	8.38%	5.13%	4.59%
CMB	11.81%	13.84%	50.43%	51.75%	25.45%	20.86%	9.37%	11.10%	2.93%	2.46%
CNCB	10.09%	13.01%	49.80%	51.62%	30.73%	25.81%	6.76%	7.20%	2.61%	2.37%
CMBC	10.16%	11.75%	44.17%	44.19%	18.72%	14.90%	20.96%	23.11%	5.99%	6.06%
SPDB	10.21%	12.06%	43.83%	47.06%	33.37%	29.88%	9.48%	8.59%	3.12%	2.40%
CIB	8.12%	11.15%	32.17%	35.16%	45.00%	30.84%	10.32%	19.62%	4.39%	3.23%
CEB	11.37%	12.94%	46.45%	46.45%	27.07%	21.50%	12.20%	16.80%	2.91%	2.31%
HXB	15.35%	15.78%	50.82%	49.48%	20.08%	22.14%	12.09%	11.07%	1.66%	1.54%
PAB	11.44%	14.01%	45.49%	45.90%	20.26%	22.02%	17.95%	13.33%	4.87%	4.74%
BOB	9.04%	12.33%	40.84%	42.95%	22.90%	22.90%	25.65%	20.16%	1.57%	1.66%
BON	10.00%	12.52%	26.89%	29.55%	52.55%	48.18%	8.22%	7.26%	2.34%	2.49%
NBCB	9.28%	12.80%	35.76%	36.95%	48.71%	39.18%	4.16%	9.09%	2.09%	1.97%
Average	11.77%	13.92%	45.35%	46.55%	28.46%	25.04%	11.00%	11.45%	3.42%	3.04%

Source: The banks' 2013 annual reports & 2014 Q3 report, KPMG China research

Appendix – Scale of loan

RMB million	2015/03/31	2015/06/30	2015/09/30	2014/12/31	Growth rate
ICBC	11,319,842	11,642,085	11,880,659	11,026,331	8%
CCB	9,812,211	10,157,079	10,091,195	9,474,523	7%
BOC	8,802,394	8,897,154	9,035,590	8,483,275	7%
ABC	8,098,067	8,727,449	8,873,759	8,098,067	10%
BCM	3,592,651	3,709,152	3,727,130	3,431,735	9%
CMB	2,513,919	2,646,157	2,718,502	2,513,919	8%
CNCB	2,244,011	2,308,003	2,377,570	2,187,908	9%
CMBC	1,812,666	1,949,336	1,978,780	1,812,666	9%
SPDB	2,084,305	2,174,434	2,187,944	2,028,380	8%
CIB	1,678,810	1,722,946	1,753,850	1,593,148	10%
CEB	1,371,835	1,418,201	1,468,522	1,299,455	13%
HXB	978,564	1,011,014	1,017,219	939,989	8%
PAB	1,124,168	1,187,834	1,265,600	1,024,734	24%
BOB	706,400	736,992	755,000	675,288	12%
BON	186,995	204,049	214,795	174,685	23%
NBCB	220,560	231,683	241,801	210,062	15%
Total	56,547,398	58,723,568	59,587,916	54,974,165	8%

Source: The banks' 2013 Q3 & 2014 Q3 report, KPMG China research

Appendix – Loan quality

	NPL ratio		Allowance to NPL		Allowance to total loans ratio	
	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31
ICBC	1.44%	1.13%	157.63%	206.90%	2.27%	2.34%
CCB	1.45%	1.19%	178.99%	222.33%	2.60%	2.65%
BOC	1.43%	1.18%	153.72%	187.60%	2.20%	2.21%
ABC	2.02%	1.54%	218.30%	286.53%	4.41%	4.42%
BCM	1.42%	1.25%	165.33%	178.88%	2.35%	2.24%
CMB	1.60%	1.11%	195.47%	233.42%	3.13%	2.59%
CNCB	1.42%	1.30%	178.42%	181.26%	2.53%	2.36%
CMBC	1.45%	1.17%	161.62%	182.20%	2.34%	2.12%
SPDB	1.36%	1.06%	248.67%	249.09%	3.38%	2.65%
CIB	1.57%	1.10%	189.64%	250.21%	2.97%	2.76%
CEB	1.43%	1.19%	164.75%	180.52%	2.36%	2.16%
HXB	1.37%	1.09%	187.31%	233.13%	2.57%	2.54%
PAB	1.34%	1.02%	166.97%	200.90%	2.24%	2.06%
BOB	0.94%	0.86%	N/A	324.22%	N/A	2.78%
BON	0.95%	0.94%	377.41%	325.72%	3.59%	3.06%
NBCB	0.88%	0.89%	299.26%	285.17%	2.62%	2.53%
Average	1.38%	1.13%	202.90%	233.01%	2.77%	2.59%

Source: The banks’ 2013 annual reports & 2014 Q3 report, KPMG China research

Appendix – Liability

RMB million	Deposits from customers		Liabilities from banks and other financial institutions		Debt certificates issued		Other liabilities		Total	
	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31
ICBC	16,521,828	15,556,601	2,379,867	1,920,196	278,277	279,590	1,234,293	1,316,262	20,414,265	19,072,649
CCB	13,827,713	12,899,153	2,084,394	1,388,048	389,523	431,652	645,345	773,392	16,946,975	15,492,245
BOC	11,548,697	10,885,223	2,316,163	2,005,577	277,084	278,045	1,221,013	899,109	15,362,957	14,067,954
ABC	13,554,404	12,533,397	1,757,025	1,187,085	308,323	325,167	914,631	895,884	16,534,383	14,941,533
BCM	4,493,337	4,029,668	1,618,020	1,324,606	137,401	129,547	436,008	310,873	6,684,766	5,794,694
CMB	3,467,658	3,304,438	1,004,639	859,039	203,916	106,155	196,114	147,137	4,872,327	4,416,769
CNCB	3,148,587	2,849,574	889,632	749,549	201,234	133,488	117,549	138,858	4,357,002	3,871,469
CMBC	2,708,015	2,433,810	958,828	975,010	194,993	129,279	212,276	229,281	4,074,112	3,767,380
SPDB	3,001,090	2,793,224	1,070,233	892,869	313,757	146,667	133,929	99,879	4,519,009	3,932,639
CIB	2,431,748	2,267,780	2,034,639	1,447,799	370,447	185,787	146,725	243,937	4,983,559	4,145,303
CEB	1,958,935	1,785,337	627,315	595,703	197,067	89,676	86,591	86,811	2,869,908	2,557,527
HXB	1,332,133	1,303,216	394,200	367,180	41,913	23,839	68,998	55,294	1,837,244	1,749,529
PAB	1,723,328	1,533,183	452,591	421,570	192,325	41,750	73,680	59,007	2,441,924	2,055,510
BOB	1,020,520	922,813	465,533	396,813	130,120	56,783	63,523	51,884	1,679,696	1,428,293
BON	490,996	368,329	140,463	124,106	76,342	33,856	17,737	14,075	725,538	540,366
NBCB	359,306	306,532	99,917	128,861	128,205	50,655	32,595	33,900	620,023	519,948
Total	81,588,295	75,772,278	18,293,459	14,784,011	3,440,927	2,441,936	5,601,007	5,355,583	108,923,688	98,353,808

Source: The banks' 2013 annual reports & 2014 Q3 report, KPMG China research

Appendix – Securities investment structure

RMB million	Financial assets at fair value through profit or loss		Available-for-sale financial assets		Held-to-maturity investment		Investment classified as receivables		Total	
	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31
ICBC	465,734	346,828	1,388,838	1,188,288	2,815,399	2,566,390	369,843	331,731	5,039,814	4,433,237
CCB	159,450	332,235	946,215	926,139	2,592,316	2,298,663	241,561	170,801	3,939,542	3,727,838
BOC	121,165	104,528	980,582	750,685	1,691,177	1,424,463	667,490	430,699	3,460,414	2,710,375
ABC	412,789	414,660	1,015,701	927,903	2,268,457	1,710,950	564,761	522,117	4,261,708	3,575,630
BCM	145,502	124,978	253,293	210,016	843,374	635,570	295,589	211,588	1,537,758	1,182,152
CMB	48,190	40,190	292,918	278,526	343,053	259,434	645,051	408,752	1,329,212	986,902
CNCB	23,287	27,509	360,001	209,404	181,482	177,957	865,162	653,256	1,429,932	1,068,126
CMBC	30,901	27,213	170,588	159,724	233,907	176,834	383,486	234,393	818,882	598,164
SPDB	47,304	32,841	214,173	222,208	221,570	121,698	1,126,040	877,171	1,609,087	1,253,918
CIB	41,748	44,435	375,257	408,066	203,012	197,790	1,760,412	708,446	2,380,429	1,358,737
CEB	8,604	4,377	208,062	138,559	153,682	111,697	465,143	333,911	835,491	588,544
HXB	9,595	9,066	70,993	63,448	174,124	136,277	136,790	201,134	391,502	409,925
PAB	17,597	25,811	766	1,493	260,022	207,874	248,290	246,258	526,675	481,436
BOB	17,027	13,360	112,592	109,706	146,858	120,099	132,963	105,876	409,440	349,041
BON	22,098	8,270	92,417	55,364	73,586	67,056	216,651	145,451	404,752	276,141
NBCB	9,976	8,879	196,886	120,109	30,465	16,569	83,437	71,555	320,764	217,112
Total	1,580,967	1,565,180	6,679,282	5,769,638	12,232,484	10,229,321	8,202,669	5,653,139	28,695,402	23,217,278

Source: The banks' 2013 annual reports & 2014 Q3 report, KPMG China research

Appendix – Capital adequacy ratio and Core capital adequacy ratio

	Deposits from customers%		Liabilities from banks and other financial institutions%		Debt certificates issued%		Other liabilities%	
	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31	2015/09/30	2014/12/31
ICBC	80.93%	81.56%	11.66%	10.07%	1.36%	1.47%	6.05%	6.90%
CCB	81.59%	83.26%	12.30%	8.96%	2.30%	2.79%	3.81%	4.99%
BOC	75.17%	77.38%	15.08%	14.26%	1.80%	1.98%	7.95%	6.39%
ABC	81.98%	83.88%	10.63%	7.94%	1.86%	2.18%	5.53%	6.00%
BCM	67.22%	69.54%	24.20%	22.86%	2.06%	2.24%	6.52%	5.36%
CMB	71.17%	74.82%	20.62%	19.45%	4.19%	2.40%	4.03%	3.33%
CNCB	72.26%	73.60%	20.42%	19.36%	4.62%	3.45%	2.70%	3.59%
CMBC	66.47%	64.60%	23.53%	25.88%	4.79%	3.43%	5.21%	6.09%
SPDB	66.41%	71.03%	23.68%	22.70%	6.94%	3.73%	2.96%	2.54%
CIB	48.80%	54.71%	40.83%	34.93%	7.43%	4.48%	2.94%	5.88%
CEB	68.26%	69.81%	21.86%	23.29%	6.87%	3.51%	3.02%	3.39%
HXB	72.51%	74.49%	21.46%	20.99%	2.28%	1.36%	3.76%	3.16%
PAB	70.57%	74.59%	18.53%	20.51%	7.88%	2.03%	3.02%	2.87%
BOB	60.76%	64.61%	27.72%	27.78%	7.75%	3.98%	3.78%	3.63%
BON	67.67%	68.16%	19.36%	22.97%	10.52%	6.27%	2.44%	2.60%
NBCB	57.95%	59.04%	16.12%	24.78%	20.68%	9.74%	5.26%	6.52%
Average	69.35%	71.56%	20.50%	20.43%	5.83%	3.45%	4.32%	4.58%

Source: The banks’ 2013 annual reports & 2014 Q3 report, KPMG China research

Appendix – Loan-to-deposit ratio

	2015/03/31	2015/06/30	2015/09/30	2014/12/31
ICBC	68.59%	68.90%	69.44%	68.40%
CCB	71.80%	74.16%	74.92%	73.45%
BOC	71.75%	72.83%	78.24%	72.97%
ABC	64.20%	57.70%	65.47%	64.61%
BCM	73.79%	72.09%	73.70%	74.07%
CMB	78.71%	71.62%	78.40%	76.08%
CNCB	77.26%	71.14%	75.51%	73.08%
CMBC	77.03%	69.91%	73.07%	74.48%
SPDB	72.40%	70.51%	69.58%	71.99%
CIB	69.77%	65.87%	72.12%	64.76%
CEB	74.54%	72.30%	74.97%	70.10%
HXB	73.48%	72.74%	72.50%	68.52%
PAB	69.77%	70.40%	70.17%	65.39%
BOB	76.44%	74.02%	73.98%	71.41%
BON	42.68%	42.84%	43.75%	47.43%
NBCB	59.23%	58.96%	58.81%	64.12%
Average	70.29%	72.75%	70.38%	68.80%

Source: The banks' 2013 Q3 & 2014 Q3 report, KPMG China research

Appendix – Capital adequacy ratio and Core capital adequacy ratio

	Capital adequacy ratio		Core capital adequacy ratio	
	2015/09/30	2014/12/31	2015/09/30	2014/12/31
ICBC	14.43%	14.53%	12.67%	12.19%
CCB	14.97%	14.87%	12.73%	12.12%
BOC	13.65%	13.87%	11.68%	11.35%
ABC	13.21%	12.82%	10.43%	9.46%
BCM	13.30%	14.04%	11.29%	11.30%
CMB	12.79%	12.38%	10.83%	10.44%
CNCB	12.00%	12.33%	9.04%	8.99%
CMBC	11.36%	10.69%	9.02%	8.59%
SPDB	12.33%	11.25%	9.38%	9.05%
CIB	11.20%	11.29%	9.23%	8.89%
CEB	11.91%	11.21%	10.18%	9.34%
HXB	10.87%	11.03%	8.82%	8.49%
PAB	11.08%	10.86%	9.14%	8.64%
BON	12.11%	12.00%	9.14%	8.59%
NBCB	12.53%	12.40%	8.92%	10.02%
Average	12.52%	12.37%	10.17%	9.83%

Source: The banks' 2013 annual reports & 2014 Q3 report, KPMG China research

Glossary of abbreviated terms

Bank names

- PBOC – People's Bank of China
- ICBC – Industrial and Commercial Bank of China
- CCB – China Construction Bank
- BOC – Bank of China
- ABC – Agricultural Bank of China
- BCM – Bank of Communications
- CMB – China Merchants Bank
- CNCB – China CITIC Bank
- CMBC – China Minsheng Bank
- SPDB – Shanghai Pudong Development Bank
- CIB – Industrial Bank
- CEB – China Everbright Bank
- HXB – Hua Xia Bank Co.,Ltd
- PAB – PingAn Bank Co., Ltd
- BOB – Bank of Beijing Co., Ltd
- BON – Bank of Nanjing Co., Ltd
- NBCB – Bank of Ningbo Co., Ltd

General terms

- MOF – Ministry of Finance
- CBRC – China Banking Regulatory Commission
- CSRC – China Securities Regulatory Commission
- SAFE – State Administration of Foreign Exchange
- SSE – Shanghai Stock Exchange
- SEHK- The Stock Exchange of Hong Kong
- SHIBOR – Shanghai Interbank Offered Rate
- NIM – Net interest margin

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