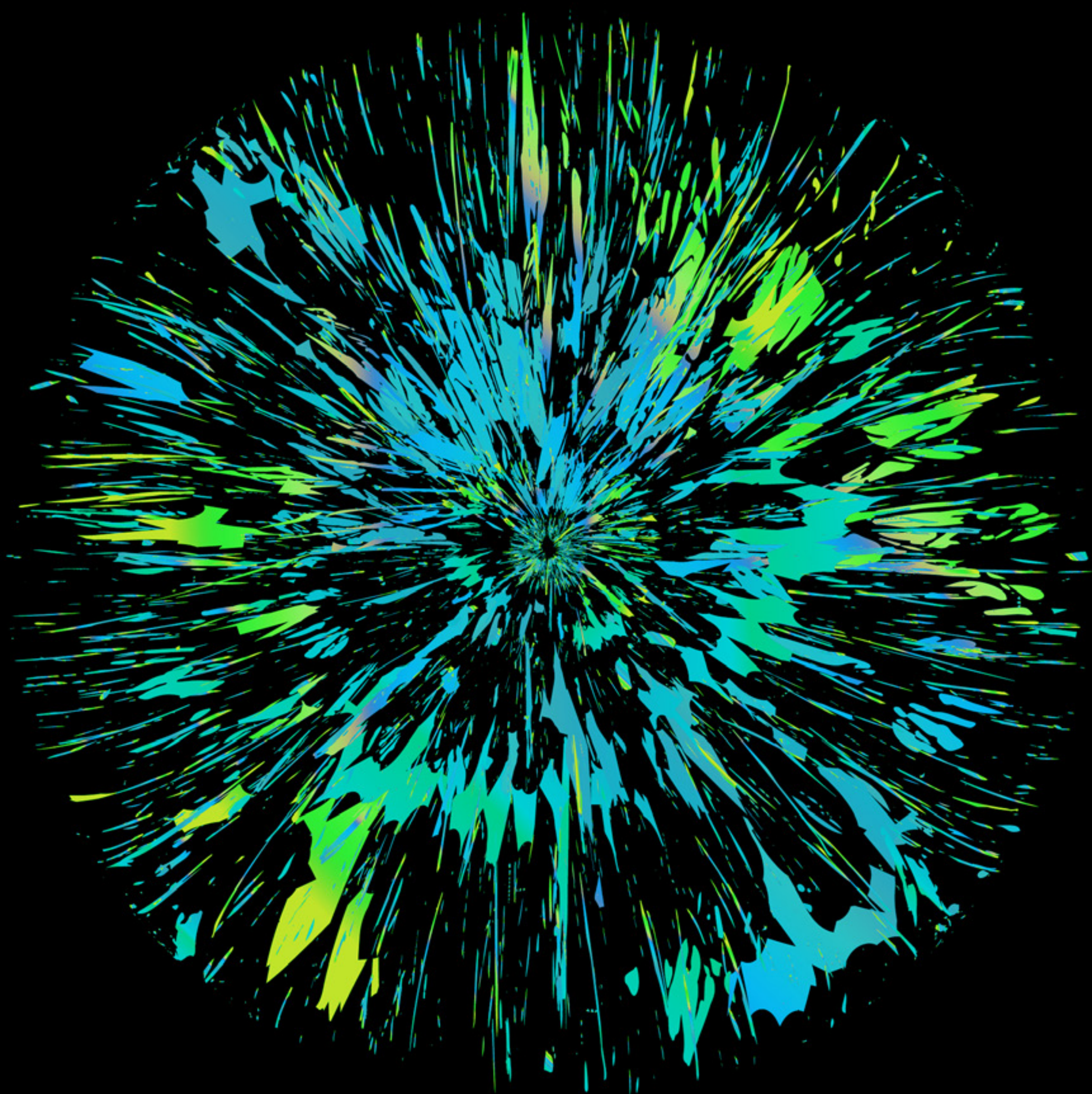
Deloitte. 德勤



# Embrace the New Era with an Increased Focus on Quality Development

## Chinese Banking Sector 2020 Review and 2021 Outlook

MAKING AN IMPACT THAT MATTERS since 1845

**Deloitte China Center for Financial Services**

# Foreword

2020 marks the concluding year of the 13th Five-Year Plan, which was an eventful year in history. China's banking sector stood the COVID-19 test by prudently tackling the risks, maintaining stable operations, and making notable headways to support the recovery of the real economy. In 2020, the total assets of China's banking sector saw steady expansion, with improved asset quality. Based on the indicators published by the China Banking and Insurance Regulatory Commission (CBIRC), by the end of 2020, the total assets of China's banking institutions climbed 10.1% year-on-year to RMB319.7 trillion; the nonperforming loans ratio stood at 1.84%, 0.02 percentage points lower from the end of 2019. The banking sector provided strong financial support to the national policy goals of stabilizing the six fronts (employment, finance, foreign trade, foreign investment, domestic investment and market expectations) and guaranteeing the six priorities (jobs, livelihoods, development of market entities, food and energy security, stable operation of industrial supply chains, and smooth functioning at the community level). Specifically, RMB loans increased by RMB19.6 trillion throughout the year, RMB2.8 trillion up year-on-year; inclusive loans to small and micro companies grew by 30.9% year-on-year. To guard against systematic financial risks, the banking institutions strengthened their risk defense ability by disposing non-performing assets of RMB3.02 trillion, and setting aside a loan loss provision of RMB1.9 trillion, an increase of RMB113.9 billion over 2019. At the end of 2020, the provision coverage ratio stood at 182.3%, and the loan loss provision coverage ratio was 3.5%, both maintaining a relatively high level.

At the beginning of the 14th Five-Year Plan, 2021 is a year of great importance in advancing China's modernization process. Currently, there are still great uncertainties from the pandemic and the external environment, which cannot provide strong support to economic recovery, and various risks associated with the pandemic cannot be underestimated. As China fully opens the financial sector and liberalizes interest rates, intensifying market competition will increasingly squeeze banks' lending margins, which means banks should place competitive differentiation front and center. With the vigorous development of Fintech, the regulators put greater emphasis on macro-prudence, which requires financial institutions to focus on cyber and data security, as well as privacy and consumer rights protection when pushing ahead with their digital transformation. To go from big to great, China's financial industry as a whole will need to address the increasingly diverse challenges and opportunities. Commercial banks should remain prudent and agile in order to timely respond to the market changes, such as regulations, competition landscape and technology advancement.

The *Chinese Banking Sector 2020 Review and 2021 Outlook* is the 13th edition of the analysis report series. In this edition, the Deloitte China FSI research team took eight domestic commercial banks as examples while using six foreign systematically important banks as benchmarks, systematically studied the profitability, assets, liabilities, and capital strength of the listed banks in China, revealed some of their remarkable achievements in 2020, and identified areas of improvement for the future. Notably, we have incorporated RORWA and ROROC as two additional indicators in this year's analysis to better reflect the core competitiveness of commercial banks. Besides, we have leveraged our experts team to provide leading insights in various industry hot topics, i.e. green finance, asset management, Fintech regulation, digital empowerment, capital replenishment, and low-carbon transition. We believe this report will serve as a valuable reference for Chinese commercial banks when they embark on a new journey towards the goals of the 14th Five-Year Plan.

14 domestic and foreign banks are listed as follows:

**Table 1: 8 domestic commercial banks (hereinafter referred to as the "domestic banks")**

| |
|---|
| Industrial and Commercial Bank of China (ICBC) |
| China Construction Bank (CCB) |
| Agricultural Bank of China (ABC) |
| Bank of China (BOC) |
| Postal Savings Bank of China (PSBC) |
| Bank of Communications (BOCOM) |
| China Merchants Bank (CMB) |
| Industrial Bank (IB) |

**Table 2: 6 foreign systematically important banks (hereinafter referred to as the "foreign banks"**

| |
|---|
| J.P. Morgan Chase & Co  (JPM) |
| Bank of American (BAC) |
| Wells Fargo  (WFC) |
| Citigroup (Citi) |
| HSBC |
| MUFG Bank |

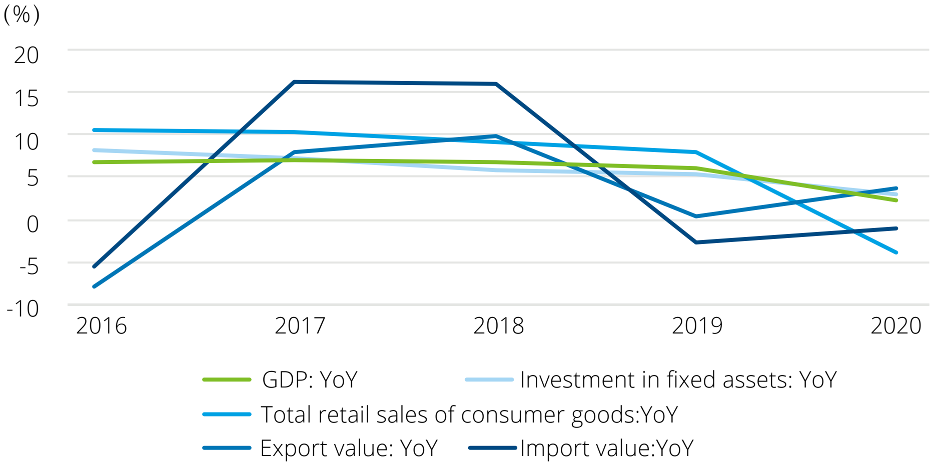
The data in this report, unless otherwise indicated, are from the annual reports published by the above banks. The balance sheet data of foreign banks are converted at the respective year-end exchange rate, and the income statement data are converted at the average exchange rate of each year. Among them, the MUFG bank's FY2019 reporting period was from April 1, 2019 to March 31, 2020, and the first-half annual reporting period of FY2020 was from April 1, 2020 to September 30, 2020. Since the FY2020 annual report of MUFG bank has not been released, the data of MUFG bank's FY2020 semi-annual report were used—the income statement data were annualized and other periods were accordingly calculated. Unless otherwise specified, the average indexes listed in this report are all weighted average indexes of the examples.

# 1. 2020 Economic and Financial Review

## V-shaped economic recovery in China after the COVID-19 pandemic

In 2020, the Chinese government actively and effectively controlled the COVID-19 outbreak, and quickly integrated resources to resume production. China's economy saw a V-shaped recovery during the second half of the year, achieving GDP growth of 2.3%. Investment boosted economic growth, with fixed asset investment up 2.9%. However, the recovery of consumption was relatively weak, and the total retail sales of consumer goods fell 3.9%, but sales of online goods and services grew 10.9%. Consumer confidence also rebounded significantly in the second half of the year. In terms of foreign trade, China's export saw significant growth in the second half of the year with a cumulative annual growth of 3.6% (in US dollars) thanks to the substitution effect caused by the stagnation of production activities abroad due to the pandemic. Finally, due to the weakening US dollar and the interest rate differences, the RMB exchange rate strengthened. The central parity rate of the US dollar against the RMB rose from 6.96 at the beginning of the year to 6.52 at the end of the year. China attracted more capital inflows and its foreign exchange reserves reached USD3.22 trillion, an increase of over USD100 billion from the end of 2019.

**Figure 1: Economic Growth of China (%)**




Source: National Bureau of Statistics

### External uncertainties increased

Under the impact of anti-globalization, populism and COVID-19, China is facing an increasingly complex external environment. Particularly, China-US relations became the biggest external economic risk of China. After US President Biden took office, China and US held a high-level strategic dialogue in Alaska in March 2021. The dialogue, although did not help in easing the tensions between the two countries, demonstrated the red lines of the two sides as well as the shared interests and potential for cooperation on issues such as climate change and epidemic control. Most importantly, China never stopped its efforts to improve bilateral relations through further opening up, including accelerating the opening up of the financial and other service sectors and providing more market access opportunities by easing licensing and ownership restrictions. China and the US may take this opportunity to find a new balance.

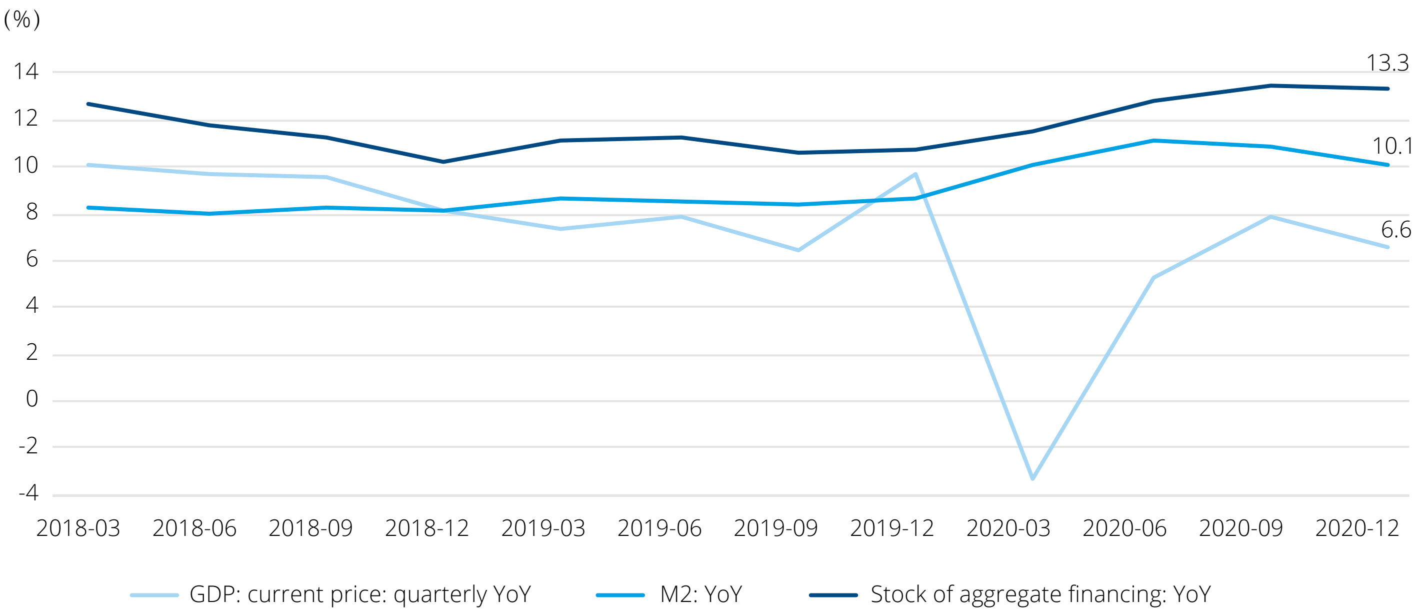
### Accelerate the construction of a new development paradigm

Facing an increasingly complex external environment, the Chinese government proposed for the first time in May 2020 to accelerate the construction of a new development paradigm featuring dual circulation, in which domestic and overseas markets reinforce each other, with the domestic market as the mainstay. This does not mean an end to the opening up policy, rather, it reflects the policymakers' judgment on China's economy—China's foreign trade will face many challenges in the medium term, and domestic demand will be a more reliable growth driver and mitigate external impact. Therefore, building a new development paradigm definitely means that we must take the domestic market as the foothold of development, unswervingly expanding domestic demand, improving people's livelihood, promoting employment, and driving the increase of disposable income; in the meantime, we will strengthen opening up and cooperation to further interactions with the world economy, improve efficiency and level of domestic circulation, and achieve broader and deeper opening up, fostering a tighter and more stable global economic system through smooth connectivity of domestic and international circulation.

### Countercyclical adjustment intensified

To combat COVID-19 and support the resumption of work and production, the central bank strengthened countercyclical adjustment. As of the end of 2020, the balance of broad money supply (M2) increased 10.1% year-on-year, and the stock of aggregate financing increased 13.3% year-on-year, which was basically in line with (even slightly higher than) the nominal GDP growth, creating an appropriate monetary and financial environment for achieving the "six fronts" and "six priorities".

**Figure 2: Aggregate Financing, M2 and Nominal Economic Growth**




Source: People's Bank of China, Wind

In 2020, the People's Bank of China cut the reserve requirement ratio (RRR) three times, provided around RMB1.75 trillion long-term liquidity, guided financial institutions to increase credit supply in inclusive finance and increase credit supply for micro, small and medium-sized enterprises as well as those in the industries severely impacted by the pandemic.

**Table 3: RRR Cuts in 2020**

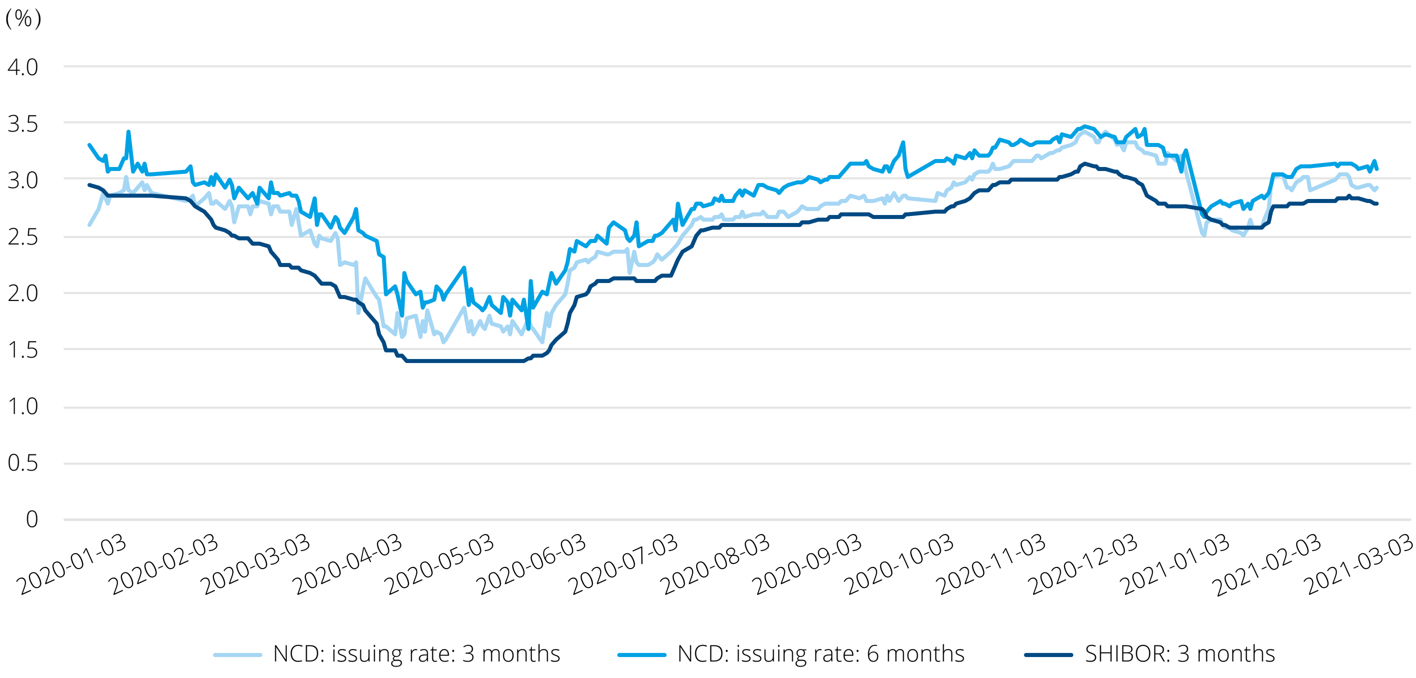
| Time | RRR cuts | Released funds |
|---|---|---|
| **January 2020** | **RRR cut:**<br>• RRR cut for financial institutions by 0.5 percentage points (excluding financial companies, financial leasing companies and auto finance companies) | Over RMB800 billion |
| **March 2020** | **Targeted cuts in RRR for inclusive finance:**<br>• Banks meeting the inclusive financial credit criteria in 2019 were given a preferential RRR cut of 0.5 or 1.5 percentage points<br>• Joint-stock commercial banks receiving 0.5 percentage points of RRR cut upon assessment in the current period were given an additional RRR cut of 1 percentage points | About RMB550 billion |
| **April 2020** | **Targeted cuts in RRR for rural and city commercial banks:**<br>• The RRR cut for rural commercial banks, rural cooperative banks, rural credit cooperatives, village banks, and city commercial banks that operate only within the provincial administrative area was 1 percentage points, which was implemented by two batches, respectively on April 15 and May 15<br>• The excess reserve ratio for financial institutions was cut from 0.72% to 0.35% | About RMB400 billion |

Source: People’s Bank of China

## Money market rate rose

The epidemic prevention and control was normalized in the second half of 2020, the economy saw V-shaped recovery, and the market interest rate gradually increased, which squeezed the profit margins of banks. Proper rise of loan interest rate was in line with marketization. The implementation of monetary policies gradually returned to normal.

**Figure 3: Money Market Rate Gradually Rose to Pre-pandemic Level**

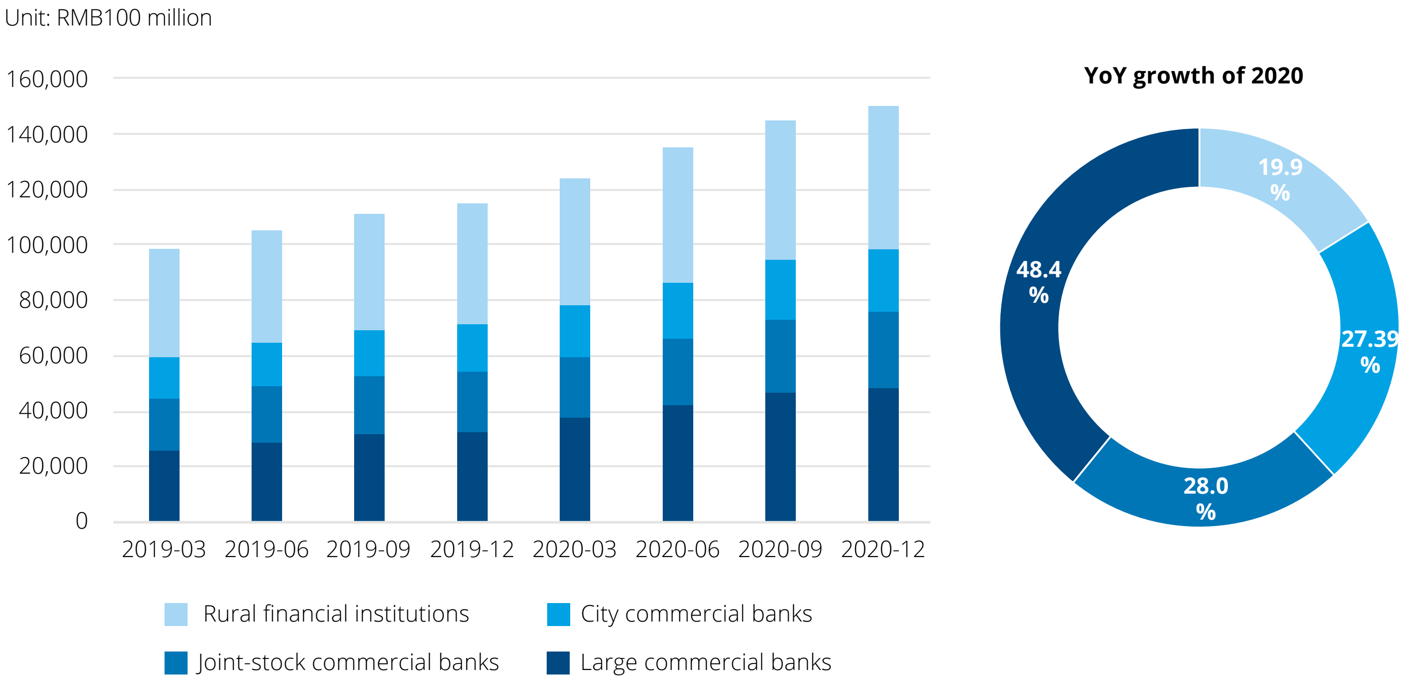



Source: Wind

## Digitalization boosted the development of inclusive finance

The digitization of industries accelerated during the pandemic. In the financial industry, digital transformation helped inclusive finance expand significantly. On March 2, Guo Shuqing, Chairman of CBIRC, said at a news conference of the State Council Information Office that the report of a relevant international organization showed that China's inclusive financial services had reached world advanced levels, and China's electronic payment, digital credit and online insurance were at a global leading position. In 2020, the total capital investment of banking institutions and insurance institutions was RMB207.8 billion and RMB35.1 billion, with year-on-year growth of 20% and 27%, respectively. Five large banks established in house Fintech companies, and the availability and convenience of financial services were significantly enhanced. As of the end of 2020, the balance of inclusive finance lending to small and micro businesses was RMB15.3 trillion, with a growth rate of more than 30%, among them, the five large banks grew by 54.8%. Basic financial services have generally covered all administrative villages.

**Figure 4: Inclusive Loans of Financial Institutions to Small and Micro Businesses**




Source: CBIRC, Wind

### Continue to prevent and defuse financial risks

Preventing and defusing financial risks will remain the regulatory focus for some time to come, which mainly includes the following aspects. First, deleveraging—the proportion of assets circulating in the financial sector dropped significantly; the total assets of the banking industry grew at an average annual rate of 8.3% between 2017 and 2020, only about half the average annual growth rate of the 2009-to-2016 period. Second, the ability to identify and dispose of non-performing assets improved. An aggregate of RMB8.8 trillion of non-performing loans were disposed of between 2017 and 2020, exceeding the total of the previous 12 years. RMB3.02 trillion of non-performing loans were disposed of in 2020, an increase of 51% over 2019. Third, high-risk financial institutions were effectively dealt with, such as Baoshang Bank transferring the relevant businesses to Mengshang Bank and Huishang Bank, Hengfeng Bank's reform and restructuring, financial restructuring of the Bank of Jinzhou, and the regulators taking over Tianan Property Insurance Co., Ltd. and other 8 financial institutions. Fourth, the property bubble was contained. In 2020, real estate loans grew at a slower pace than all other loans for the first time in eight years. Fifth, market-oriented debt-for-equity swaps, amounting to RMB1.6 trillion, were conducted by the rule of law. By the end of 2020, 20,000 creditor committees had been set up across the country to effectively deal with the debts of large and medium-sized enterprises. In addition, the scale of shadow banking decreased by RMB20 trillion from the historical peak.

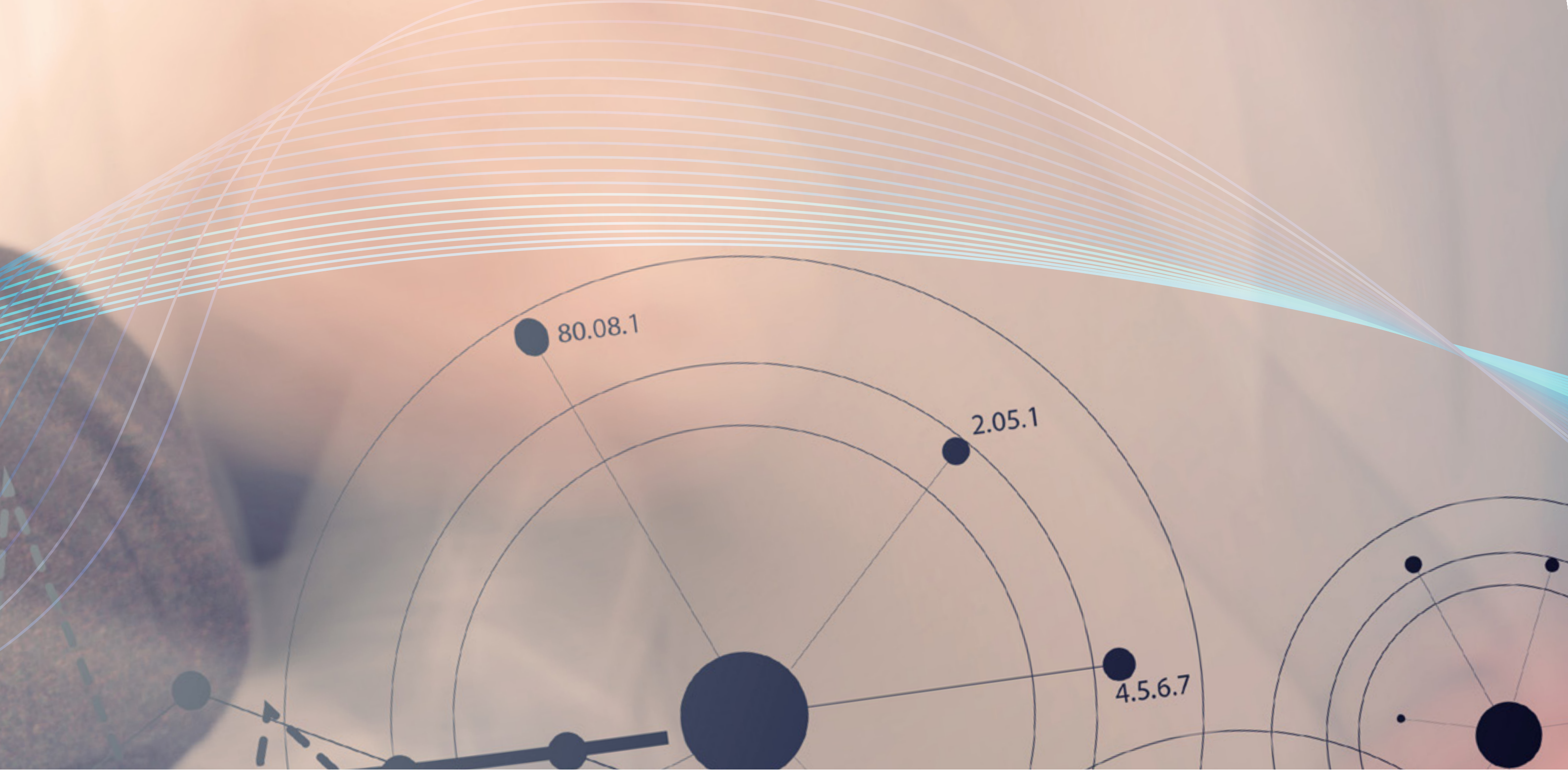
Considering the adverse impact of COVID-19 on the economy, the People's Bank of China conducted stress tests on 1,550 financial institutions in 2020, and the calculation showed that the capital adequacy ratio of 30 large and medium-sized banks met the regulatory requirements of 10.5%, showing strong ability to resist credit risks. The existing provisions and capital levels of 1,520 small and medium-sized banks could support their overall non-performing loan ratio to rise by 4.55 percentage points to 7.54%, which could still achieve a provision coverage ratio of 100% and a capital adequacy ratio of 10.5%; If the non-performing loan ratio increased by 100%, 200% and 400%, the overall capital adequacy ratio would decrease to 11.54%, 9.51% and 5.16%, and there were respectively 589, 786 and 977 banks that failed the press testing. In addition, proper attention should be paid to risks related to customer concentration, off-balance-sheet businesses, local government debts, and real estate loans.

# Author

**Xu, Si Tao**
**Deloitte China Chief Economist**
**Partner, Deloitte Research**
Tel: +86 10 8512 5601
Email: sxu@deloitte.com.cn

**Zhou, Annie Fei**
**Senior Manager, Center of Financial Services Deloitte China**
Tel: +86 10 8512 5843
Email: annizhou@deloitte.com.cn

# 2. Analysis of Listed Banks' Performance in 2020




# 2.1 Profitability

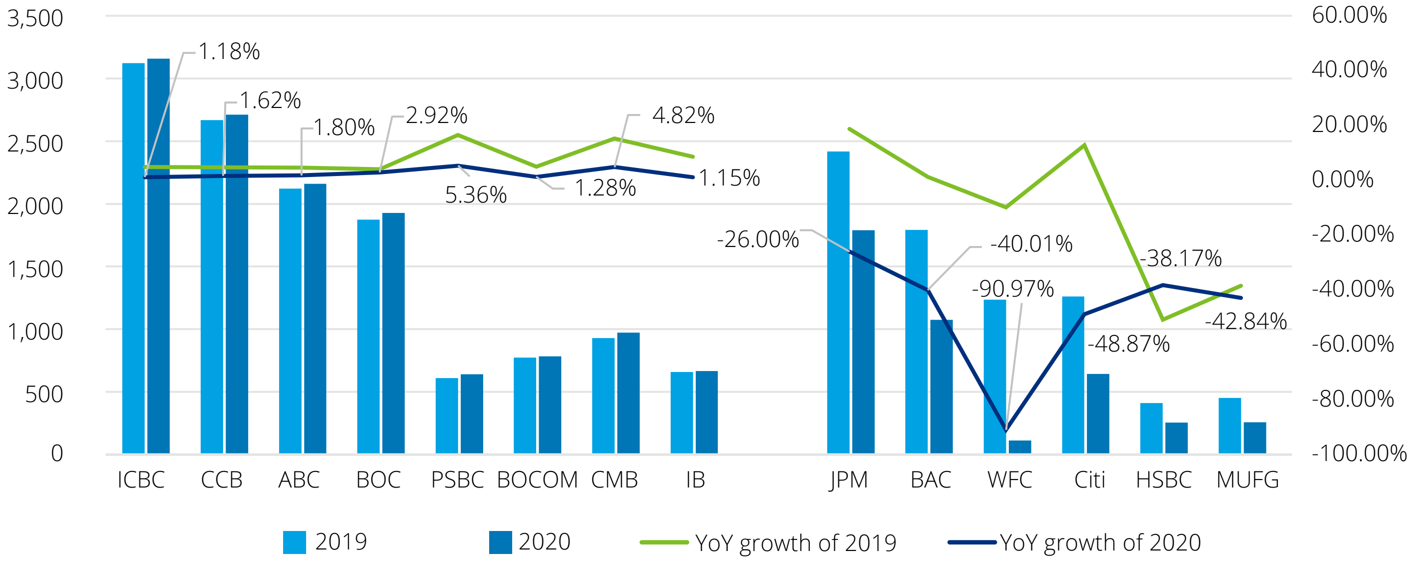
**The overall operating performance of the banking sector was under heavy pressure, and provisions significantly eroded the pre-tax profits**

COVID-19 significantly impacted the economy and financial markets. The global banking sector is undergoing situations that are normally associated with a general economic recession, including but not limited to financial market turmoil and declined credit asset quality, which may lead to more extensive economic recession and exert a long-term adverse impact on the financial performance of the banking sector. Therefore, the COVID-19 pandemic exacerbated the erosion of provisions on the profitability of commercial banks. As the pandemic was effectively controlled in China, and work and production were gradually resumed in the second quarter of 2020, China was the first to see macroeconomic recovery in the world; however, COVIP-19 still spread in foreign countries, therefore, the domestic commercial banks greatly outperformed the foreign banks.

In 2020, the net profit attributable to the shareholders of the parent company of domestic commercial banks totalled RMB1,300.2 billion, an increase of 2.10% (RMB26.8 billion) year-on-year, which decreased compared with the growth of 6.08% in 2019. PSBC ranked the first with a growth rate of 5.36%, followed by CMB with a growth rate of 4.82%; the growth rate of BOC was 2.92%, while the rest five commercial banks' growth was less than 2%. The net profit attributable to the shareholders of the parent company of foreign banks totalled RMB413.2 billion, a year-on-year decrease of RMB343.7 billion, representing an average decrease of 45.40% (the average decrease in 2019 was 3.73%). In addition, foreign banks’ net profit attributable to the shareholders of the parent company was almost halved due to the impact of the provision for credit losses. Among them, Wells Fargo recorded a 90.97% drop in net profit attributable to the shareholders of the parent company.

**Figure 5: Net Profit Attributable to the Shareholders of the Parent Company**

Unit: RMB100 million




In 2020, the pre-provision operating profit (PPOP) of domestic commercial banks totalled RMB2,523.7 billion, a year-on-year increase of RMB134.3 billion or 5.62%, about 1.48% lower than that of the previous year (7.10%)—the decline in growth rate was much lower than that of the net profit attributable to the shareholders of the parent company (3.98%) in the same period. Among them, PSBC's PPOP recorded a slight decline, mainly due to the increase in operating and administration expenses. The PPOP of foreign banks totalled RMB1,021.2 billion, a year-on-year decrease of RMB153.6 billion, or an overall decline of 13.07%, which was far lower than the decline of 45.40% in the net profit attributable to the shareholders of the parent company during the same period. On the whole, the provision for impairment was the main factor causing drastic fluctuation in profitability of both domestic and foreign banks.

## Multiple profitability indicators trended downward, and per capita profitability showed significant difference

### ROA & ROE

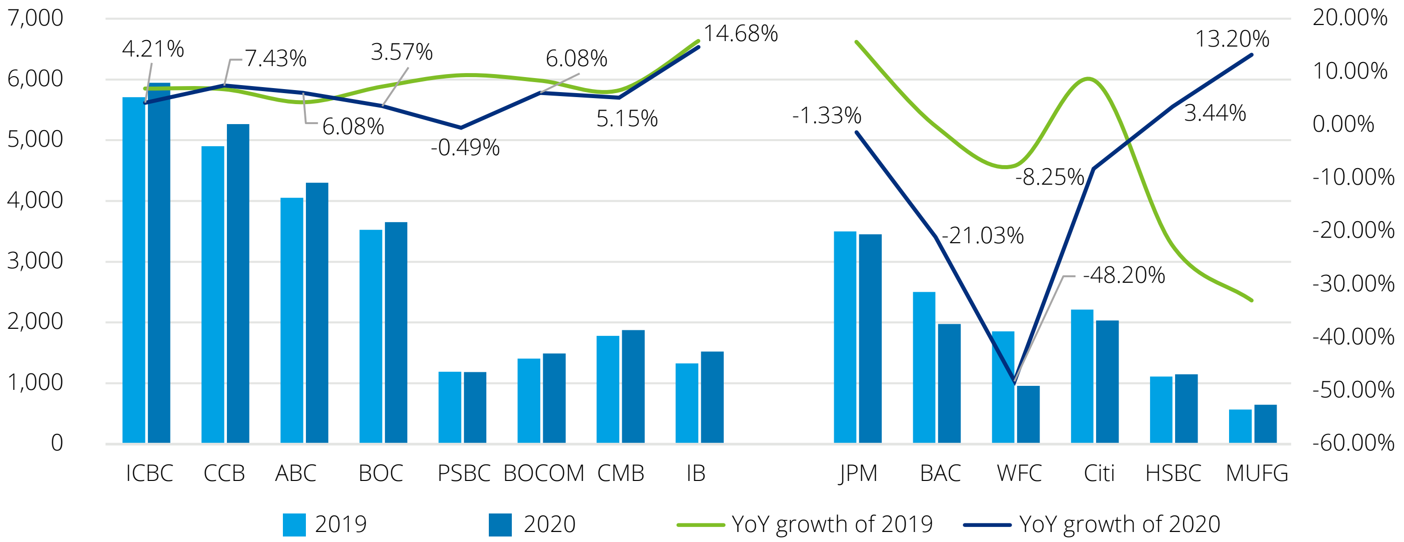
Due to the pressure on the profitability of domestic and foreign commercial banks in 2020, the return on total assets ( "ROA" ) and return on equity ( "ROE" ) showed a downward trend. Due to the continuous impact of COVID-19, the net margin of foreign banks decreased significantly, directly leading to a much higher degree of decline in their ROA and ROE than that of domestic commercial banks.

In 2020, the average ROA of domestic commercial banks was 0.90%, 6 basis points less than the average of the previous year, and the average ROE was 12.07%, 109 basis points less than the average of the previous year. The average ROA of foreign banks was 0.43%, 40 basis points less than the average of the previous year, and the average ROE was 5.21%, 378 basis points less than the average of the previous year.

Loan issuance increased, especially in inclusive finance, and the total assets scale expanded rapidly (see 2.2). The profitability of commercial banks was under much pressure, and the profit growth slowed, which caused the decline in the ROA of domestic commercial banks; the decline of ROE was also directly associated with the rapid increase in net assets caused by the commercial banks' capital supplement through various external means.

**Figure 6: Total PPOP**

Unit: RMB100 million




Note: total PPOP = pretax profits + assets impairment loss + credit impairment loss

**Figure 7: ROA**

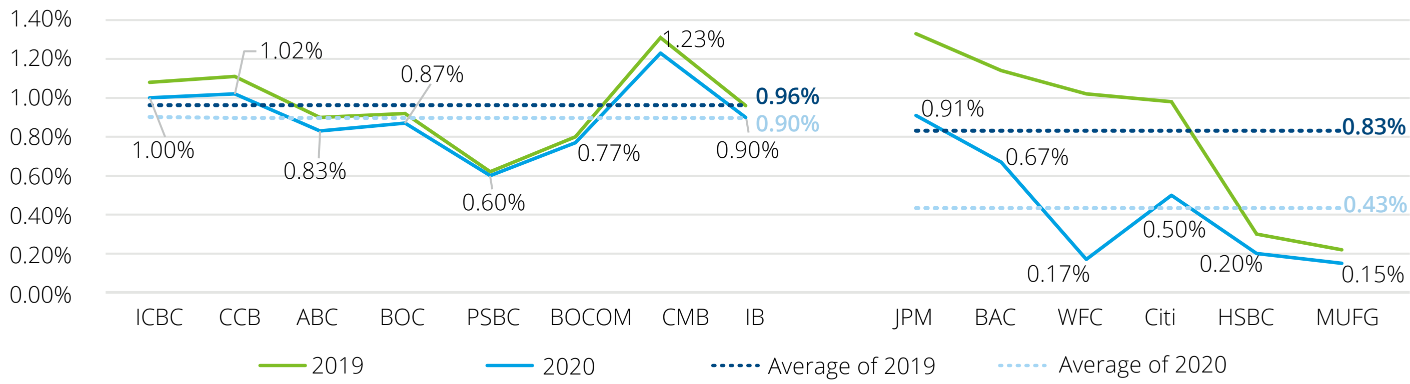
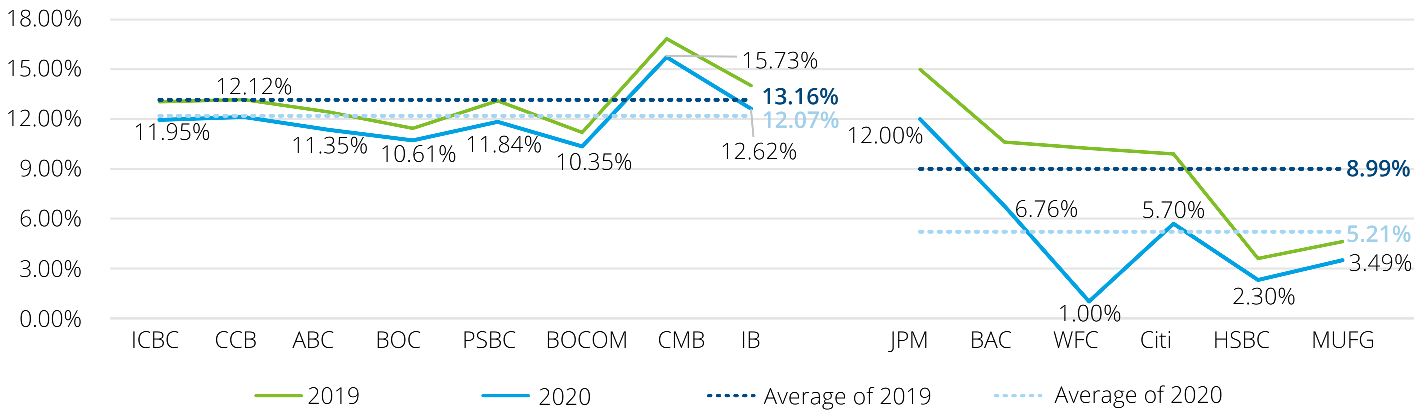


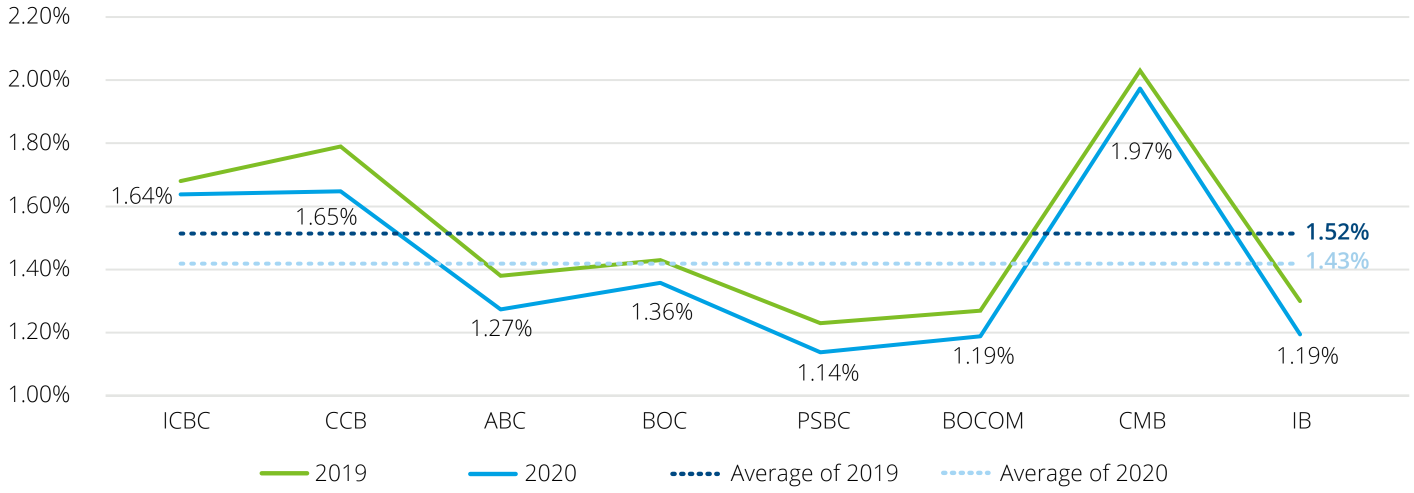

**Figure 8: ROE**



### RORWA & RAROC

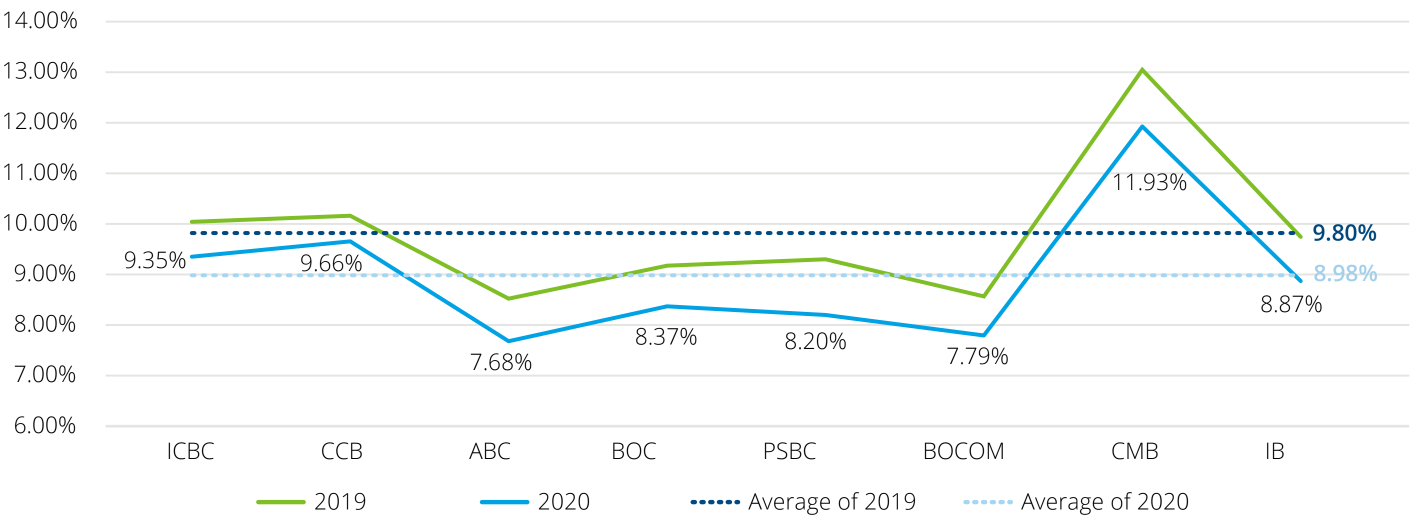
In 2020, the average return on risk-weighted assets (RORWA) of domestic commercial banks was 1.43%, down 9 basis points from the previous year's average. The average risk-adjusted return on capital (RAROC) was 8.98%, down 82 basis points from the previous year's average. Domestic commercial banks vigorously supported the real economy after the pandemic and increased loan issuance, especially inclusive loans to small and micro enterprises. The total lending, risk exposure and risk-weighted assets generally increased. Specifically, CMB outperformed its domestic peers with RORWA at 1.97%, down 6 basis points from the previous year, and RAROC at 11.93%, down 112 basis points from the previous year.

**Figure 9: RORWA**




Note: RORWA = net profit/risk-weighted assets (data of ICBC was from its annual report)

**Figure 10: RAROC**




Note: RAROC = net profit/net capital

### Per capita net profit

In 2020, the average of per capita net profit of domestic commercial banks was RMB760,000, an increase of 0.30% year-on-year. IB recorded the highest per capita net profit at RMB1.14 million. PSBC had the per capita net profit of RMB330,000. On the whole, the per capita profitability of domestic commercial banks greatly differed.

**Figure 11: Per Capita net profit**

Unit: RMB10,000/person

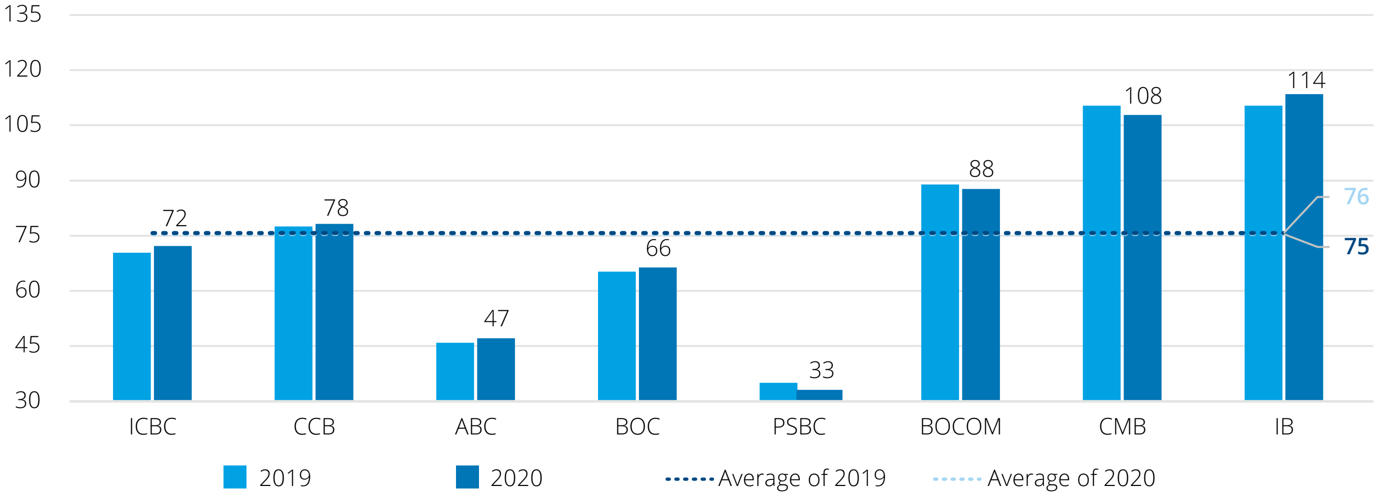



**Table 4: Net Profit and Total Employees**

Unit: RMB100 million /10,000 people

| Item | ICBC | CCB | ABC | BOC | PSBC | BOCOM | CMB | IB |
|---|---|---|---|---|---|---|---|---|
| Net profit in 2019 | 3,134 | 2,692 | 2,129 | 2,019 | 625 | 781 | 934 | 667 |
| Net profit in 2020 | 3,177 | 2,736 | 2,164 | 2,051 | 643 | 796 | 980 | 677 |
| Employees in 2019 | 44.51 | 34.72 | 46.40 | 30.94 | 17.44 | 8.78 | 8.47 | 6.05 |
| Employees in 2020 | 43.98 | 34.97 | 45.90 | 30.91 | 19.45 | 9.07 | 9.09 | 5.96 |

### Growth rate in operating income dropped, and the 2nd-half performance slightly improved

In 2020, the operating income of domestic commercial banks totalled RMB3.888 trillion, a year-on-year increase of RMB190.2 billion or 5.14%; the operating income of foreign banks totalled RMB2,656.3 billion, a year-on-year decrease of RMB693.3 billion or 20.70%. Specifically, HSBC's operating income declined by 44.53%. Generally, domestic commercial banks still showed good resilience in revenue growth amid the COVID-19 crisis: the increase in loan issuance and investment scale promoted the increase of overall interest income; various asset management demands increased, which drove the increase of intermediate business income; the revenue of foreign banks decreased significantly due to the impact of COVID-19.

Benefiting from the steady recovery of China's macro economy, the operating performance of the banking sector rebounded significantly in the fourth quarter of 2020. With the continuous supply and demand recovery, China's economy was on the upturn and achieved stable results as of the end of 2020, providing a good external environment for the growth of the banking sector. In addition, the increase in loan issuance, improved interest margin, non-interest income, and reduced provisions under the expectation of better economy are conducive to the steady recovery of banks' profits.

In 2020, domestic commercial banks maintained certain growth resilience. Focusing on the tasks of "six fronts" and "six priorities", countercyclical adjustment policies were implemented, and provisions for impairment losses were timely increased to ward off future risks. The evolution of COVID-19 may still bring great challenges and far-reaching impacts to the domestic and foreign banking sector. Looking ahead, China's economy is growing steadily towards a better future. The "stable" tone has provided a favorable environment for the reform and opening up of the financial sector since the outbreak of COVID-19. Financial institutions should develop an overall safety concept, coordinate development and safety, strengthen risk management ability, and strive to promote high-quality opening up with high-quality risk management.

### LPR reform pushed the overall market interest rate downward, and the scale factor supported the growth of interest income

In 2020, the net interest income of domestic commercial banks totalled RMB2,918.9 billion, an increase of RMB176.6 billion year-on-year, or an average increase of 6.44%. Among them, ICBC's net interest income exceeded RMB600 billion, an increase of 2.30%. The net interest income of foreign banks totalled RMB1,463.1 billion, a year-on-year decrease of RMB294.1 billion, or an average decrease of 16.74%. The net interest income of domestic commercial banks averagely accounted for 74% of their operating income. Among them, PSBC's net interest income accounted for as high as 89% of its operating income. Foreign banks' net interest income accounted for 56% of their operating income on average.

**Figure 12: Operating Income**

Unit: RMB100 million

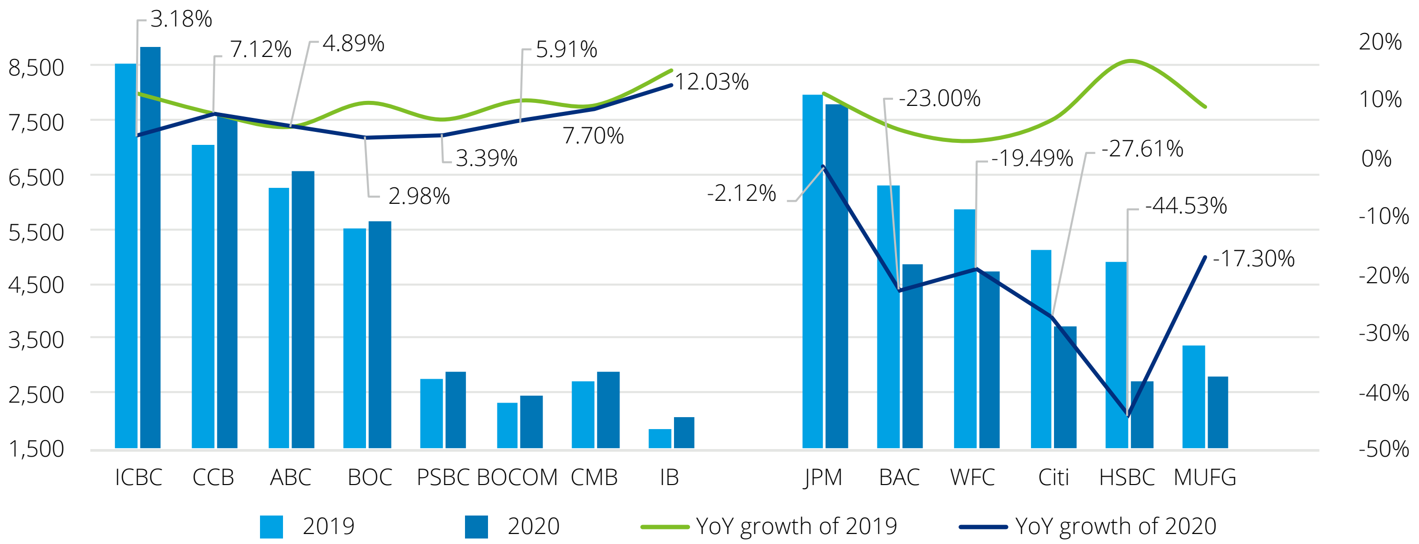


**Figure 13: Net Interest Income**

Unit: RMB100 million

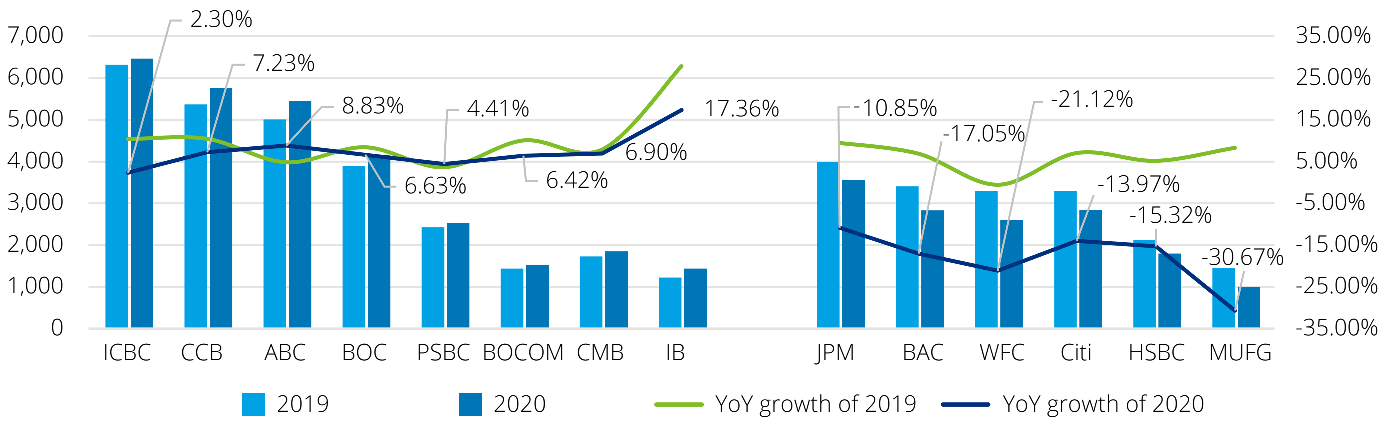
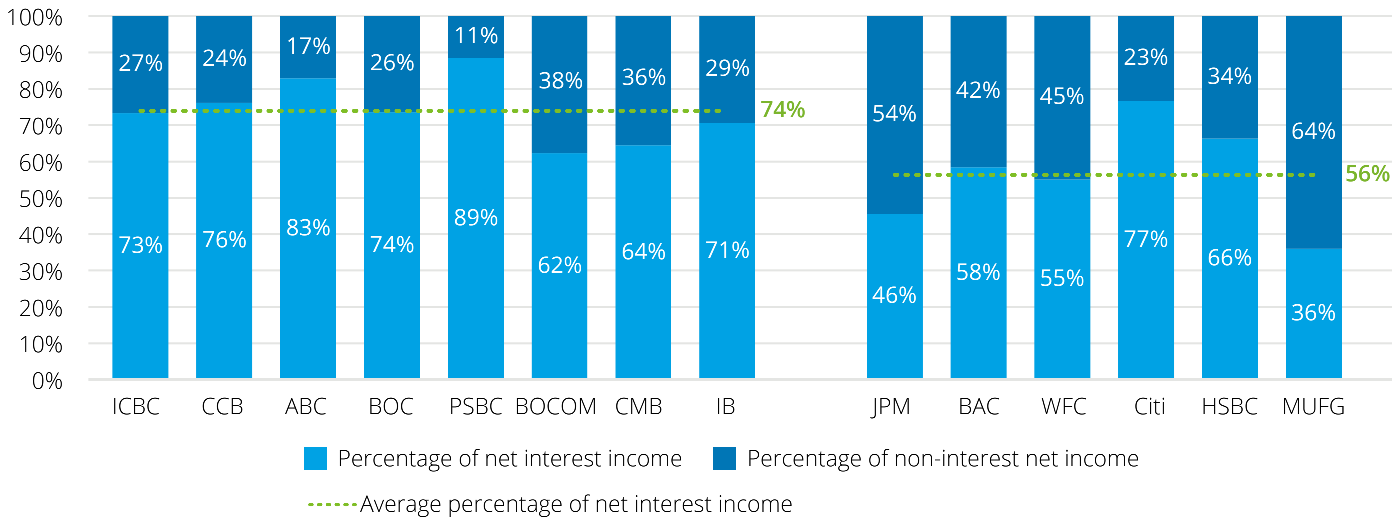


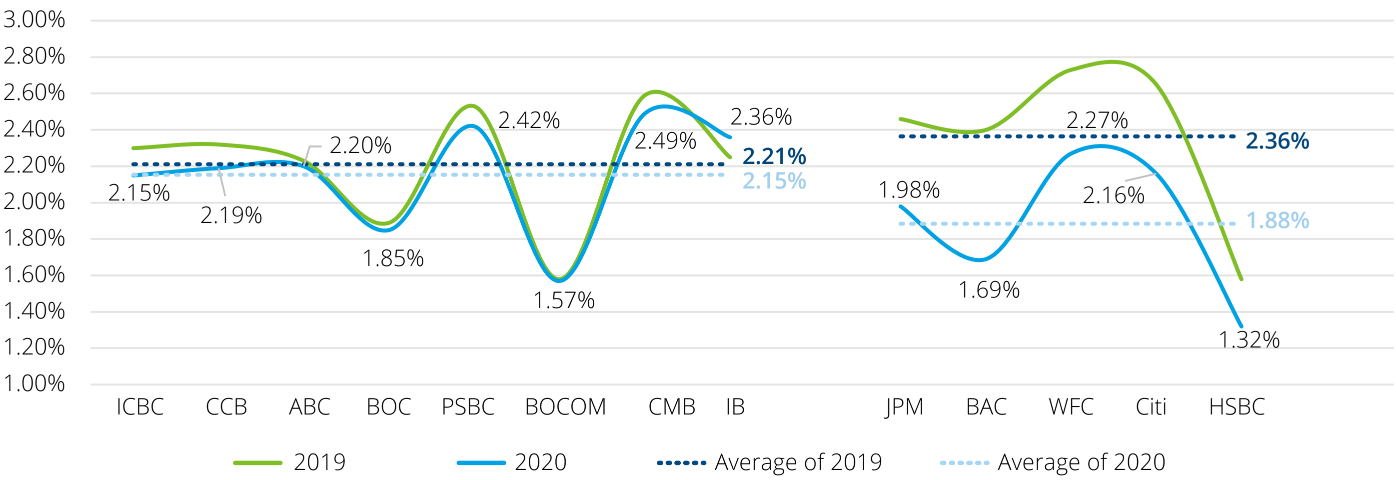

**Figure 14: Proportion of Net Interest Income in 2020**



In 2020, the average net interest margin of domestic commercial banks and foreign banks were 2.15% and 1.88%, down 6 basis points and 48 basis points respectively. Due to the impact of COVID-19, all countries actively took measures to support the development of the real economy. The domestic banks reduced fees and interest for small and micro businesses and furthered the LPR reform to lower the lending rate; thus the net interest margin was narrowed. The market interest rate in Europe and the US dropped rapidly to near zero in 2020, and the interest-paying cost rate remained at a low level, thus the net interest margin narrowed greatly. With limited space for further decline of deposit interest-paying rate, the net interest margin of domestic and foreign banks trended downward in 2020. The 2021 Report on the Work of the Government requires banks to increase credit loans to small and micro businesses as well as first-time loans, and extend the pay-as-you-go lending model, to ensure that small and micro businesses have easier access to financing and their overall financing costs drop steadily. The interest margin is expected to continue to narrow in 2021, and domestic banks will still face great pressure in enhancing profitability.

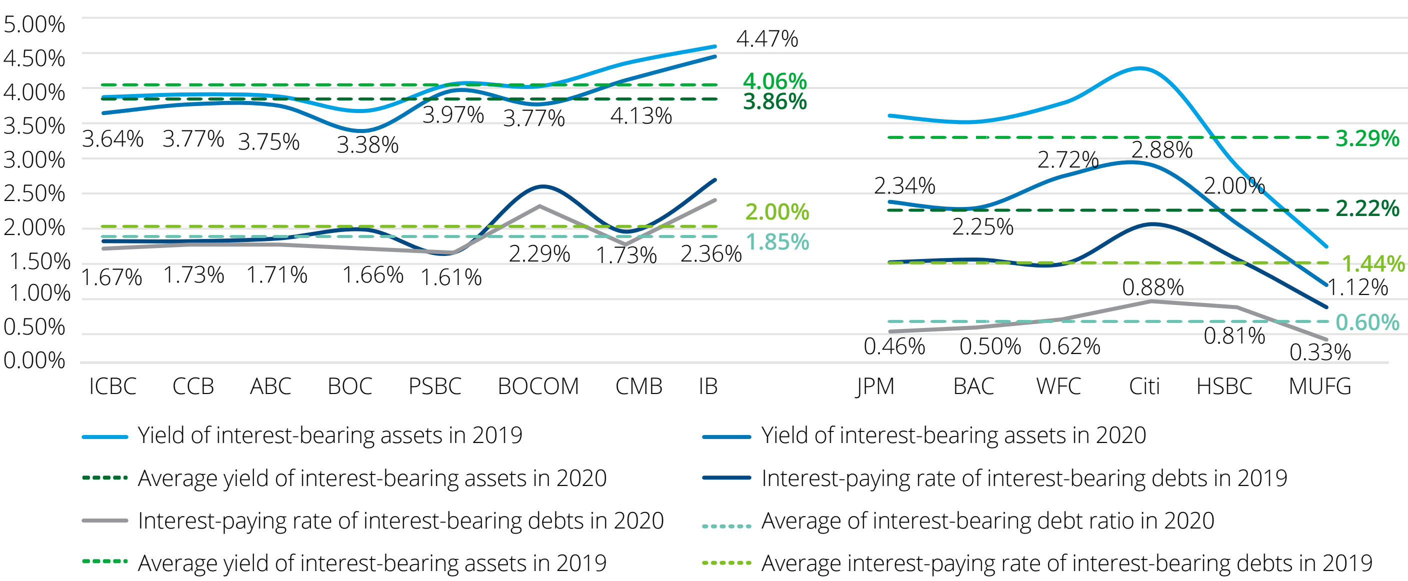
In 2020, domestic banks continued to make appropriate interest concessions to support the real economy, helped lower the financing costs of enterprises, and accelerated the transition to the LPR benchmark. At the end of 2020, the one-year LPR was 3.85%, and the five-year LPR was 4.65%. The transition to LPR was completed at the end of August 2020, which also affected the banks' loan yield. The downward trend of market interest rates, such as the interbank borrowing and pledged-repo, further led to a year-on-year decline in domestic banks' yield of interest-bearing assets and interest-paying rate of interest-bearing debts.

**Figure: Net Interest Margin**




Note: MUFG 's net interest margin was not disclosed.

**Figure 16: Yield of Interest-bearing Assets & Interest-paying Rate of Interest-bearing Debts**



Specifically, the average yield of interest-bearing assets and the average interest-paying rate of interest-bearing debts of domestic commercial banks were 3.86% and 1.85%, down 20 basis points and 15 basis points year-on-year, respectively. That was mainly because that for assets, the LPR affected the interest rate to go downward, in the meantime, liabilities were mainly associated with customer deposits and banks' deposit cost did not decline significantly due to price stickiness, fierce competition, and normalized bargaining and bidding of financial and other main funding. In addition, central banks around the world greatly cut interest rates, the monetary policies of major countries shifted to the zero-interest-rate range, and developed economies resumed or enhanced quantitative easing in policies to maintain the stability of the financial market and economy. This year, the average yield of interest-bearing assets and the average interest-paying rate of interest-bearing debts of foreign banks (especially the European and American banks) were 2.22% and 0.60%, respectively down 107 basis points and 84 basis points year-on-year. As there is not much space of for the interest-paying cost to go down, foreign banks are facing new challenges in controlling interest rate risks.

As of the end of 2020, domestic commercial banks' average customer loan & advance yield, and financial investment yield were 4.56% and 3.49% respectively, down 21 basis points and 20 basis points year-on-year. Specifically, IB's customer loan & advance yield and financial investment yield were both higher than those of its peers.

**Figure 17: Customer Loan & Advance Yield**

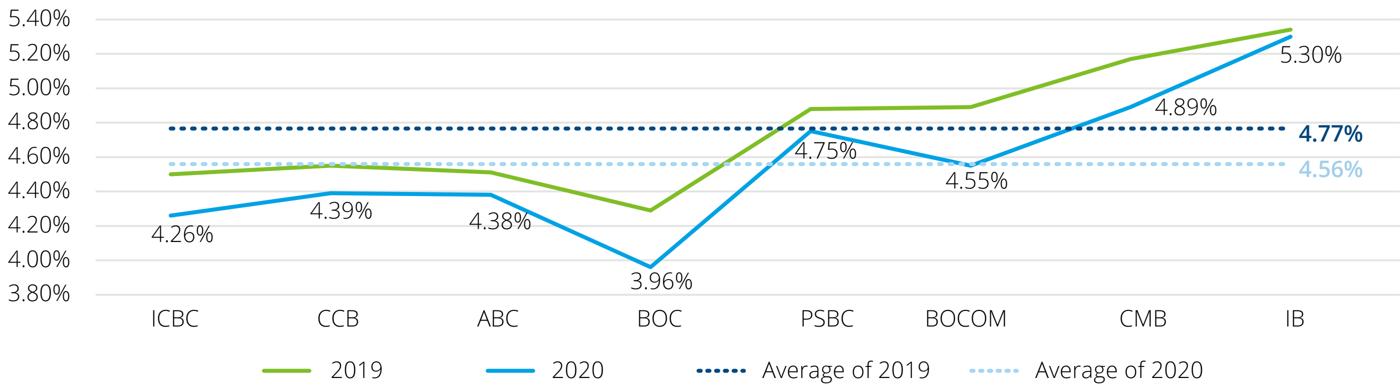
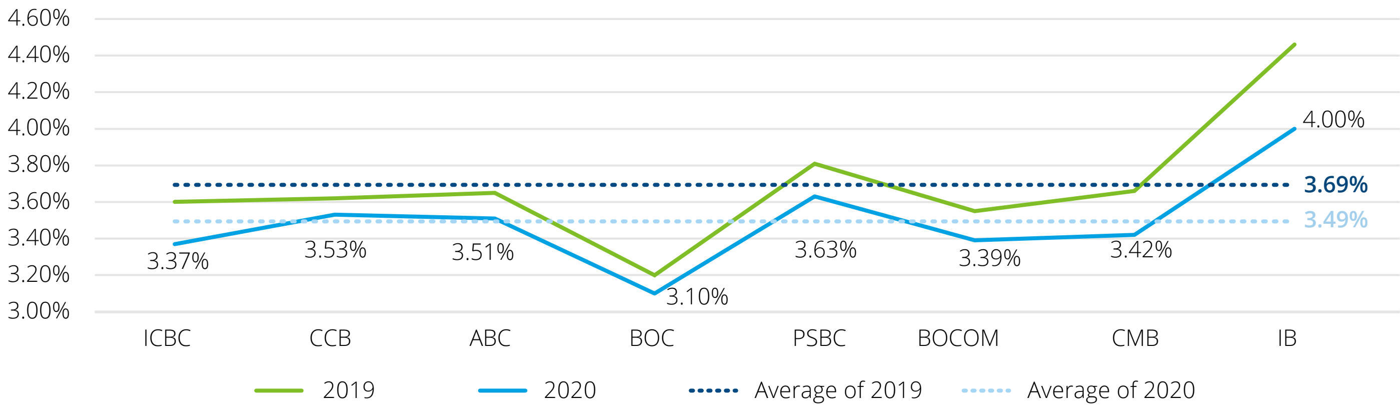



**Figure 18: Financial Investment Yield**



As of the end of 2020, domestic commercial banks' average deposit interest-paying rate was 1.74%, down 6 basis points year-on-year. Among them, BOCOM and IB's deposit interest-paying rate were 2.20% and 2.26% respectively, and that of all other domestic commercial banks were lower than the average. BOC's deposit interest-paying rate narrowed the most, by 20 basis points, compared with the beginning of the year, mainly due to the suspension of products offering interest calculated by a scale of interest rates based on length of deposit for early withdrawals. The average interest-paying rate of domestic commercial banks' broad interbank businesses was 1.91%, down 56 basis points year-on-year, and such interest-paying rate of ICBC, BOC, BOCOM, CMB and IB narrowed more than that of the average, mainly because of good deposit base and low interest expenses on initiative debts. ABC, BOCOM and IB were among the top of the industry, whose interest-paying rate of broad interbank businesses were 2.21%, 2.27% and 2.17%, respectively.

**Figure 19: Deposit Interest-paying Rate**

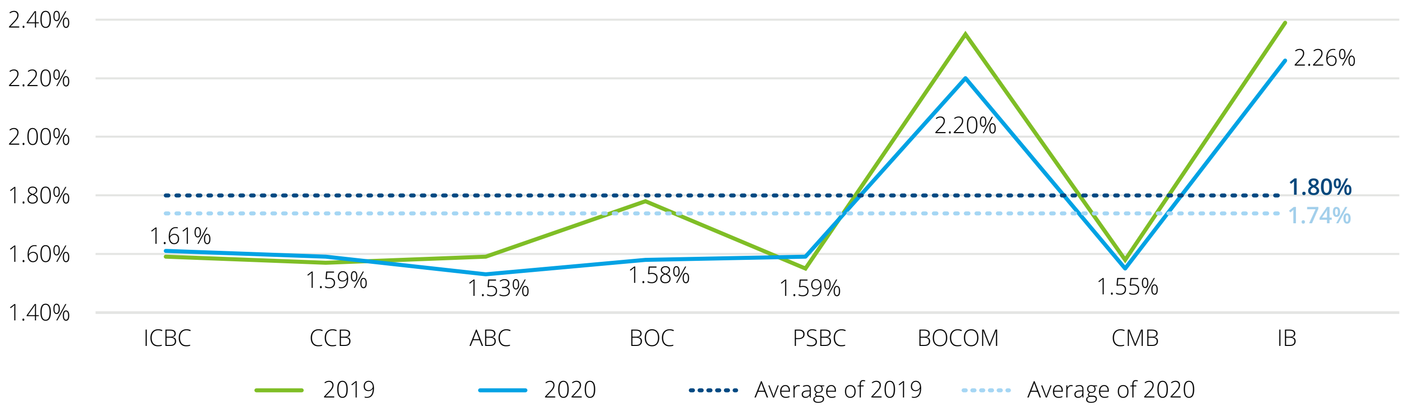
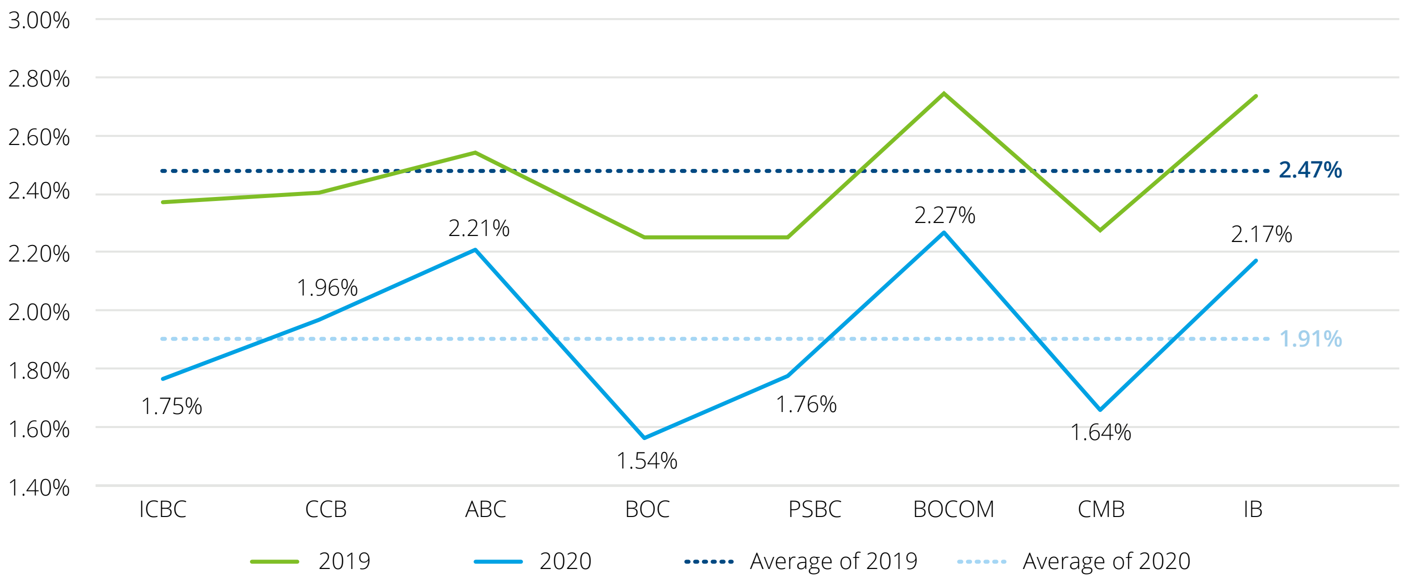


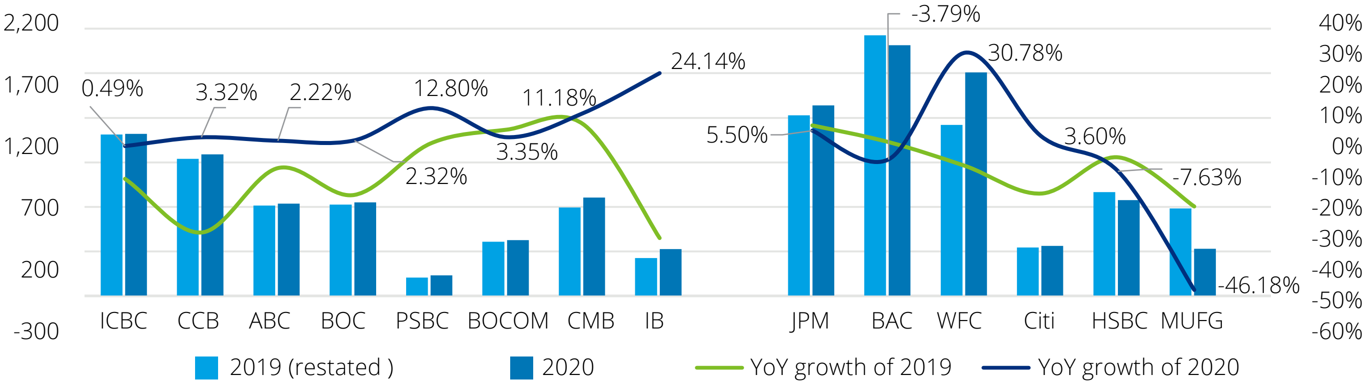

**Figure 20: Interest-paying Rate of Broad Interbank Businesses**




Note: broad interbank businesses include interbank deposits and inter-financial institution deposits, loans from other banks and financial institutions, financial assets sold for repurchase, etc. ( for BOC it also includes the liabilities to the central bank).

**Figure 21: Net Income from Commission Charges**

Unit: RMB100 million




## Fee reduction and benefit transfer to support the real economy; steady increase in income from intermediate businesses

In 2020, according to the requirements of the Circular on Strictly Implementing the Accounting Standards for Business Enterprises and Effectively Strengthening the Work on the 2020 Annual Reports of Enterprises jointly issued by the Ministry of Finance, SASAC, CBIRC and CSRC, major domestic commercial Banks included the commission charges of credit card installment businesses in interest income and adjust the comparative figures of the same period. After the adjustment, domestic commercial banks' net income from commission charges amounted to RMB574.6 billion, up RMB26.3 billion year-on-year, or an average increase of 4.80%. Foreign banks' net income from commission charge totalled RMB694.2 billion, up RMB5 billion year-on-year, or an average increase of 0.72%.

On the whole, there was still a big gap between domestic commercial banks and foreign banks in the development of intermediate businesses. As the domestic capital market matures and becomes standardized, and residents' and enterprises' concepts of wealth management and consumption change, the domestic banks' intermediate business income has a large space in electronic banking, wealth management, agency and custody services, etc.

## The dominant position of traditional intermediate businesses stabilized; fee reduction and benefit transfer led to business income decline

Seen from the income structure of intermediate businesses, the dominant position of traditional intermediate businesses was still stable, with bank card, electronic banking and settlement businesses accounting for more than 50% on average—that of ABC accounted for 70%. In 2020, as national policies guided banks to make further interest concessions and strengthen support for the real economy, traditional intermediate businesses such as bank card, settlement and clearing businesses did not increase much, although accounts for a relatively high proportion. Domestic commercial banks' income from bank cards, electronic banking and settlement as well as clearing businesses totalled RMB287.9 billion, decreasing RMB2.1 billion year-on-year, with an average decrease of 0.73%, among which, that of BOC decreased by 8.20% year-on-year and that of CMB increased by 3.73% year-on-year.

At the end of 2020, in response to the regulatory requirements, commercial banks adjusted the accounting and disclosure of the income from commission charges of credit card installment businesses—changing to interest income. Among the domestic commercial banks, according to their annual reports, except BOCOM and CMB that had adapted to the relevant adjustment before 2019, the rest of the banks saw a nearly 50% decrease on average in income from bank card commission charges due to the reclassification and adjustment of the income from credit card installment fees, among which PSBC decreased the least, by about 17%.

With the promotion of vaccines, the COVID-19 pandemic was effectively controlled in China, demand recovery was consolidated, and organic growth continued to increase. The income from commission charges of bank card, electronic banking and settlement businesses is expected to increase in 2021.

**Figure 22:Bank Card, E-banking, and Settlement Businesses**

Unit: RMB100 Million

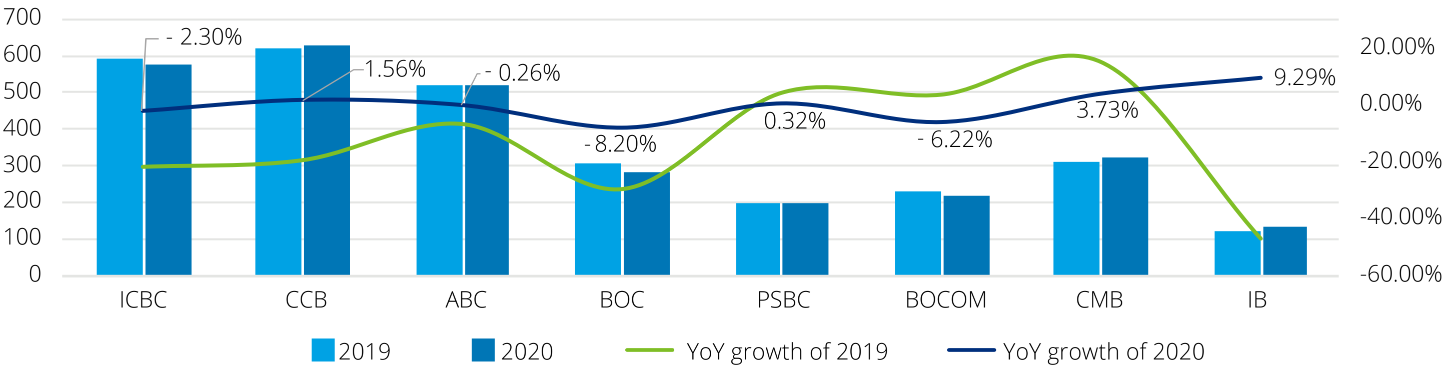



**Table 5: Bank Card Income before and after Adjustment**

Unit: RMB100 million

| Bank | Before Adjustment (2019) | After Adjustment (2019) | Adjustment Amount | Percentage |
|---|---|---|---|---|
| ICBC | 471 | 218 | (253) | (54%) |
| CCB | 526 | 240 | (286) | (54%) |
| ABC | 302 | 155 | (147) | (49%) |
| BOC | 328 | 160 | (168) | (51%) |
| PSBC | 147 | 122 | (25) | (17%) |
| BOCOM | 211 | 211 | 0 | 0% |
| CMB | 196 | 196 | 0 | 0% |
| IB | 302 | 109 | (193) | (64%) |

Note: BOCOM and CMB have reclassified and adjusted their bank card income before 2019.

### Increased demand for management of assets; steady increase in income from intermediate businesses

In 2020, domestic commercial banks' income from commission charges of wealth management, agency and custody businesses totalled RMB242.8 billion, an increase of RMB30.6 billion year-on-year, or an average increase of 14.41%. All banks recorded an increase in such income, among which BOC, PSBC, BOCOM, CMB and IB all saw a year-on-year growth rate of more than 20%. On the whole, as the impact of COVID-19 gradually eased, the macro economy focused more on high-quality development, and residents' wealth increased steadily. Under the background of "dual circulation", the demand for management of various types of assets increased, and banks' wealth management, fund distribution and insurance businesses expanded, so did the custody business, which boosted the increase in income from relevant commission charges.

### Personal financial business developed rapidly, and retail banking income continued to rise

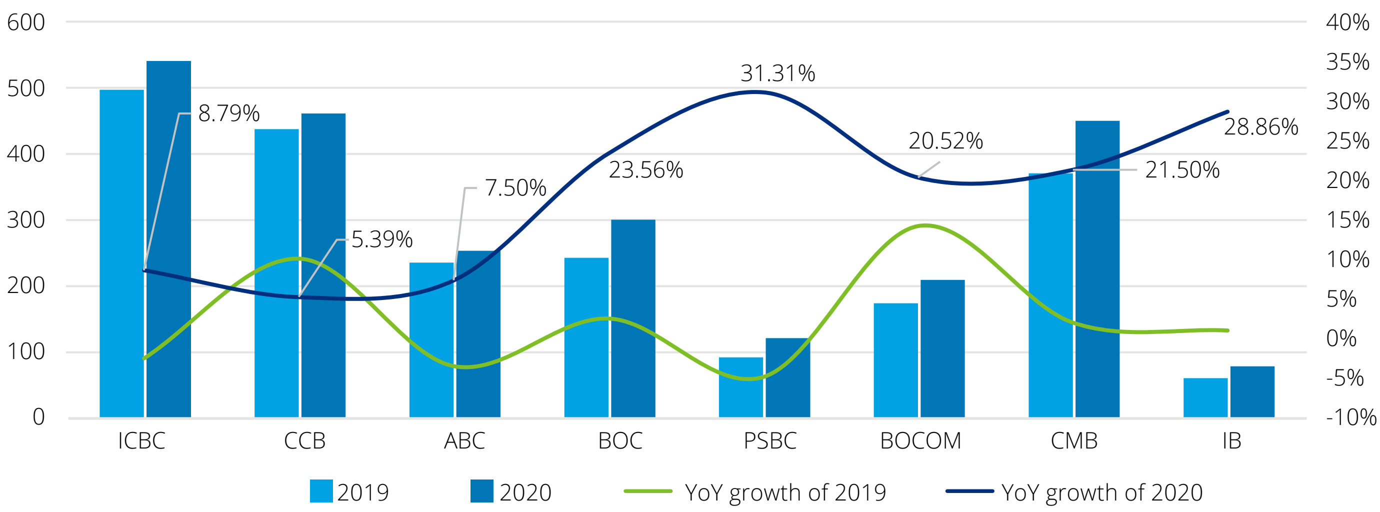
In 2020, the domestic commercial banks' corporate financial business income, personal financial business income, capital business income and other business income accounted for 39%, 48%, 9% and 5% of their operating income on average, which changed by 0.45 percentage points, 3.10 percentage points, 4.46 percentage points and 0.27 percentage points respectively compared with that at the beginning of the year.[1] Among them, BOCOM's corporate financial business recorded the highest proportion, accounting for nearly 47% of its operating income, and PSBC's personal financial business took up the highest proportion at 69%. PSBC and CMB's personal financial business income continuously outmatched the corporate financial income.

From the perspective of the change in the proportion of operating income structure, ICBC and CMB's overall income structure was relatively stable, while the remaining five commercial banks saw obvious fluctuations. Affected by the regulatory policies centering around the development of real economy, the capital business income of the six major state-owned commercial banks all declined compared with that at the beginning of the year, among which, CCB, BOC and PSBC saw a significant drop. ICBC and CMB's personal financial business income recorded a stable proportion, while the other five commercial banks saw a significant increase, among which the proportion of PSBC's personal financial business income increased the most, by 5.43%, that of CCB increased by 5.33%, and that of BOC increased by 5.17%.

On the whole, domestic commercial banks' personal financial business developed rapidly in recent years. Private banking clients and other areas have become new growth points for banks' operating income. Major banks continued to expand personal financial business, which is expected to still be a focus of development for banks in the future.

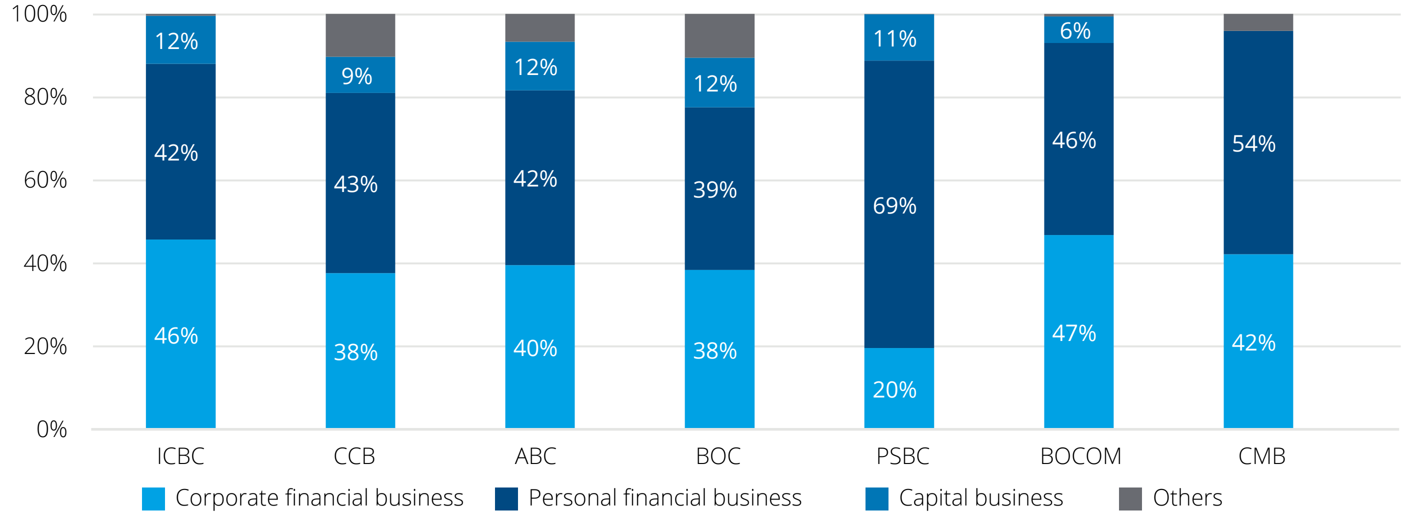
**Figure 23: Wealth Management, Agency and Custody Businesses**

Unit: RMB100 million




Note 1: As CMB only disclosed the information of the retail and wholesale financial businesses, and the capital business was mainly included in the wholesale financial business, and its business structure differed significantly from that of large commercial banks, the average proportion of corporate financial business income and capital business income did not include CMB. In addition, for convenience of analysis, the relevant businesses were uniformly described as personal financial business and corporate financial business.

**Figure 24: Composition of Operating Income in 2020**




Note: IB did not disclose the information of its business structure, so it was not included in the analysis.

## Specifically:

- **ICBC** fully launched the "No.1 Personal Bank" strategy. ICBC's individual clients and saving deposits reached the highest level in recent years;
- **CCB** actively pursued digital retail business and enhanced market competitiveness and value contribution. As of the end of 2020, the proportion of CCB's retail financial business was 5 percentage points more than the corporate financial business;
- **ABC** focused on building "the first-choice intelligent retail bank for customers". Driven by "Finance + Technology + Data", ABC strove to improve the digital, intelligent and online service capabilities of personal financial business, further consolidating the status of retail business as the strategic cornerstone. As of the end of 2020, the number of individual clients totalled 860 million;
- **BOC** focused on building competitive businesses such as wealth management, consumer finance, private banking, foreign exchange and bank card, and promoted the asset-light strategy with full development of financial assets, comprehensively improving its retail performance;
- **PSBC** adhered to the strategic vision of "building a first-tier large retail bank which is trustworthy, distinctive, prudent, safe, innovative, and with remarkable value", and continued to implement the business strategy of "dominating retail banking with coordinated wholesale business". PSBC speeded up reform in key areas and strove to create a new situation of high-quality development. PSBC's key indicators such as proportion of personal bank operating income, management of retail client assets, and scale of personal deposits maintained a leading position;
- **CMB** adhered to the established strategy and its strategic vision of "building the best commercial bank in China with innovation-driven development, leading retail banking and distinguished features". The proportion of CMB's retail operating income and its profit contribution ranked among the best in the industry.

With the introduction of regulatory policies such as the Interim Measures for Administration of Internet Loans Issued by Commercial Banks, retail business gradually returned to the rational development mode, and banks were also facing the challenge of quickly reshaping their offline and risk control capabilities. In the past year, a number of regulatory requirements were issued concerning the overdependence of retail business on Internet platforms, including: (1) the regulatory rules on the Internet loan business of commercial banks were gradually clarified; (2) Commercial banks were restrained in selling financial products through Internet platforms; (3) New quantitative indicators were added for syndicated loans, requiring commercial banks to independently carry out the core risk control links. (4) High-interest retail products were explicitly prohibited, the retail business gradually returned to the core of accommodating the consumer demands, and banks resumed the main responsibilities of risk control. In addition, regulation restricted the commercial banks' online-focused business model. In the future, the Internet platform-based sales will be limited, the importance of offline outlets will increase rapidly, and banks will gradually pay more attention to refinement of offline outlets and remodelling of self-operation ability. It is no longer feasible to simply rely on the Internet risk control. Banks need to further strengthen their risk identification and control capabilities, including the use of big data risk control platform to monitor fund flow.

### Impairment losses increased significantly due to the impact of COVID-19

The outbreak of COVID-19 at the beginning of 2020 had a huge impact on the global economy, significantly increasing credit impairment losses of major European and American banks. Comparatively, the annual growth of credit impairment losses of domestic commercial banks was much lower than that of the European and American banks thanks to the proper control of the pandemic. Specifically, in 2020, impairment losses of domestic commercial banks totalled RMB929.9 billion, an increase of RMB119.7 billion year-on-year, or an average growth rate of 14.77%; among them, the growth rate of CCB, ABC, BOC, IB and BOCOM all exceeded 15%. Impairment losses of foreign banks totalled RMB478.1 billion, an increase of RMB316.6 billion year-on-year, or an average increase of 196.04%. On the whole, the impairment losses of both domestic and foreign banks increased significantly, and the foreign banks saw more obvious growth (MUFG's provision in this period totalled RMB26.3 billion, increasing more than 1,000%).

In 2020, domestic commercial banks were affected by the increase of new loans and the increase in provision for impairment losses, with slight change in the average annual credit cost ratio (1.12%). Among them, ICBC, PSBC, CMB and IB saw a minor decrease of the annual credit cost ratio. The average annual credit cost ratio of foreign banks was 1.36%, an increase of 91 basis points year-on-year, which was caused by the sharp increase in provision for impairment and the decline in total loans. Generally, the credit cost ratio of domestic and foreign banks varied a lot. and overseas banks increased significantly. Among the domestic commercial banks, ICBC, BOC and PSBC's credit cost ratio was below 1% and that of the rest banks was all above 1%. For foreign banks, except HSBC and MUFG, the credit cost ratio of other banks all exceeded 1%.

**Figure 25: Impairment Losses**

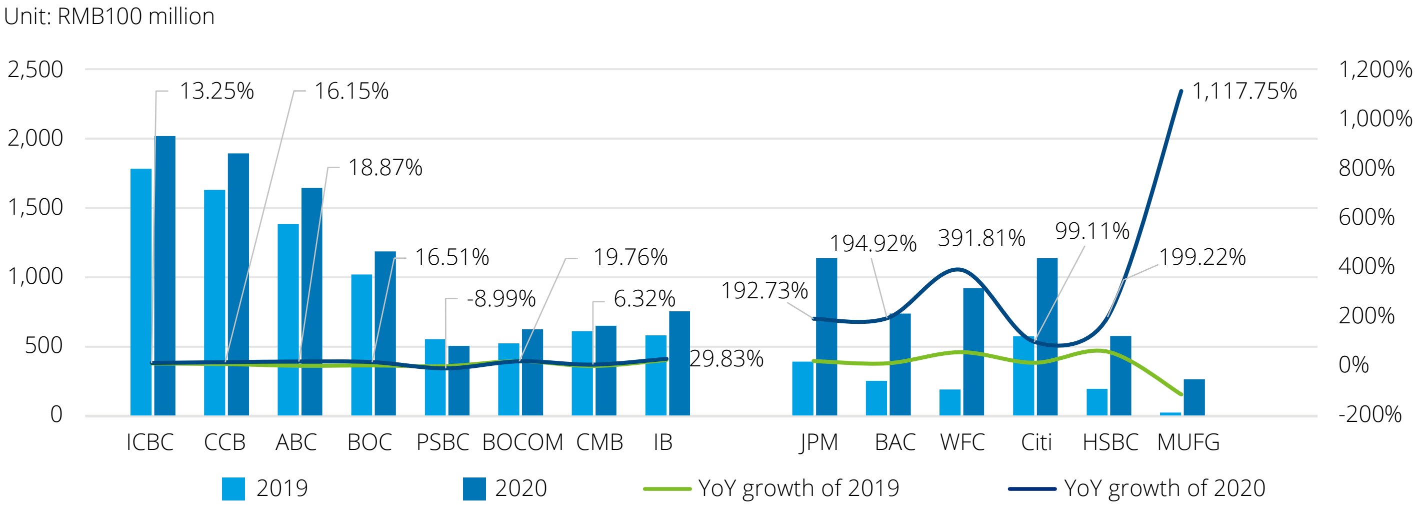
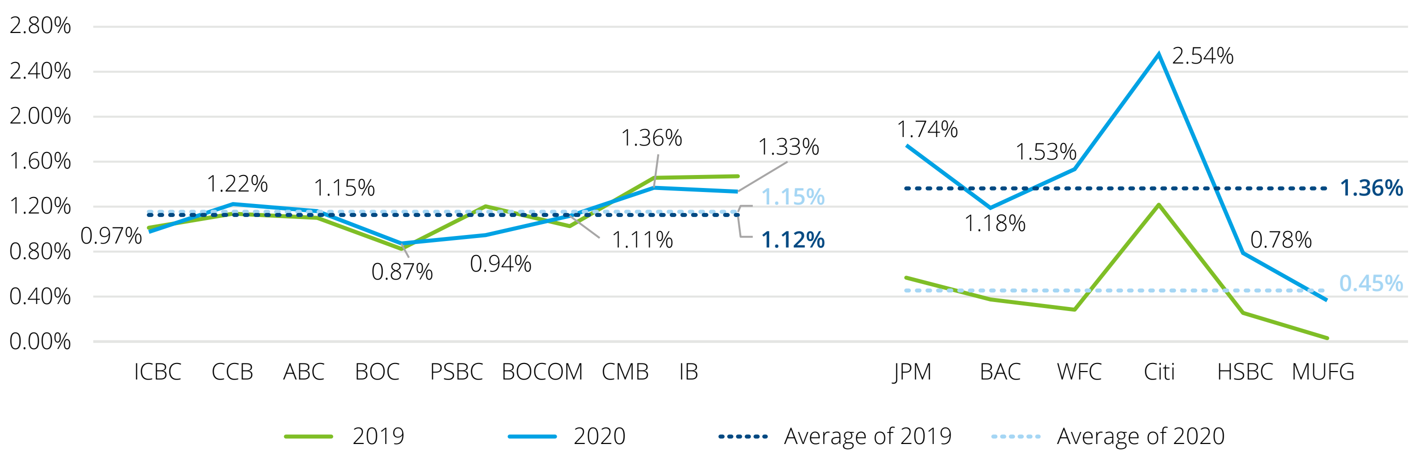



**Figure 26: Credit Cost Ratio**




Note: Credit cost ratio=impairment loss/average loan balance

### Investment in technology infrastructure increased; staff costs rose steadily

The operating and administration expenses of domestic commercial banks totalled RMB1,096.4 billion, an increase of RMB16.5 billion year-on-year, or an average increase of about 1.52%. Among them, PSBC and CMB saw a relatively larger increase at 5.78% and 11.79% respectively. The operating and administration expenses of foreign banks totalled RMB1,692.2 billion, a decrease of RMB165.9 billion, or an average decrease of 8.93%. Generally, the operating and administration expenses of domestic banks increased steadily. As domestic economic operation was less affected by the pandemic, the office compensation expenses were basically stable. PSBC and CMB continued to increase investment in information technology infrastructure as well as resource and personnel input in the relevant areas, thus, their operating and administration expenses increased. The operating and administration expenses of foreign banks are much higher than that of domestic banks, mainly due to higher staff costs. In 2020, All foreign banks' operating and administration expenses decreased, mainly due to the reduced staff costs and office expenses because of the impact of the pandemic.

In 2020, domestic commercial banks' total provision for employee compensation was RMB613.5 billion, an increase of RMB3 billion year-on-year, or an average growth rate of only 0.49%. As the country cut corporate contributions to social insurance and house fund, except for CMB, PSBC and IB, all other banks saw a year-on-year decrease in such provision (CMB, PSBC and IB increased 10.89%, 2.63% and 3.80%, respectively). Foreign banks' provision for employee compensation totalled RMB931.8 billion, down RMB49.4 billion year-on-year, or an average decrease of 5.03%.

In 2020, domestic commercial banks' average cost-income ratio was 27.28%, down 0.92% year-on-year, except for PSBC and CMB, all other banks' cost-income ratio declined. CMB's cost-income ratio rise was mainly because of the additional operating and administration expenses caused by the increase in Fintech infrastructure investment and the increase of personnel. The average cost-income ratio of foreign banks was as high as 68.35%, an increase of 8.51% year-on-year. HSBC's cost-income ratio rose significantly in this period, mainly due to the decline in operating income. In general, the average cost-income ratio of domestic banks was stable with slight decrease, which was largely attributable to cost refined management. Affected by the pandemic, foreign banks' revenue declined rapidly, but the operating costs were not quickly reduced, thus resulting in increased cost-income ratio.

**Figure 27: Operating and Administration Expenses**

Unit: RMB100 million

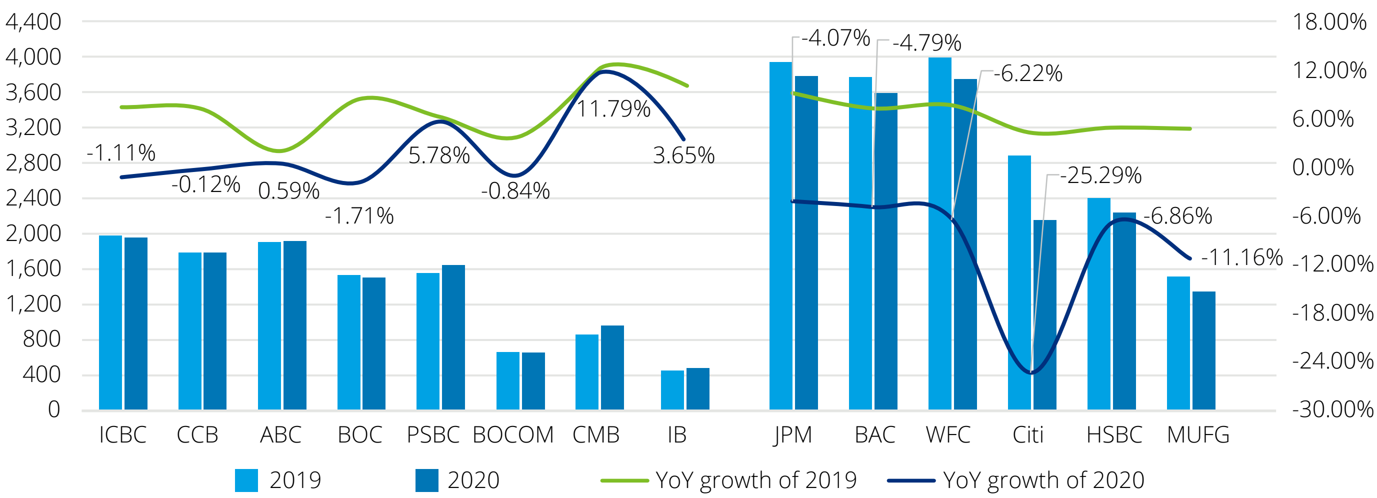


**Figure 28**: **Employee Compensation**

Unit: RMB100 million

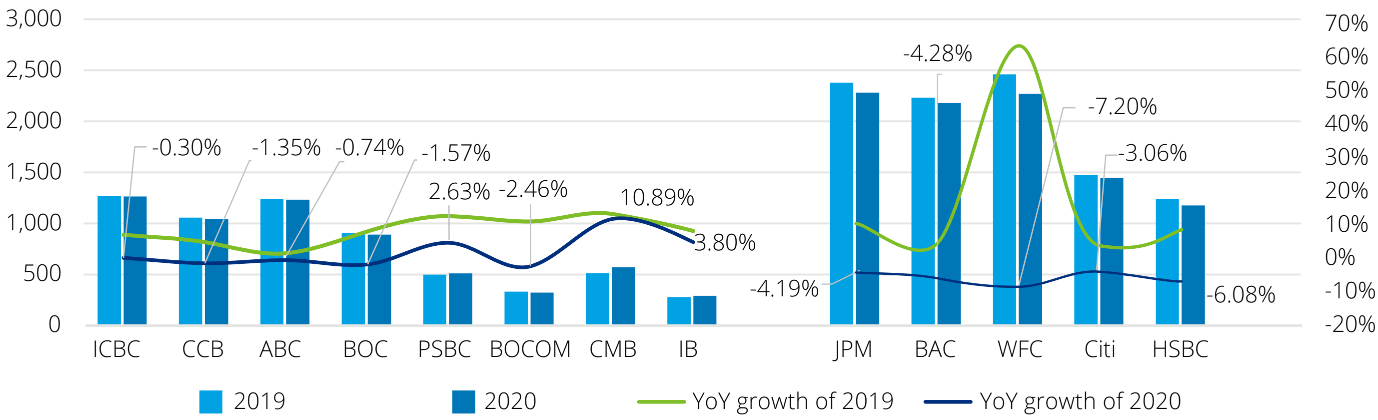
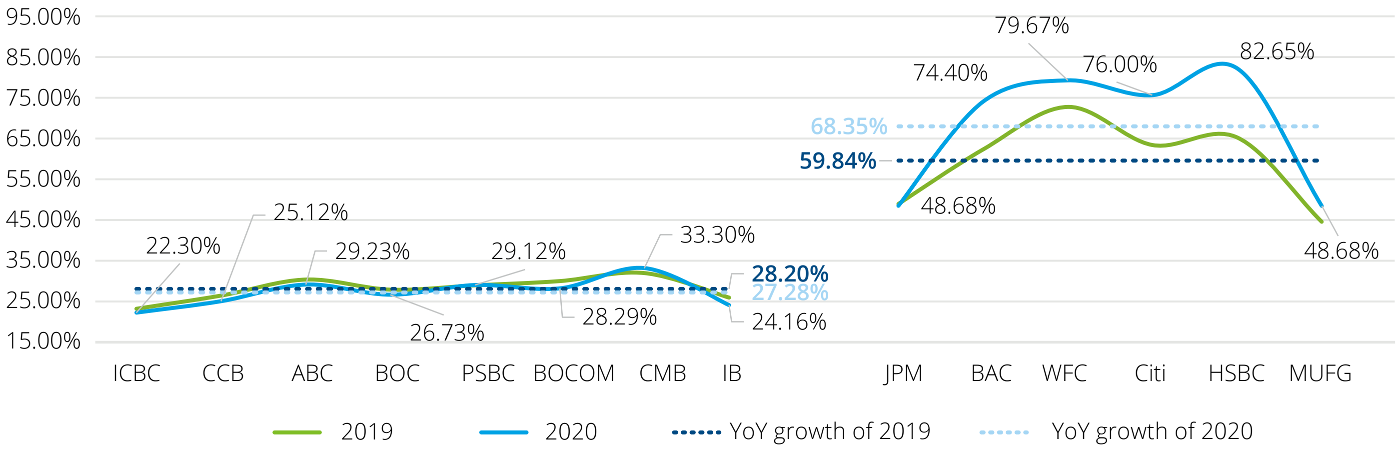



**Figure 29: Cost-income Ratio**




Note: To enhance comparability, PSBC's cost-income ratio was calculated based on the operating and administration expenses from which the saving commission fees had deducted.

# 2.2 Assets

**Accelerated expansion of assets facilitated economic recovery**

As of the end of 2020, the total assets of domestic commercial banks reached RMB151 trillion, an increase of RMB14 trillion or 9.80% compared with the beginning of the year. The total assets of the six foreign banks amounted to RMB105 trillion, an increase of nearly RMB4 trillion or 3.86% compared with the beginning of the year. In general, domestic and foreign banks accelerated the expansion of their balance sheets during this period; some foreign banks saw faster growth, but the four major state-owned banks still occupied an absolute advantage in the scale of assets.

At the end of 2020, the average proportion of domestic commercial banks' lending, financial investment and interbank assets were 54%, 29% and 6% respectively. The proportion of lending of foreign banks was generally lower than that of domestic banks, and the average proportion of foreign banks' corresponding indicators were 35%, 34% and 9%, respectively. In general, the financial investment, interbank assets and other assets of the domestic commercial banks all showed a downward trend, while their lending was on the rise, which reflected that commercial banks had actively responded to the national economic policies to support the recovery of the real economy, and continuously guide capital to flow to the real economy.

**Figure 30: Total Assets**

Unit: RMB100 million

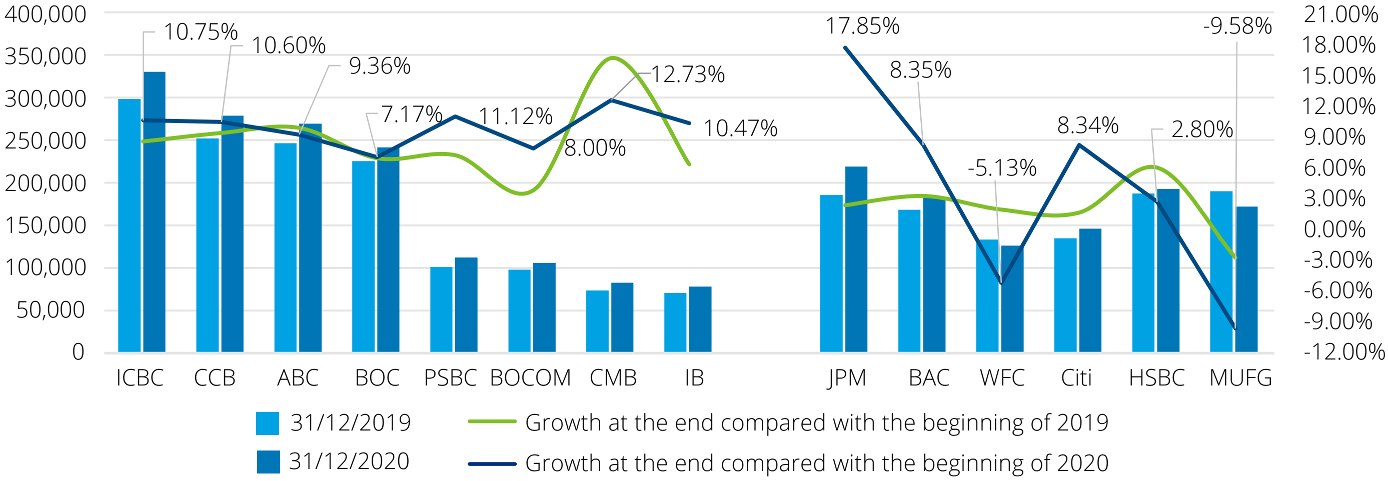
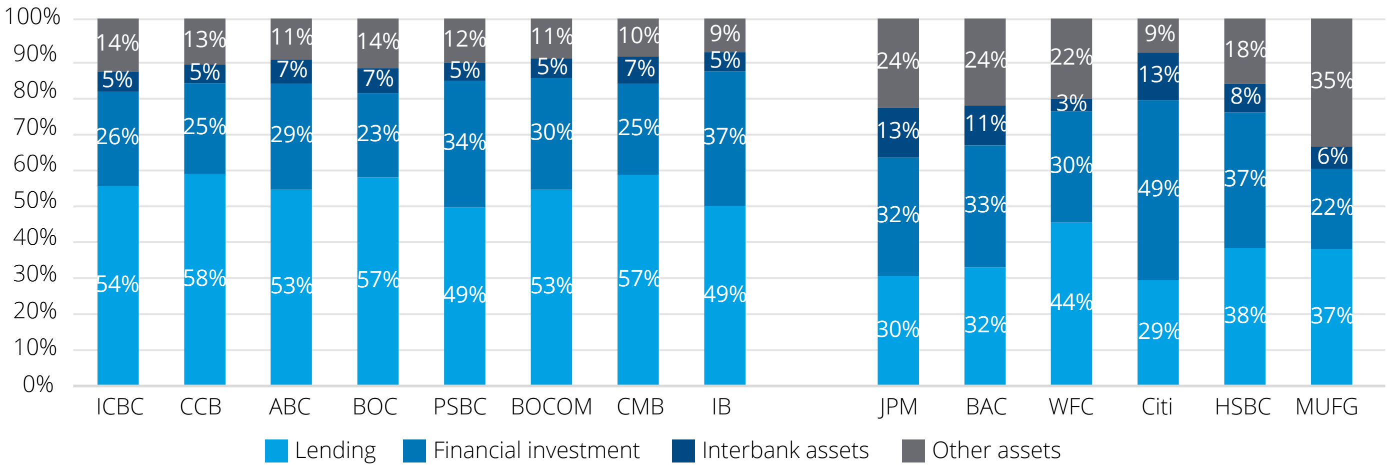



**Figure 31: Asset Composition in 2020**



### Support for the real economy enhanced, and new loans continuously increased

In 2020, in response to the impact of the pandemic, the central bank injected more liquidity, implemented rediscounting and re-lending policies, and introduced a variety of new monetary policy instruments that can directly stimulate the real economy. The growth rate of loans was generally on the rise in the year. It also reflected the banks' optimistic expectations for the economic outlook—the banks still actively issued loans at the end of the year when the credit lines were limited.

Specifically, as of the end of 2020, the book value of loans and advances issued by domestic commercial banks totalled RMB82.67 trillion, an increase of RMB8.63 trillion compared with the beginning of the year, or an average growth rate of 11.65%.

All domestic commercial banks saw a year-on-year increase in the growth rate of loans. The book value of loans and advances issued by foreign banks totalled RMB36.05 trillion, RMB4.01 trillion less than that at the beginning of the year, representing an average decrease of 10.01%. Except for HSBC and JPM, the total loans of the other four foreign banks decreased significantly. In general, as development trends of COVID-19 varied in China and foreign countries, there were significant differences in the fluctuation trends of loans and advances issued by domestic and foreign banks. With effective control of the pandemic in China, domestic commercial banks enhanced efforts in supporting the real economy, with new loans increasing continuously. However, the loans and advances issued by foreign banks generally declined due to impact of the pandemic.

### Asset quality impaired, and a lagging effect appeared

In 2020, affected by the pandemic, the non-performing loans of the banking sector increased, especially the banks' foreign institutions that were more seriously impacted by the pandemic. Specifically, as of the end of 2020, the total non-performing loan balance of domestic commercial banks was RMB1,250.4 billion, an increase of RMB206.1 billion compared with the beginning of the year, or an average growth rate of 19.74%. Among them, ABC recorded the highest increase at 26.66%; ICBC, CCB, ABC and BOCOM all saw an increase of more than 20%; CMB had a growth rate of only 2.56%; Only IB showed a downward trend, with a decrease of 6.35%.

**Figure 32: Book Value of Loans and Advances**

Unit: RMB100 million

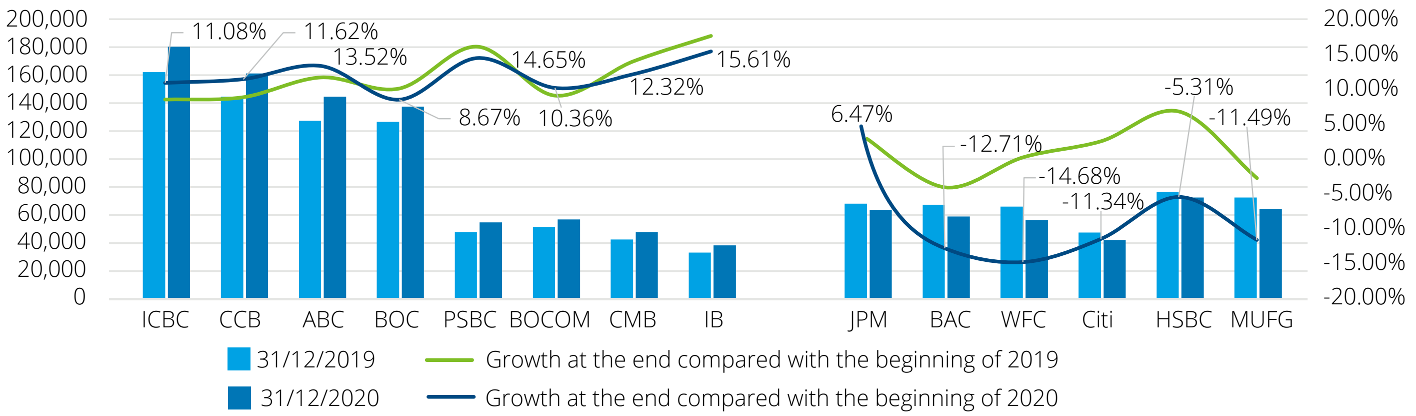



**Figure 33: Non-performing Loan Balance**

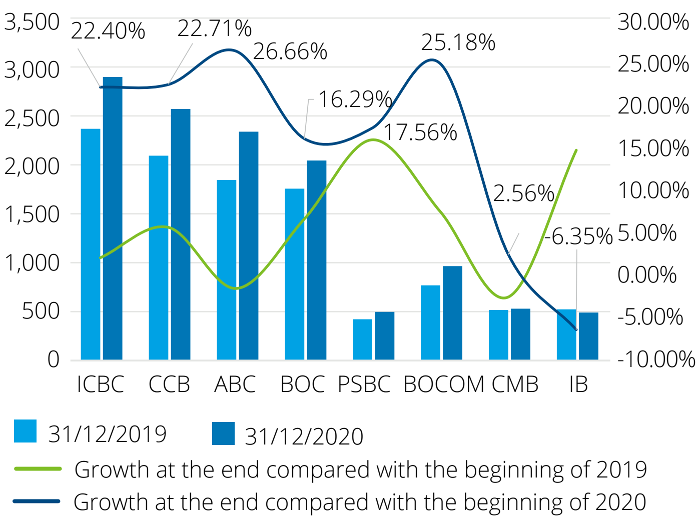
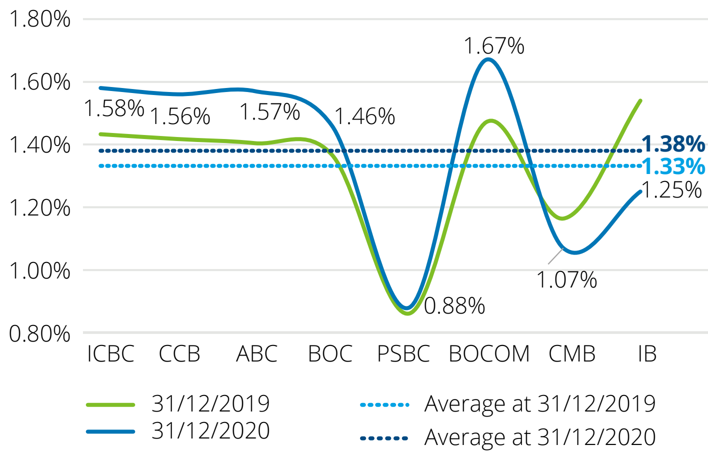



**Figure 34: Non-performing Loan Ratio**



The average non-performing loan ratio of domestic commercial banks was 1.38%, an increase of 5 basis points compared with the beginning of the year. The change in the non-performing loan ratio of the banks differed a lot. Specifically, BOCOM's non-performing loan ratio rose faster, while the non-performing loan ratio of CMB and IB dropped as a result of a higher growth rate of lending than that of the generation of non-performing loans, as well as the comprehensive influence of their respective 36% and 43% increase in write-offs in the year. In general, the volume of non-performing loans of domestic commercial banks increased and the average non-performing loan ratio rose slightly.

In 2020, the corporate non-performing loan ratio generally increased, and the non-performing loan ratio of different industries varied greatly. The new non-performing loans were mainly from the manufacturing, wholesale & retail, and transportation industries that were seriously affected by the pandemic, and the overall non-performing loan ratio of these industries was relatively high. With lagged COVID-19 impact, some small and medium-sized enterprises with operation difficulties may still face the risk of a concentrated outbreak of non-performing loans. The policy allowing small and medium-sized enterprises to postpone principal and interest repayments on loans may lead to delayed credit risks.

### Acting on the principle that houses are for living in, not for speculation; drawing red lines for the concentration of real estate loans

In accordance with the requirements of the Circular on Establishing the Management System of Concentration of Real Estate Loans of Financial Institutions issued by CBIRC, commercial Banks' individual housing loans shall be within the proportion limit for individual housing loans. Chinese-funded banks and Chinese-funded midsize banks are capped at 32.5% and 20%, respectively, for individual housing loans. As of the end of 2020, CCB, PSBC, CMB and IB exceeded the regulatory limit, while all other commercial banks met the limit requirements. Specifically, PSBC only exceeded the regulatory limit by 1.11 percentage points, with a transition period of 2 years for adjustment. CCB exceeded the regulatory limit by 2.56 percentage points. Among the midsize banks, CMB exceeded the regulatory limit by 5.35 percentage points and IB by 6.55 percentage points, with a transition period of 4 years for adjustment. Individual housing mortgage loan is a high-quality personal financial business of commercial banks—although without a high yield rate, the non-performing loan ratio and capital coefficient are relatively low. In addition, six state-owned commercial banks' real estate loans were under the regulatory red lines, while that of CMB and IB exceeded the regulatory limit (the data are in line with the information of annual reports).

The 2021 Report on the Work of the Government required large commercial banks to increase inclusive loans to small and micro businesses by over 30%. Therefore, commercial banks are expected to continue to allocate more credit resources as inclusive finance lending to small and micro businesses during their credit structure adjustment.

**Figure 35: Industries with A Higher Non-performing Loan Ratio**

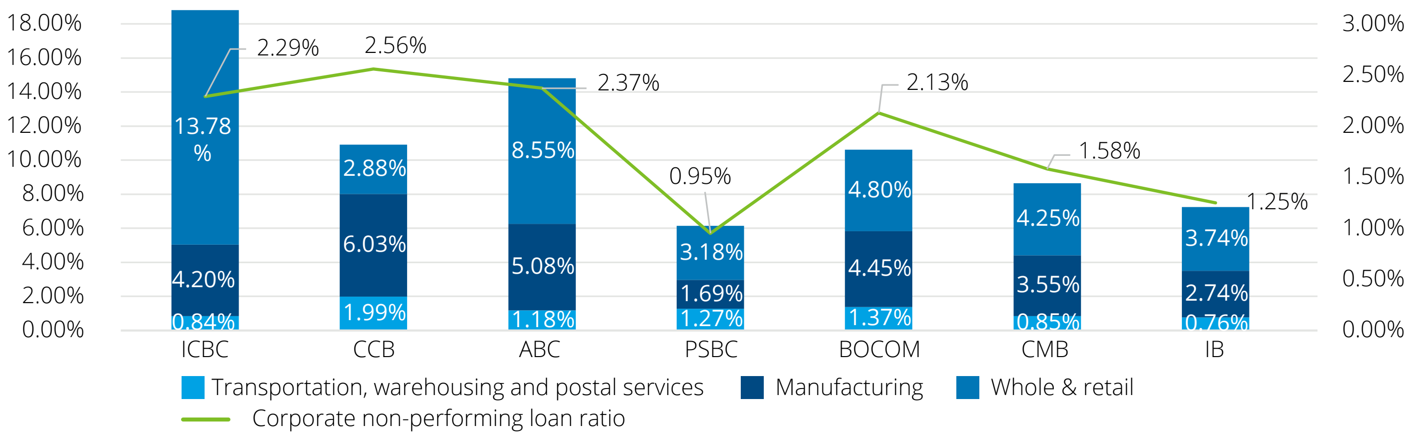
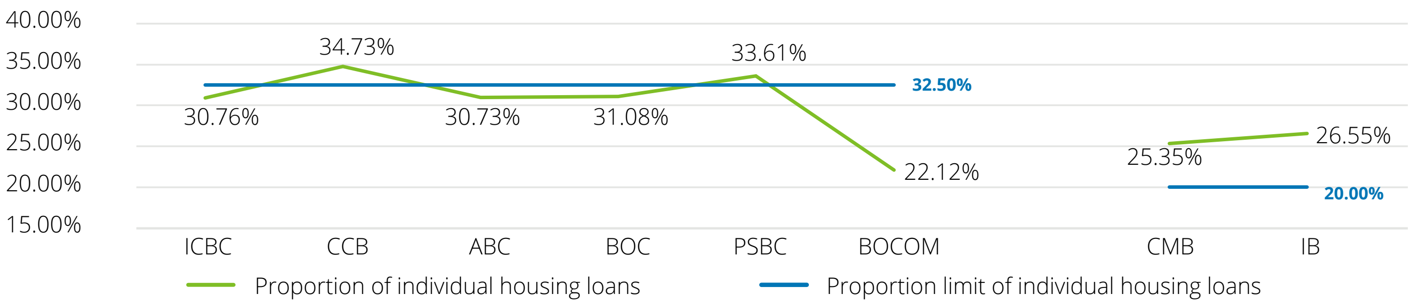



**Figure 36: Proportion of Individual Housing Loans**



### Domestic commercial banks' credit card business grew at a slower pace, with rising non-performing loan ratio

In 2020, the overall growth rate of domestic banks' credit card business slowed, although showing an upward trend. Affected by the pandemic, the non-performing loan ratio of credit card business increased—overdue loans generally increased in 2020. It is expected that the future development of the credit card business will change from focusing on pursuing quantity of credit cards to cultivating quality customer groups in the future.

As of the end of 2020, the credit card overdraft balance of domestic commercial banks totalled RMB4,313.6 billion, an increase of RMB331.7 billion compared with the beginning of the year, or an average increase of 8.33%. Among them, PSBC recorded a greater year-on-year growth at 17.41%; the year-on-year growth of CCB, ABC, CMB and IB all exceeded 10%; the credit card loans of BOCOM decreased for two consecutive years.

The People's Bank of China decided that starting from January 1, 2021, credit card issuers and cardholders will independently decide the interest rates on overdrafts, and the upper and lower limits on credit card overdraft interest rates will be cancelled, which will facilitate the development of the credit card business.

Affected by the epidemic, the credit card debt pressure rose in 2020, and the non-performing loan ratio increased. The average credit card non-performing loan ratio of domestic commercial banks that disclosed such information in this period was 1.82%, an increase of 14 basis points compared with the beginning of the year. CCB and IB's credit card non-performing loan ratio at the end of the period were 1.40% and 2.16% respectively, up 37 basis points and 69 basis points from the beginning of the year. BOCOM's credit card non-performing loan ratio was the highest among commercial banks. In the second half of 2020, the overall situation of credit card non-performing loans was better than that of the first half, which was because that in the second half, the central bank and the issuing banks introduced a series of risk control measures. In addition, the issuing banks strengthened the efforts in debt collection, wrote off debts, and applied innovative disposal means (such as credit-based non-performing assets securitization), which effectively curbed the high risks of credit card overdrafts for the year. Although there was an inflection point in the third quarter, the credit card non-performing loan ratio still soared in 2020 compared to 2019. According to data released by the People's Bank of China, outstanding credit card loans that were overdue for half a year totalled RMB83.864 billion in 2020, up 12.92% from RMB74.266 billion of 2019, which accounted for 1.06% (0.98% in 2019) of total credit card outstanding balance in 2020.

**Figure 37: Credit Card Overdraft Balance**

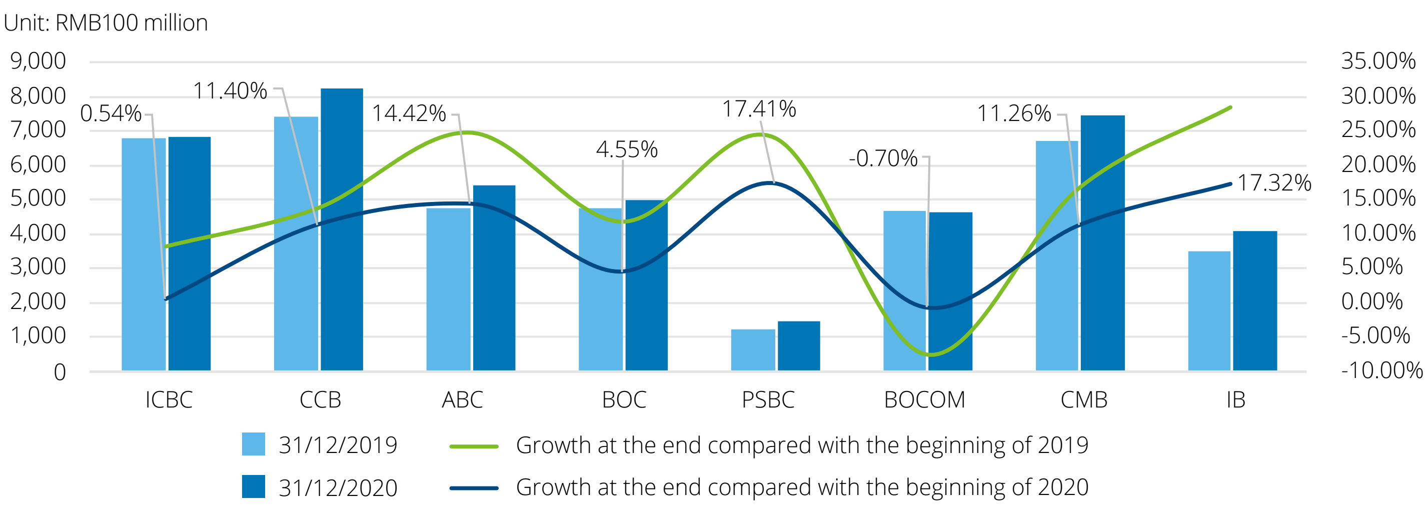
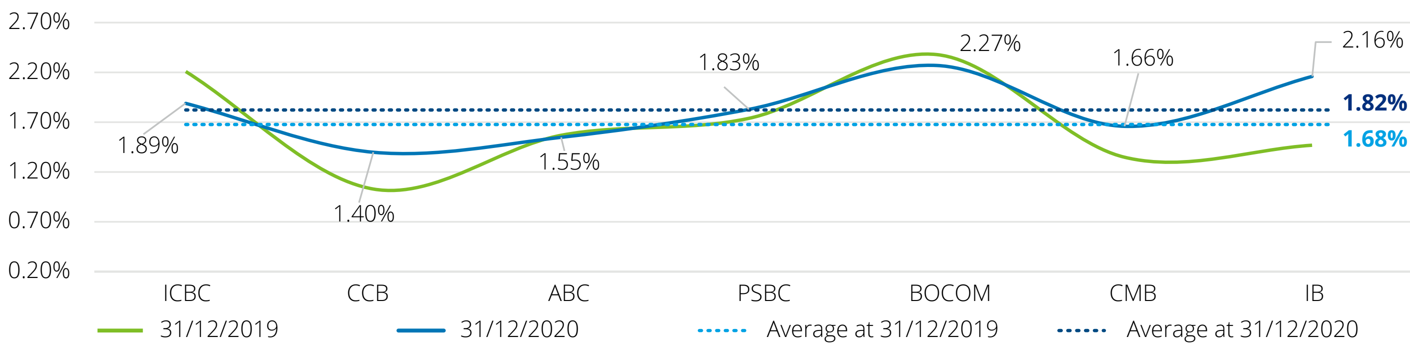



**Figure 38: Credit Card Non-performing Loan Ratio**




Note: BOC did not disclose its credit card non-performing loan ratio.

### Less special-mention loans; more prudent identification of non-performing loans

In general, domestic commercial banks saw a year-on-year decline in special-mention loans, which was due to the dual impact of the stricter non-performing loan identification standards and the policy allowing principal and interest repayments to be deferred.

Specifically, at the end of 2020, the total balance of domestic commercial banks' special-mention loans reached RMB1,683.7 billion, RMB59.2 billion less than that at the beginning of the year, with an average decline of 3.40%. In addition to CCB that saw a 12.63% increase compared with the end of the previous year, many banks recorded a decline in special-mention loan balance. BOCOM and CMB's special-mention balance fell more than 20%.

The special-mention loans of domestic commercial banks averagely accounted for 1.65%, 33 basis points reduced compared with the beginning of the year. In addition to CCB with its proportion of special-mention loans rising to 2.95% in the year, all other commercial banks' proportion of special-mention loans dropped , among which, PSBC's proportion of 0.54% was lower than the average level of the industry. Overall, domestic commercial banks' proportion of special-mention loans dropped in the year.

**Figure 39: Special-mention Loan Balance**

Unit: RMB100 million

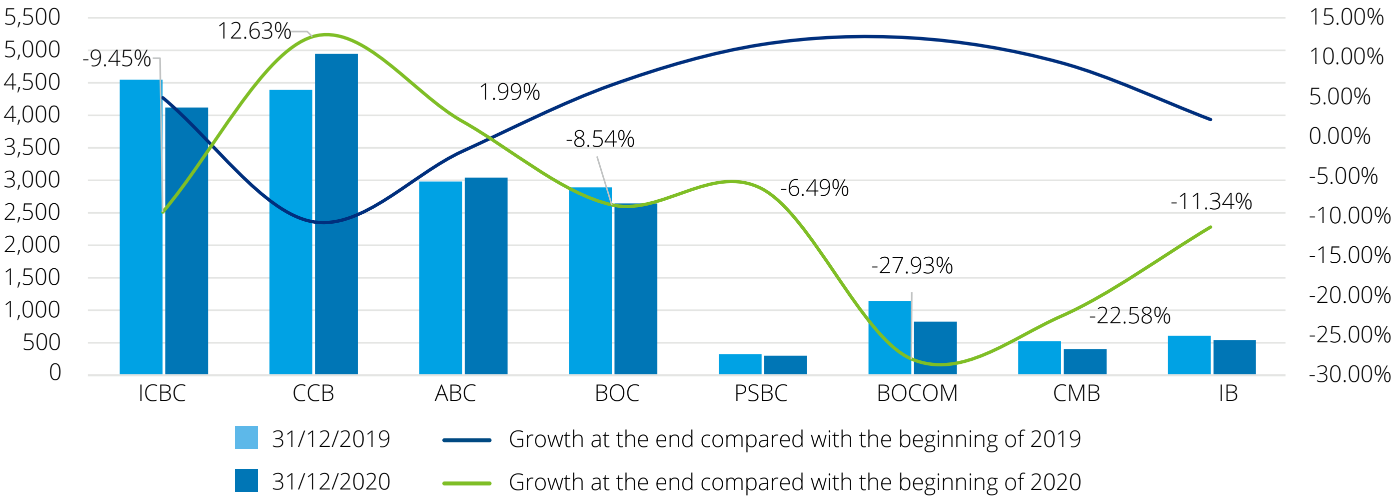



**Figure 40: Proportion of Special-mention Loans**

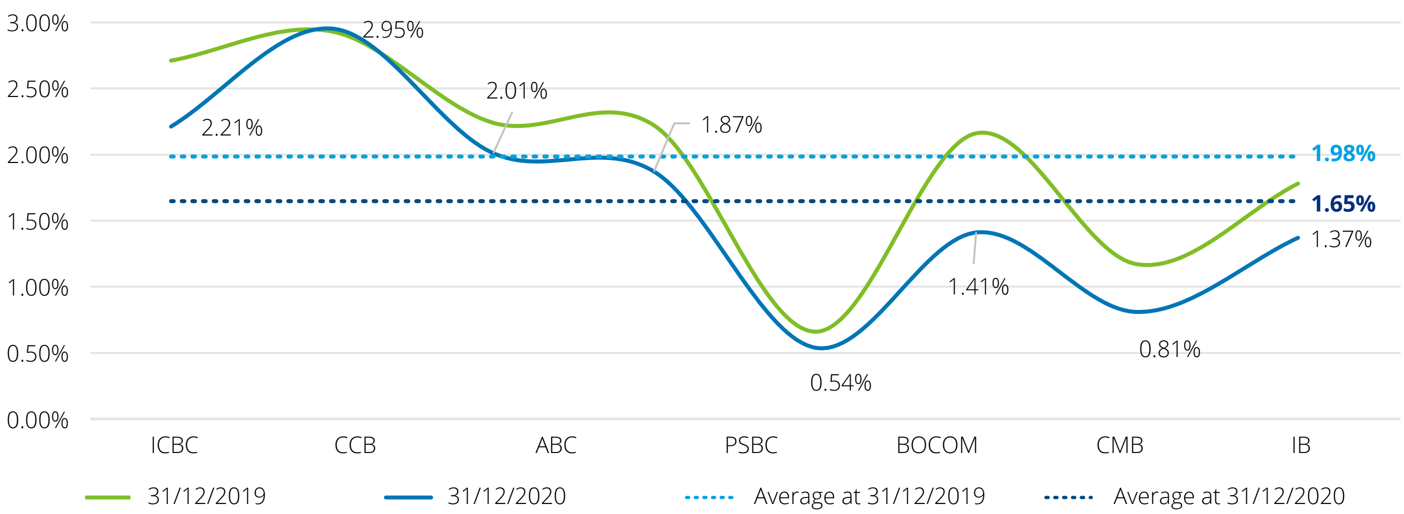
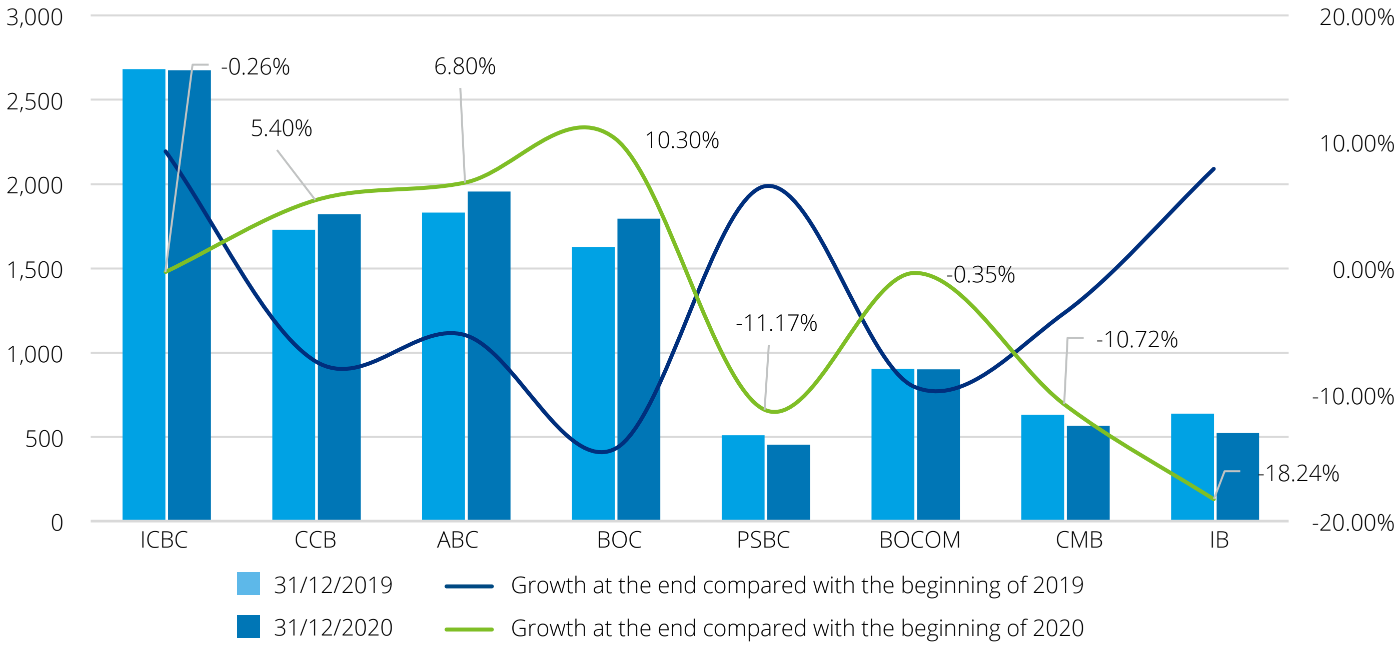


**Figure 41: Balance of Overdue Loans**

Unit: RMB100 million




## Balance of overdue loans increased, all banks saw significant fluctuation

To ensure adequate liquid capital of micro, small and medium-sized enterprises (MSMEs) that had been temporarily trapped by the pandemic, the regulator issued the policy for postponing principal and interest repayments on loans twice in 2020. The policy was further extended till the end of March 2021—payments on all inclusive loans of small and micro businesses eligible for this policy should also be deferred. The introduction of this policy alleviated the impact of the pandemic on late payment of credits and loans.

As of the end of 2020, the balance of overdue loans of domestic commercial banks totalled RMB1.069 trillion, RMB13.3 billion more than that at the beginning of the year, with an average growth rate of 1.26%. BOC saw faster growth; PSBC, CMB and IB's balance of overdue loans decreased over the course of the year; ICBC saw minor change in the year.

In terms of the change in overdue loan ratio, the average overdue loan ratio of domestic commercial banks was 1.23%, 19 basis points lower than that at the beginning of the year. Both the balance of overdue loans and the overdue loan ratio of PSBC and IB declined. Many banks' decline of overdue loan ratio was because that the banks extended the period (the longest to March 31, 2021, without any penalty interest) for principal and interest repayments on inclusive loans to small and micro businesses.

Many commercial banks declared that the quality of inclusive loans to small and micro businesses was generally controllable. Liang Shidong, chief risk officer of PSBC, said at the 2020 performance release conference that the loans with extended period of principal and interest payments accounted for over 1% of PSBC's overall loan scale, which had a very limited impact on its overall asset quality. Zhu Jiangtao, chief risk officer of CMB pointed out at its performance release conference that since the implementation of the policy for postponing principal and interest repayments, CMB had generally recovered to the pre-pandemic level in terms of the overall downward migration ratio of non-performing loans and current assets quality of retail loans, and its overall asset quality risk was controllable. ABC's Chairman Gu Shu also said that ABC had been monitoring the quality of loans with deferred principal and interest repayment in 2020, and the loans were controllable although with a higher non-performing loan ratio compared with ordinary loans.

On March 24, 2021, the State Council executive meeting decided to extend the policy (which expired on March 31) for postponing principal and interest repayments on inclusive loans to small and micro businesses, to mitigate the risk that some of the loans may change into non-performing loans. The extension of the policy allowed commercial banks more time to deal with post-pandemic potential credit risk exposure, and adjust and optimize credit asset quality management strategies. Commercial Banks are expected to further conduct comprehensive investigations on client resources: focus on the potential rising operating risks of enterprises that are ineligible for policy support, improve risk response measures, enhance the resilience and flexibility of credit asset management, strengthen risk prevention and control, and level asset risk exposure.

As of the end of 2020, the ratio of the average overdue loans to the non-performing loans of domestic commercial banks was 90.39%, 17% lower than that at the beginning of the year. That ratio of ICBC, PSBC and BOCOM decreased by more than 20 percentage points; the ratio of six state-owned commercial banks all dropped below 100% at the end of the year; the ratio of CMB and IB was about 105%. In general, more rigid non-performing loan identification standards led to the fast increase of non-performing loans, and risk classification also became stricter.

**Figure 42: Overdue Loan Ratio**

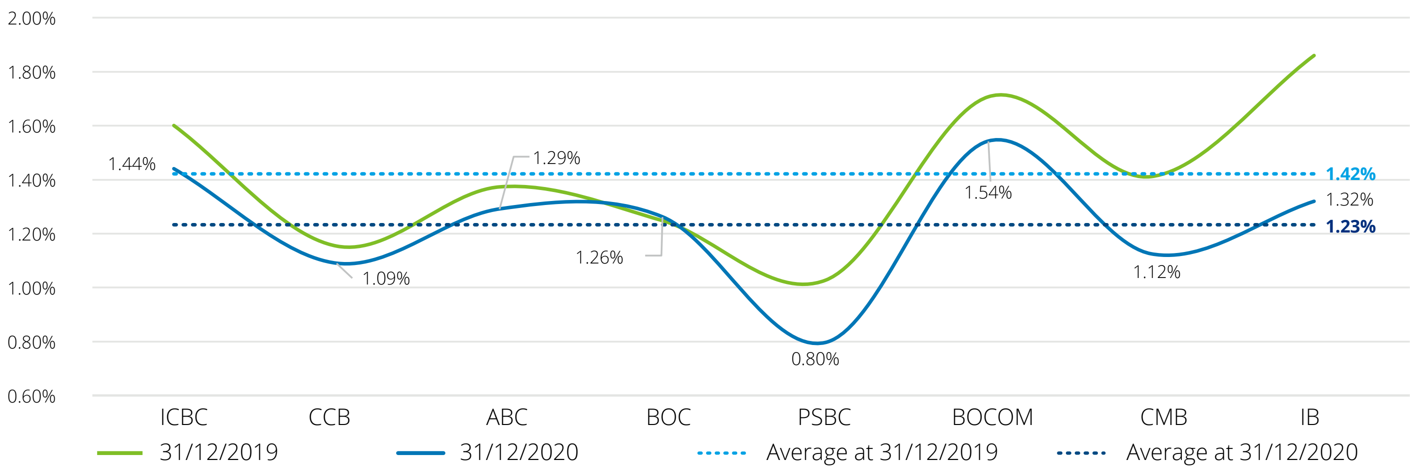
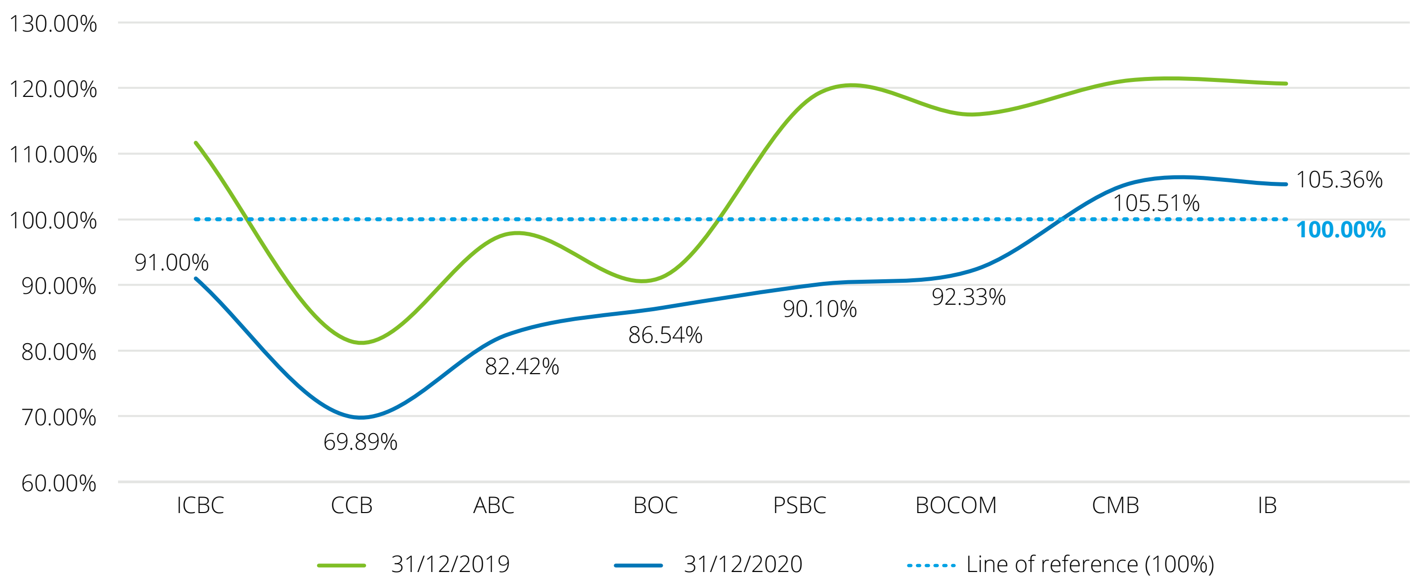



**Figure 43: Ratio of Overdue Loans to Non-performing Loans**



In 2020, the average migration ratio of pass loans of domestic commercial banks was 1.86%, 14 basis points higher than that of 2019. The average migration ratio of special-mention loans was 35.56%, up 10.62% from 2019. Although the credit quality of loans declined due to the impact of COVID-19, the policy for postponing principal and interest repayments deferred the downward migration of pass loans. The overall downward migration of special-mention loans changed greatly as a result of the banks' strengthened risk control and the more rigid non-performing loan identification standards.

**Figure 44: Migration Ratio of Pass Loans**

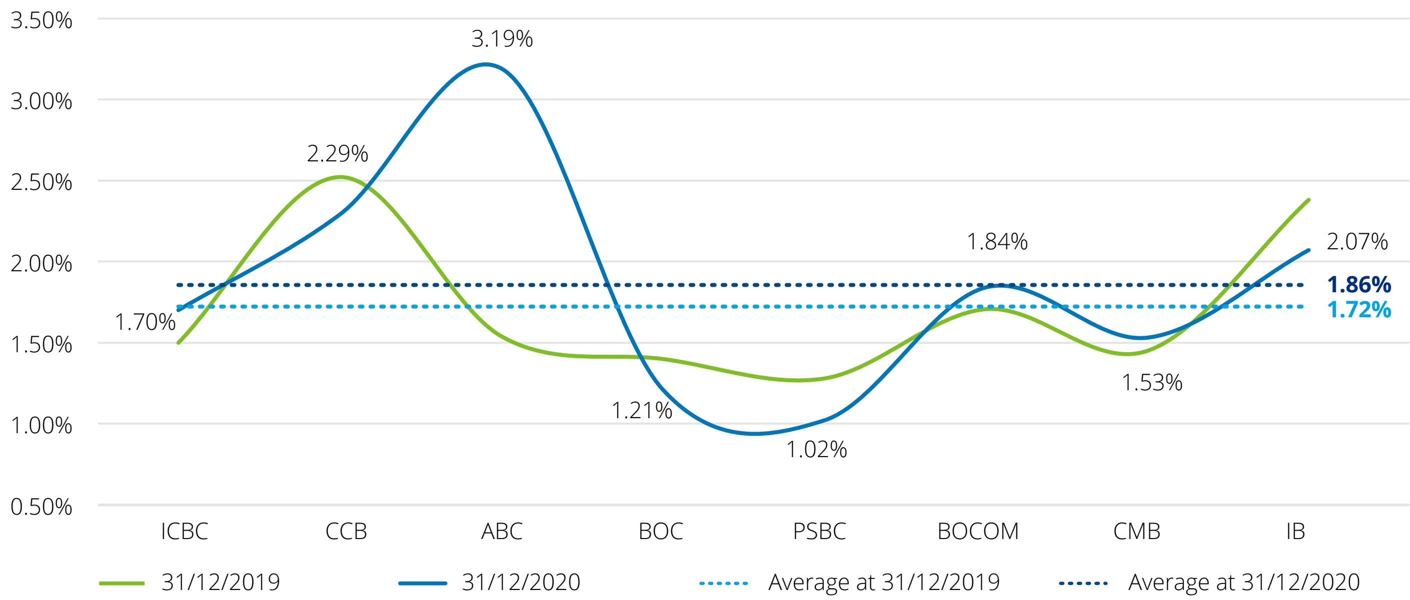
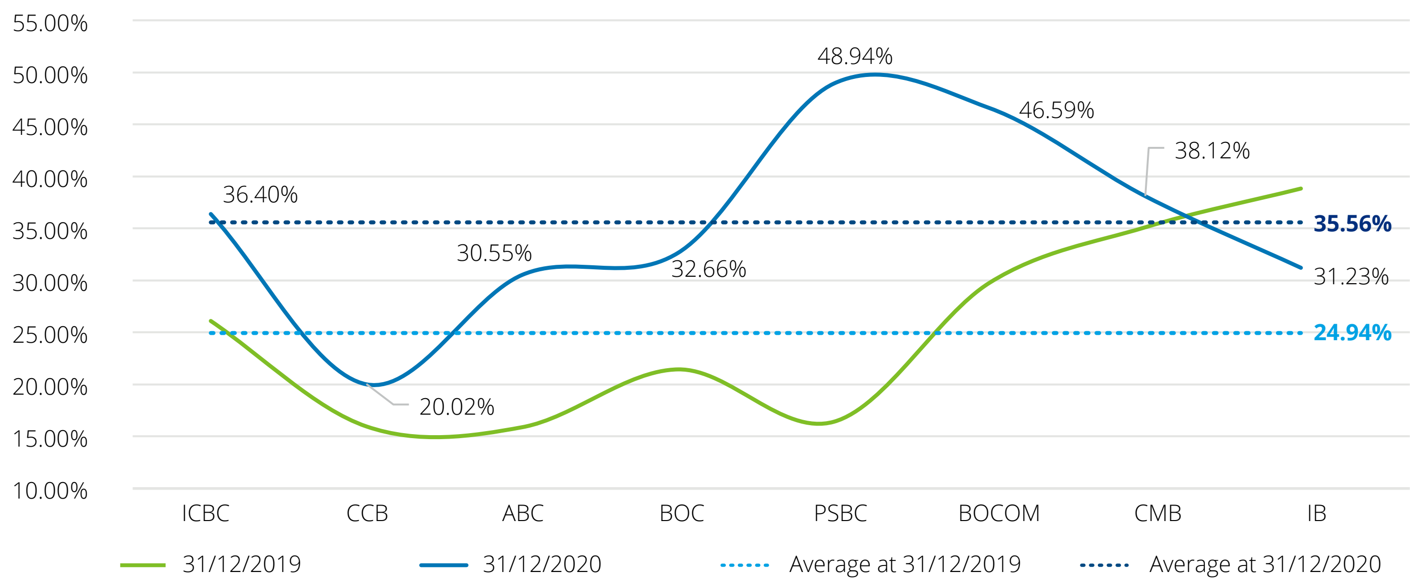


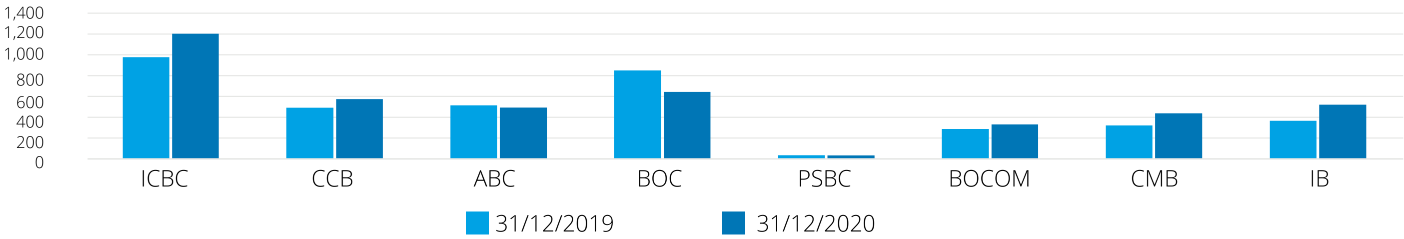

**Figure 45: Migration Ratio of Special-mention Loans**



In 2020, the loans written off (and transferred out) by domestic commercial banks totalled RMB423.8 billion, an increase of RMB40.8 billion or 10.67% compared with 2019. Specifically, ICBC, CMB and IB increased by RMB22.6 billion, RMB11.5 billion and RMB15.6 billion respectively. Generally, the increase of loan write-off had a positive impact on the banks' non-performing loan ratio, provision coverage, and other indicators.

**Figure 46: Written-off (and Transferred-out) Loans**

Unit: RMB100 million




**Adequate provision, although down from the previous year**

As of the end of 2020, the average provision coverage of domestic commercial banks was 255.15%, down 5.57% from that at the beginning of the year. Specifically, BOCOM's provision coverage at the end of the year was 143.87%, lower than that of other domestic commercial banks; the provision coverage of CMB and PSBC maintained positive growth to exceed 400%. Generally, as the non-performing loans had been gradually cleared over the past few years, the provision coverage of domestic commercial banks was relatively stable in the year; however, the banks' provision coverage differed greatly, which may affect the banks' risk-resistance ability to different degrees.

As of the end of 2020, the average loan provision ratio of domestic commercial banks was 3.33%, down 5 basis points from the beginning of the year. Among them, the BOCOM's loan provision ratio at the end of the year was 2.40%, down 13 basis points from the beginning of the year, which was significantly lower than that of other domestic commercial banks. The Circular on Launching the Pilot Program for Transfer of Non-performing Loans issued by CBIRC is expected to have a further positive impact on indicators such as the non-performing loan ratio and provision coverage.

**As required by the Circular on Further Implementing the New Accounting Standards for Financial Instruments, several domestic banks disclosed more parameter information of the expected credit loss model**

The eight domestic commercial banks disclosed in their 2020 annual report three to ten macroeconomic indicators of the forward-looking information affecting the expected credit loss. Compared with the indicator information disclosed in the 2019 annual report, BOC and PSBC reduced one macroeconomic indicator, ICBC reduced three macroeconomic indicators, CCB added three macroeconomic indicators, and CMB reduced the fixed investment indexes and added two macroeconomic indicators. All commercial bank adjusted the forward-looking information used in the expected credit loss model according to their development characteristics.

Among the indicators, GPD was used by all the eight commercial banks as one of the macroeconomic indicators of the forward-looking information affecting the expected credit loss.

**Figure 47: Provision Coverage**

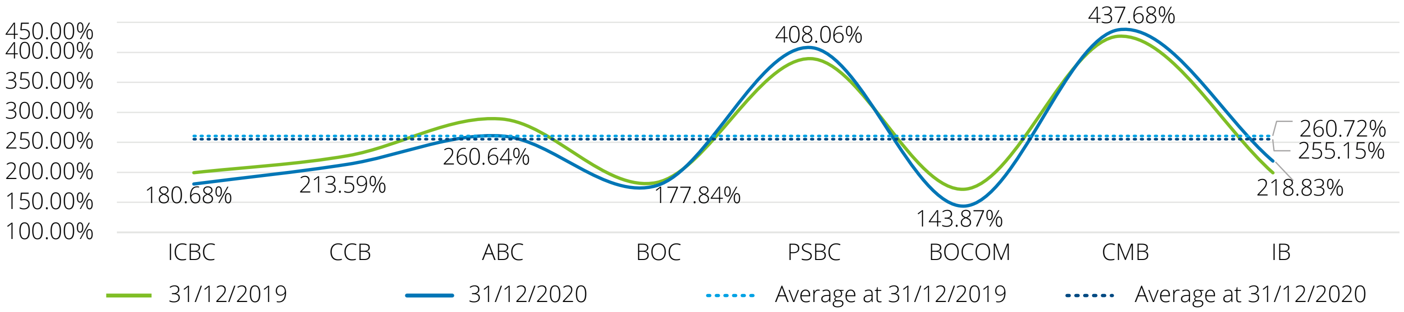
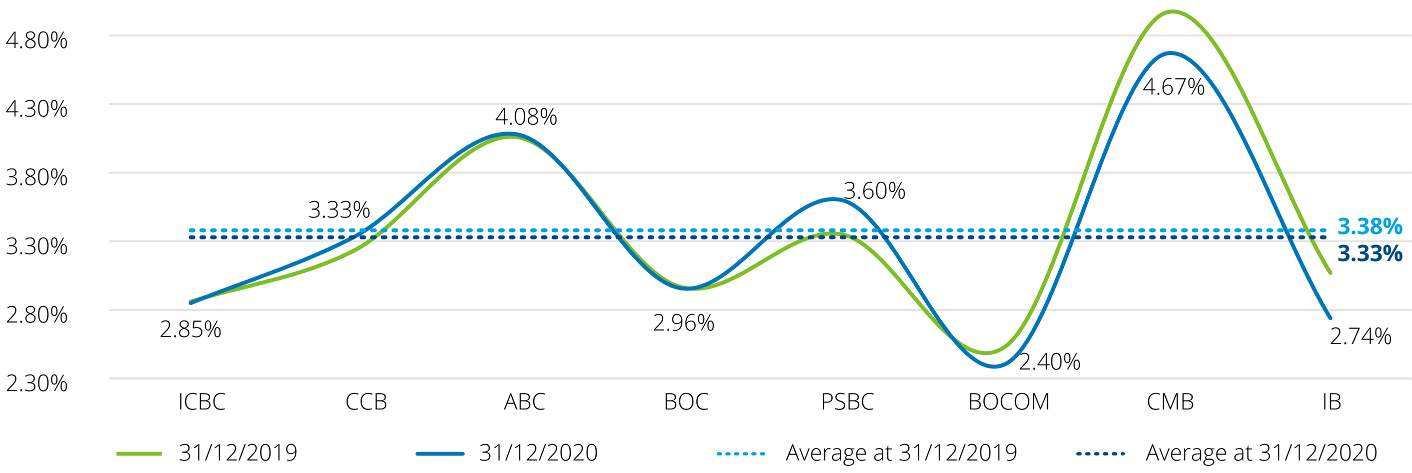


**Figure 48: Loan Provision Ratio**




To further strengthen the guidance for enterprises to implement the new accounting standards for financial instruments, the Ministry of Finance and the CBIRC jointly issued the Circular on Implementing the New Accounting Standards for Financial Instruments (Cai Kuai [2020] No. 22) on December 30, 2020, which requires enterprises to disclose the estimation techniques, key assumptions, parameters and other relevant information used to determine the expected credit loss, especially the specific value of key macroeconomic indicators applied in the economic scenarios, the impact of "beyond-model adjustment, and the consideration of supportive policies of the government.

In response to regulatory requirements, several commercial banks added parameters that determine the expected credit loss:

- The six state-owned commercial banks all disclosed the forecast GDP growth rate, while CMB disclosed the forecast industrial value added and the growth rate of loan balance of financial institutions;
- ABC and BOCOM both disclosed the forecast GDP growth rate in different scenarios, while the rest four banks disclosed the forecast GDP growth rate/range in the baseline scenario;
- Overall, the forecast GDP growth rate disclosed by the six banks was between 6% and 11.12%, and the consensus forecast of growth rate in the baseline scenario was around 8%.

All commercial banks disclosed the sensitivity analysis for the expected credit loss model parameters, among which:

- ABC, PSBC, CCB and BOCOM continuously disclosed the sensitivity analysis for the expected credit loss model parameters; BOC, ICBC and CMB additionally disclosed this analysis in 2020; IB has not disclosed this analysis yet;
- ABC, PSBC, BOCOM and CMB considered the impact of weight in different scenarios when conducting the sensitivity analysis;
- CCB and PSBC disclosed the stage-by-stage sensitivity analysis, while others mainly conducted the sensitivity analysis of main economic indicators in the baseline scenario.

According to the results of sensitivity analysis, the fluctuation of parameters did no significantly impacted the change in the expected credit loss. Specifically:

- For banks (except PSBC, CMB and BOCOM) whose disclosed parameter fluctuation was 10%, the change in the expected credit loss did not exceed 5% of the balance of the expected credit loss;
- PSBC' weight or main economic indicators fluctuated by 10% in different scenarios, and the change in the expected credit loss did not exceed 10% of the balance; and the impact of stage II-to-stage I migration on the expected credit loss balance did not exceed 5%;
- CMB's disclosed weight fluctuation was 10% in different scenarios, and the specific percentage of the change in the expected credit loss were 1% and 2.5%; BOCOM also disclosed the specific amount of the change in the expected credit loss with weight fluctuation of 10% in different scenarios.

Both PSBC and BOCOM disclosed the information of beyond-model adjustment, mainly for the loans with deferred principal and interest repayments and the financial instruments affected by default in the credit bond and other secondary markets.

The following table presents the disclosure of the expected credit loss model of domestic commercial banks in 2020.

**Table 6: Disclosure of the Expected Credit Loss Model of Domestic Commercial Banks**

| Items | | ICBC | CCB | ABC | BOC | PSBC | BOCOM | CMB | IB |
|---|---|---|---|---|---|---|---|---|---|
| **Macroeconomic indicators of forward-looking information affecting the expected credit loss** | GDP | √ | √ | √ | √ | √ | √ | √ | √ |
| | CPI | √ | √ | √ | √ | √ | √ | - | √ |
| | Purchasing Managers' Index (PMI) | √ | - | - | - | - | - | - | - |
| | PPI, Housing Price Index (HPI) | - | √ | - | √ | √ | - | - | - |
| | Industrial added value | - | - | √ | - | - | - | √ | - |
| | Investment in fixed assets | - | - | - | √ | - | √ | - | √ |
| | M2, RMB deposit reserve ratio, London spot gold price, average exchange rate of USD to RMB, China Real Estate Climate Index and unemployment rate | - | √ | - | - | - | - | - | - |
| | Foreign trade index, currency and interest rate, etc. | - | - | - | - | - | √ | - | - |
| | M2, total retail sales of consumer goods, investment in real estate development | - | - | - | - | - | - | - | √ |
| **Main macroeconomic indicators disclosed** | Forecast range of YoY GDP growth rate in the baseline scenario | √ | - | - | - | - | - | - | - |
| | Forecast YoY GDP growth rate in the baseline scenario | - | √ | √ | √ | √ | - | - | - |
| | Forecast YoY GDP growth rate in different scenarios | - | - | √ | - | - | √ | - | - |
| | Industrial added value in the baseline scenario, forecast YoY growth rate of various loan balances of financial institutions | - | - | - | - | - | - | √ | - |
| | CPI in different scenarios, forecast YoY growth rate of PMI | - | - | - | - | - | - | - | - |
| **Sensitivity analysis** | Sensitivity analysis of forecast key economic indicators | √ | √ | √ | √ | √ | √ | - | - |
| | Sensitivity analysis of weight in different scenarios | - | - | √ | - | √ | - | √ | - |
| | Stage-by-stage sensitivity analysis | - | √ | - | - | √ | - | - | - |
| **Impact of the pandemic** | Impact on the judgment of significant increase in credit risk and impact on forward-looking information | √ | √ | √ | √ | √ | √ | √ | √ |

Although domestic commercial banks disclosed information of the expected credit loss model in their 2020 annual report, there was still room for improvement compared with their overseas counterparts. Take HSBC as an example.

HSBC disclosed in detail the assumptions and parameters used to calculate the expected credit loss in various economic scenarios, conducted adequate sensitivity analysis, and clarified the management's views on various potential results. To be specific:

- HSBC disclosed specific forecasts for the global economic development, including the supporting plans of different governments;
- HSBC made assumptions for four economic scenarios, three of which are the result of consensus forecasts and distribution estimation. Such consensus forecasts were based on the fact that with the launch of vaccination programs in 2021, the governments and public health departments of the Group's major markets were expected to vigorously implement the vaccination programs to benefit the economic recovery. The fourth scenario disclosed the assumption of an additional downturn of global recession to reflect the management's views on serious risks—in this scenario, the virus infection rate will increase and vaccination programs will be hampered in 2021, which means that the vaccine will not be available until the end of 2021 and the pandemic will not end until the end of 2022; moreover, governments and central banks are also assumed to be unable to substantially expand their fiscal and monetary plans, leading to a quick adjustment in the labor and asset markets;
- HSBC disclosed in figures the forecast GDP growth rate, unemployment rate, housing price growth rate and short-term interest rate of eight major markets in four different scenarios, as well as the probability of the different scenarios;
- In terms of the forecast length of indicators, HSBC disclosed the forecast average annual growth rate of the 2020-2023 period and the five-year average of the 2021-2025 period;

- In terms of sensitivity analysis, HSBC mainly disclosed the sensitivity analysis of weight in different scenarios, and analyzed the sensitivity analysis of eight major markets as well as the sensitivity analysis of wholesale and retail businesses;
- In terms of the management's judgment and adjustment, HSBC disclosed the reasons and amount of the adjustment in the wholesale and retail businesses, and made explanations in detail.

### The financial market fluctuated violently, while the investment of domestic banks was relatively stable

As of the end of 2020, the book value of financial asset investment of domestic commercial banks totalled RMB41 trillion, an increase of more than RMB3 trillion from the beginning of the year, with an average growth rate of 8.13%, 352 basis points lower than the growth rate of loans. The book value of foreign banks' financial asset investment totalled nearly RMB42 trillion, an increase of nearly RMB5 trillion from the beginning of the year, with an average growth rate of 13.49%. JPM, Citi and MUFG had a relatively high YoY growth rate; the year-end balance of WFC's book value of financial asset investment showed a downward trend. On the whole, the growth rate of financial asset investment of domestic commercial banks was stable, while that of foreign banks was volatile, which might be caused by the active increase of trading assets to obtain short-term income in the face of the drastic fluctuation of global financial market.

### Government bonds accounted for a higher proportion, with varied proportions of equity and non-standardized debt assets investment

As of the end of 2020, bond investment accounted for a dominate proportion in the financial assets investment of domestic commercial banks. Specifically, PSBC had a relatively lower proportion of government and central bank bonds among the domestic banks, and ABC's government and central bank bonds accounted for about 77%; PSBC had relatively more policy bank bonds and financial institution bonds, accounting for about 56%; corporate bonds held an average proportion of 7.14%; IB's equity and non-standardized debt assets investment maintained the leading position, at about 46%.

**Figure 49: Financial Asset Investment**

Unit: RMB100 million

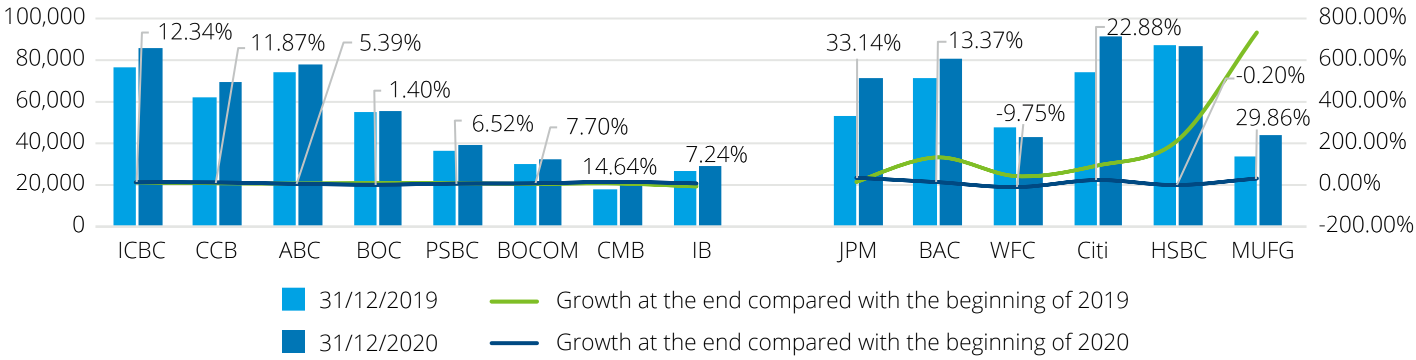
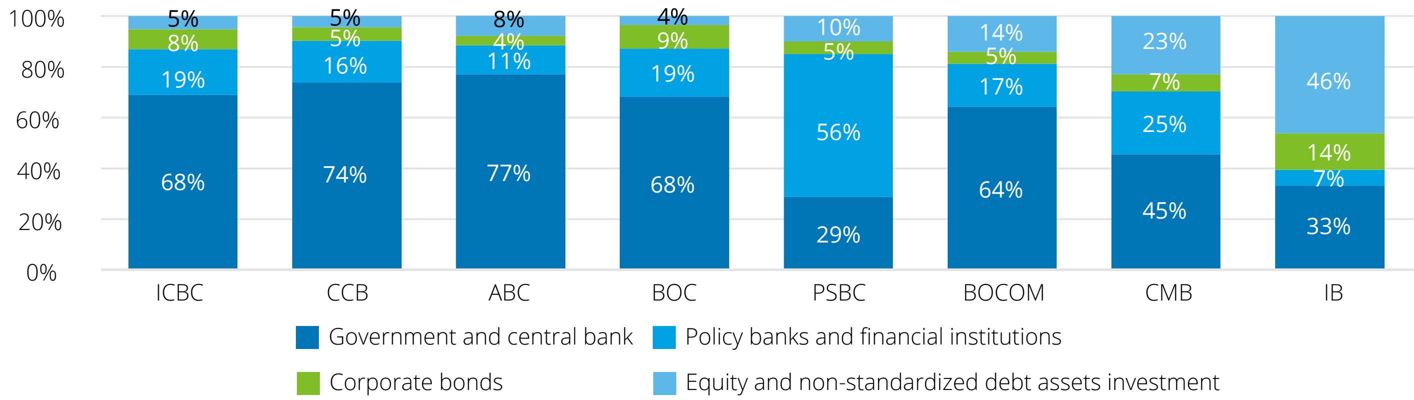



**Figure 50: Financial Investment Structure in 2020**




Note: it was based on the financial statements, and did not include the accrued interest, provision for losses, and fair value changes included in other comprehensive income.

# 2.3 Liabilities

### Increased growth rate of total liabilities

At the end of 2020, the liabilities of domestic banks totalled RMB139 trillion, up RMB12 trillion from the beginning of the year, with an average growth rate of 9.73%, among which the total liabilities of ICBC exceeded RMB30 trillion. The liabilities of foreign banks totalled RMB97 trillion, an increase of RMB4 trillion from the beginning of the year, with an average growth rate of 4.72%. Some banks' liabilities grew faster. On the whole, except for a few banks, the growth rate of total liabilities of most domestic commercial banks increased year-on-year.

### Customer deposits increased, the broad interbank liabilities decreased, and other liabilities increased

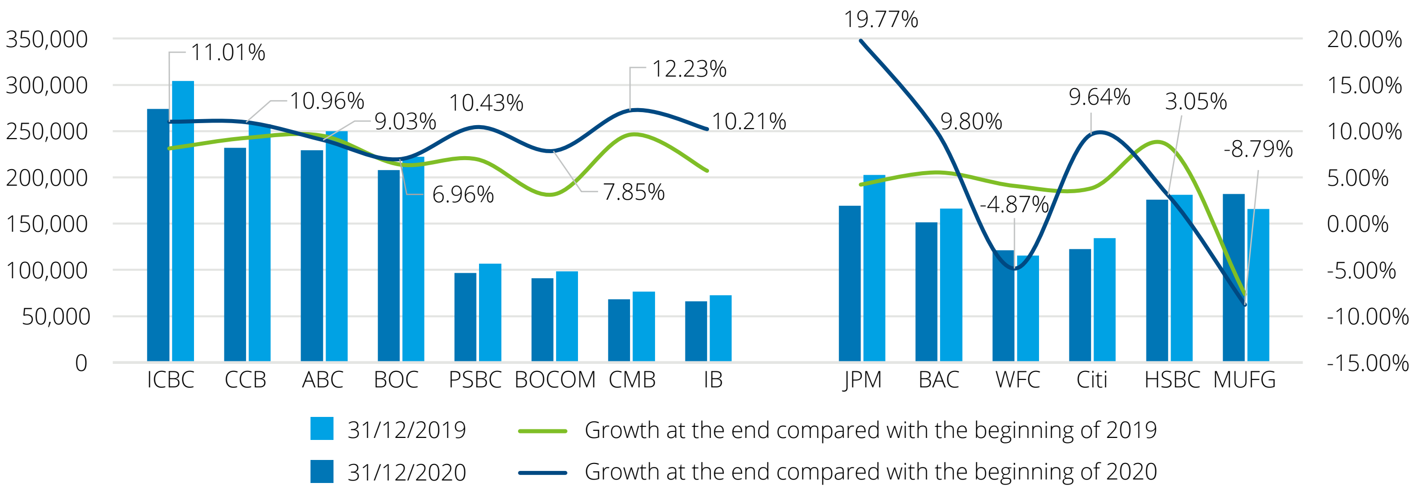
CBIRC published the Measures for Quality Management of Liabilities of Commercial Banks (hereinafter referred to as the "Measures") at the beginning of 2021, which aims to promote the quality management, stable sources and diversified structure of liabilities as well as reasonable asset-liability matching, and to maintain stable operation of the banking system. The Measures specify the core factors of liability quality management from the aspects of stability of liability sources, diversity of liability structure, reasonableness of liability-asset matching, proactivity of liability acquisition, the appropriateness of liability costs, and authenticity of liability items.

Specifically, as of the end of 2020, the liability structure of domestic commercial banks was relatively stable: (1) ICBC, ABC and CCB's proportion of customer deposits accounted for more than 80%, and that of PSBC exceeded 96%; (2) BOCOM's proportion of customer deposits was maintained at about 67%, and its customer deposits and broad interbank liabilities recorded relatively balanced proportions compared with other domestic commercial banks; (3) IB's proportion of customer deposits declined slightly by 1.35% year-on-year.

According to the Measures, domestic commercial banks should improve the liability-asset matching reasonableness, as well as the liability-asset matching level in maturity and other aspects to prevent risks arising due to too many mismatches. According to the information of liquidity risks disclosed by domestic commercial banks at the end of 2020, all the banks had a certain liquidity gap in a less than one-year period (including on demand); assets with a maturity period of over one year showed better liquidity, mainly due to the extensive customer base of domestic commercial banks and the overall rapid growth of deposits. Overall, domestic banks' deposition rate of current deposits was relatively higher, with stable growth. Except for WFC and MUFG, domestic and foreign banks' customer deposits, as an important part of bank liabilities, were on the rise. Due to the COVID-19 pandemic, residents were more inclined to increase bank deposits, reduce consumption and

**Figure 51: Total Liabilities**

Unit: RMB100 million

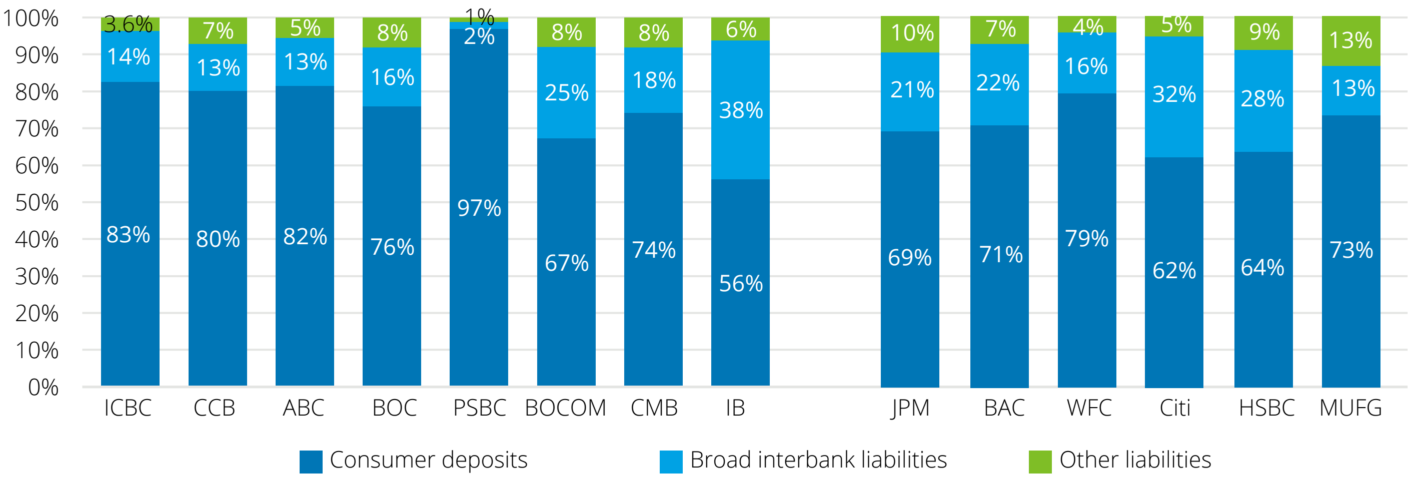


choose more conservative approaches of money management. Generally, banks had relatively stable sources of liabilities, and can reasonably change the liability structure and manage the liability scale, so as to prevent financial risks arising from sudden and major abnormal changes of bank liabilities. The proportion of average customer deposits of foreign banks was maintained at about 70%.

### Long-standing deposit-taking pressure; continued tendency towards fixed-term deposits

At the end of 2020, the YoY growth rate of customer deposits of commercial banks rose significantly, with an average increase of nearly 10%. Besides ICBC, CCB and ABC's balance of deposits also exceeded RMB20 trillion. CMB' balance of customer deposits rose 16% from the beginning of the year. Foreign banks' balance of deposits totalled RMB66.96 trillion, an increase of RMB6.06 trillion from the beginning of the year, representing a growth rate of 9.95%. Overall, the average balance of customer deposits of most domestic and foreign banks was on the rise.

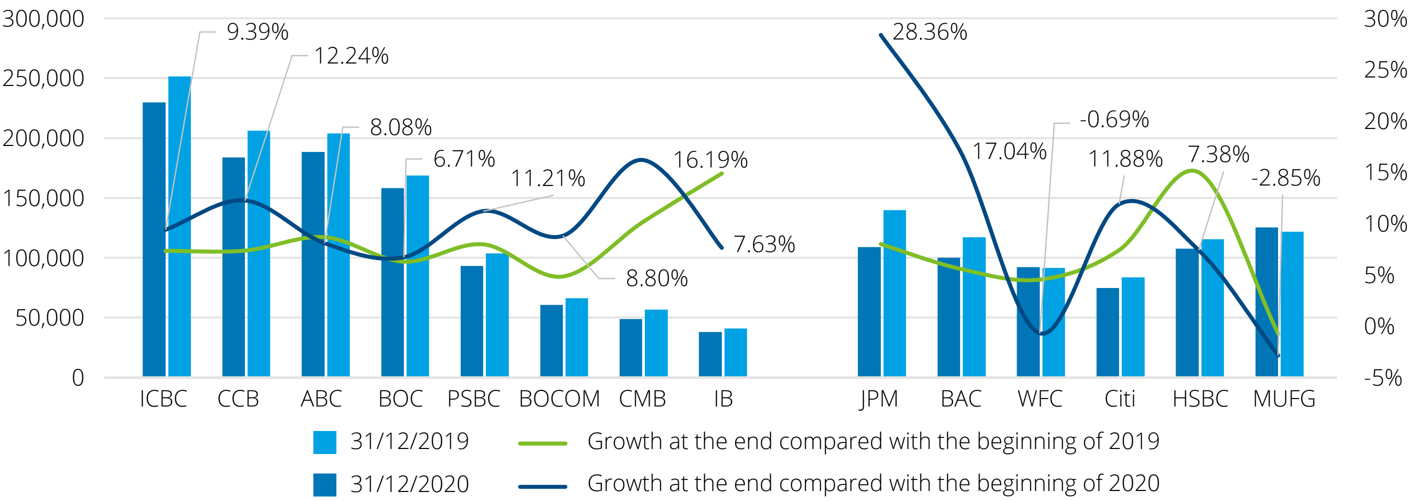
**Figure 52: Liability Structure in 2020**




Note: broad interbank liabilities include interbank deposits and inter-financial institution deposits, loans from other banks and financial institutions, financial assets sold for repurchase, bonds payable and Certificates of Deposit (CDs) issued.

**Figure 53: Customer Deposits**

Unit: RMB100 million

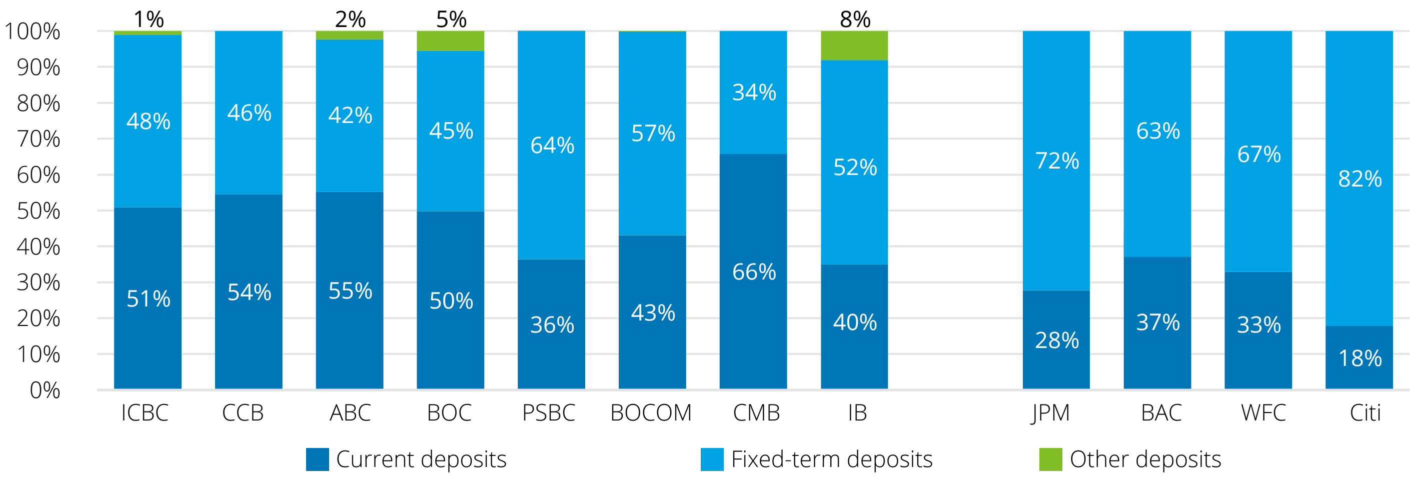


As of the end of 2020, the average current deposits of domestic commercial banks accounted for 49%, slightly higher than that of fixed-term deposits. The current deposits of CCB and ABC accounted for more than 54%; PSBC' current deposits accounted for 36%, while its fixed-term deposits accounted for 64%; CMB recorded the highest proportion of current deposits at 66%, and its fixed-term deposits accounted for 34%. Banks were under great pressure to attract savings, so they introduced high-yield products. The proportion of fixed-term deposits of foreign banks was greater than that of domestic banks, but the tendency towards fixed-term deposits weakened in the year.

**Total amount of bonds payable declined; some domestic banks' demand for external capital supplement increased**

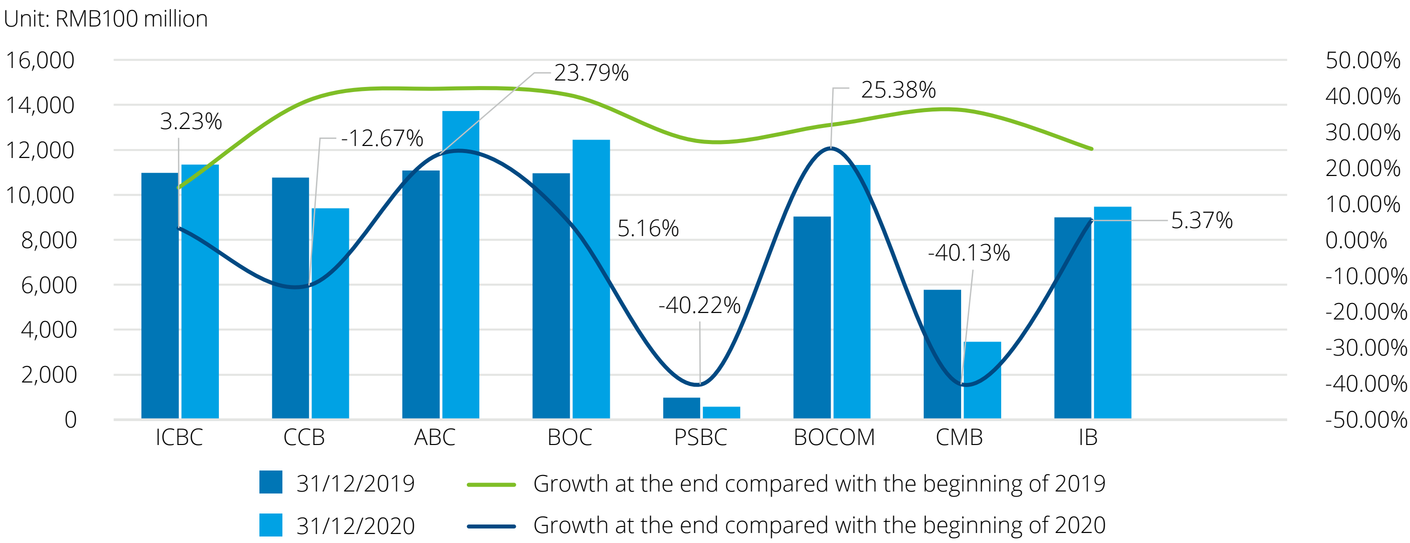
As of the end of 2020, domestic commercial banks' balance of bonds payable and CDs issued totalled RMB7,379.9 billion, an increase of 3.37% from the beginning of the year. Specifically, PSBC and CMB fell by more than 40%; BOCOM and ABC issued more debt instruments than the rest banks in the year, with a growth rate of more than 20%. Overall, the capital supplement pressure on domestic commercial banks increased compared with the previous year.

**Figure 54: Deposit Composition in 2020**




Note: HSBC and MUFG did not disclose their information of deposit composition.

**Figure 55: Bonds Payable and CDs Issued**

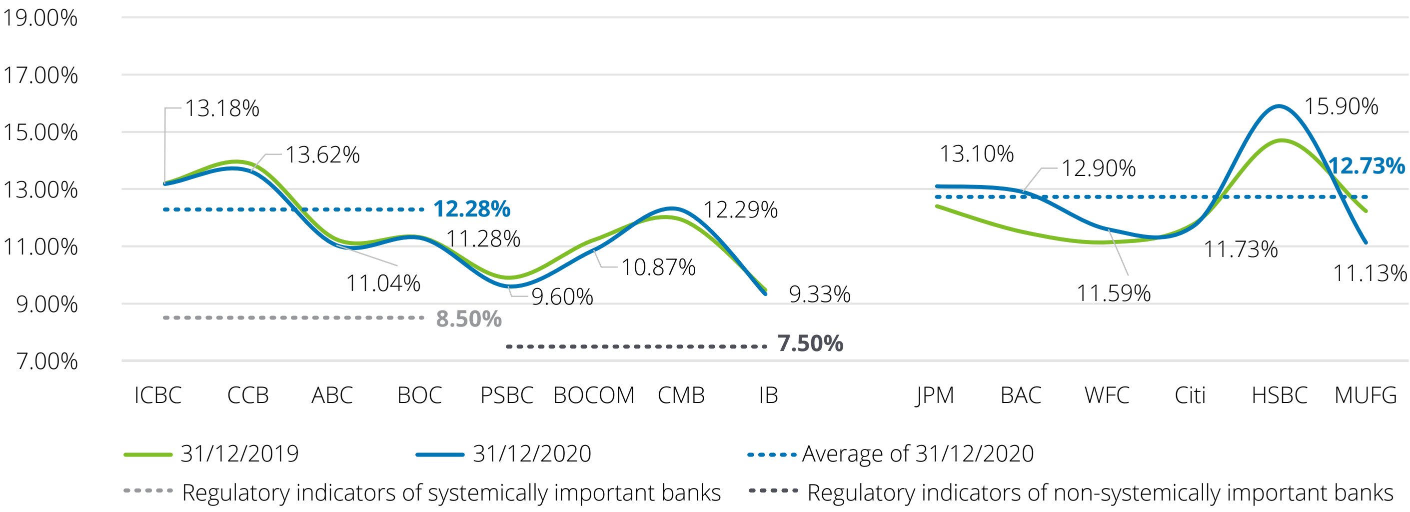


# 2.4 Capital position

**Some domestic banks were under pressure, while foreign banks' capital indicators improved**

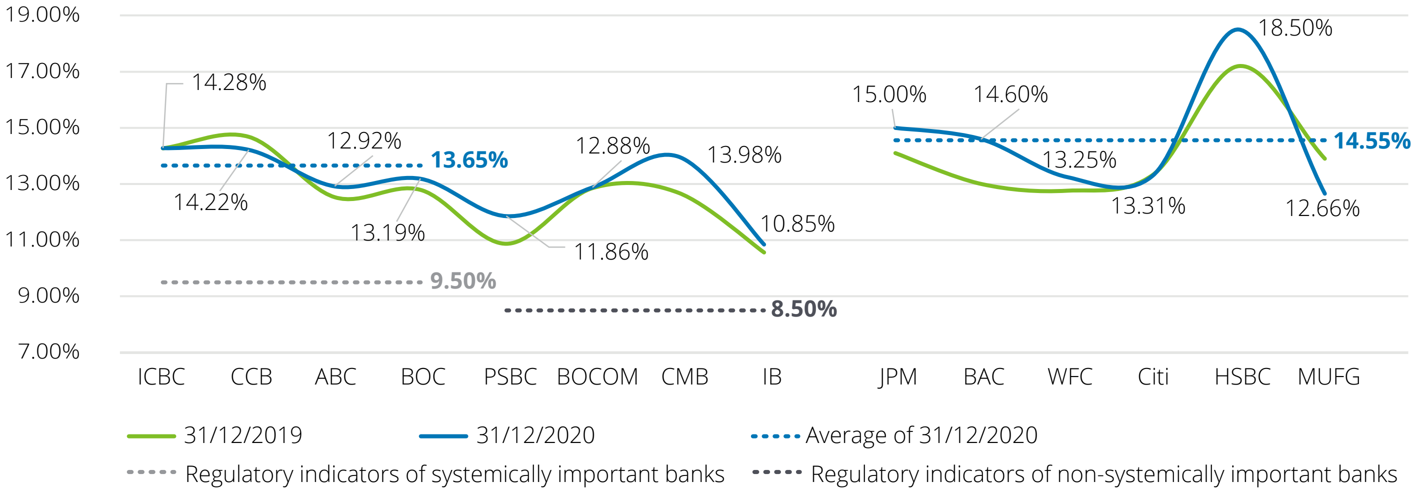
According to the Administrative Measures for the Capital of Commercial Banks (for Trial Implementation) issued by CBIRC, systemically important banks shall have a core tier 1 capital adequacy ratio of no lower than 8.50%, a tier 1 capital adequacy ratio of no lower than 9.50%, and a capital adequacy ratio of no lower than 11.50% at the end of 2018. For non-systemically important banks, the minimum requirements for their core tier 1 capital adequacy ratio, tier 1 capital adequacy ratio and capital adequacy ratio at the end of 2018 were 7.5%, 8.5% and 10.5%, respectively. At the end of 2020, the average core tier 1 capital adequacy ratio, average tier 1 capital adequacy ratio and average capital adequacy ratio of domestic commercial banks met the regulatory requirements, all of which increased compared with the beginning of the year. Specifically, the three ratios of CMB rose more rapidly by 0.34%, 1.29% and 1.00%, respectively, reflecting remarkable results of its low-capital consumption and high-capital efficiency businesses. The ratios of CCB, PSBC and IB dropped slightly, leading to future capital supplement pressure. The average ratios of foreign banks were 12.73%, 14.55% and 16.81% respectively, all slightly higher than that at the beginning of the year. On the whole, the capital adequacy ratio of domestic commercial banks increased, but the gap with foreign banks widened.

**Figure 56: Core Tier 1 Capital Adequacy Ratio**



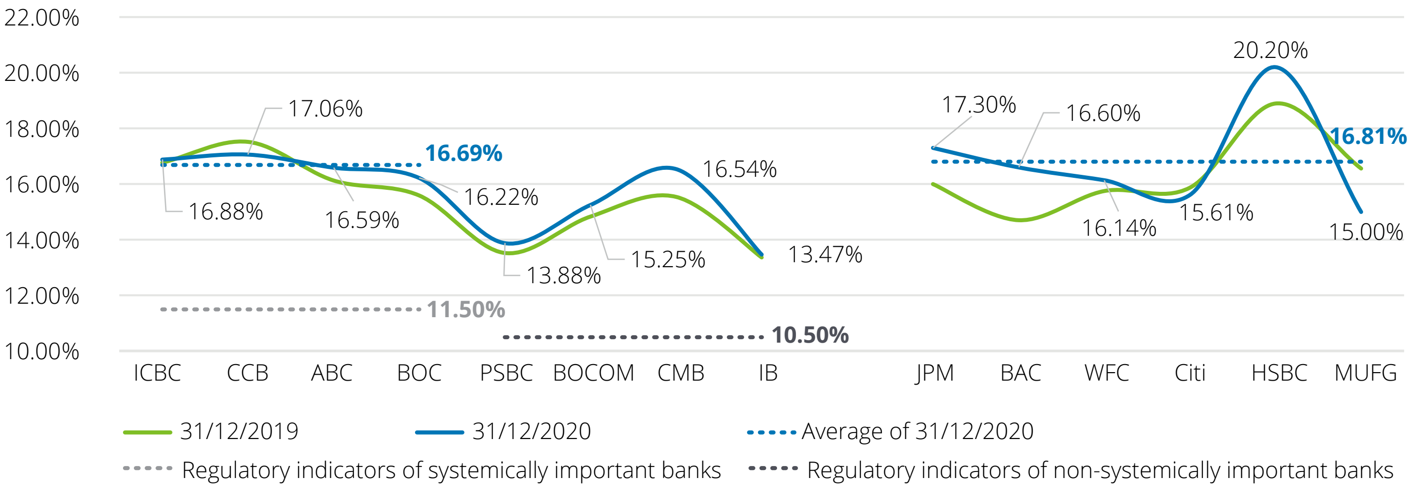

Note: for the measurement of credit risk-weighted assets (CRWA), among the domestic banks, ICBC, CCB, ABC, BOC, BOCOM and CMB have applied the internal rating-based approach, while PSBC and IB have applied the weight approach; all foreign banks have applied the internal rating-based approach.

**Figure 57: Tier 1 Capital Adequacy Ratio**




Note: for the measurement of credit risk-weighted assets (CRWA), among the domestic banks, ICBC, CCB, ABC, BOC, BOCOM and CMB have applied the internal rating-based approach, while PSBC and IB have applied the weight approach; all foreign banks have applied the internal rating-based approach.

**Figure 58: Capital Adequacy Ratio**




Note: for the measurement of credit risk-weighted assets (CRWA), among the domestic banks, ICBC, CCB, ABC, BOC, BOCOM and CMB have applied the internal rating-based approach, while PSBC and IB have applied the weight approach; all foreign banks have applied the internal rating-based approach.

## Domestic banks' RWA increased, with varied average weight

In 2020, to support the resumption of work during the pandemic, domestic commercial banks enhanced loan issuance, especially inclusive loans to small and micro businesses, resulting in increased amount of loans, risk exposure and risk-weighted assets (RWA). With increased credit risks as a result of the pandemic, the banks timely adjusted the probability of default (PD) model, and the PD rose slightly.

Specifically, the CRWA accounted for more than 90% of the RWA of the 6 major state-owned commercial banks, with an average of 92%; BOC, CMB and IB's CRWA reached 93%, 87% and 91% respectively. Among the 8 domestic commercial banks, PSBC and IB still adopted the weight approach, while the rest applied the internal rating-based approach. The operational risk-weighted assets of the 8 domestic commercial banks accounted for 6.98% on average, with that of CMB accounting for 11.44%. Currently, CMB uses the standardized approach to measure the operational risks; CMB had a relatively higher percentage of operational risk-weighted assets due to the implementation of the asset-light strategy.

As of the end of 2020, the average weight of RWA of domestic commercial banks was 60.90%, among which IB recorded the highest at 71.75% and PSBC the lowest at 49.78%. Among the 6 banks using the internal rating-based approach, the average weight of ABC and BOCOM was relatively high. Specifically, ABC's non-retail credit risk exposure accounted for about 65.94%; the weighted average of risk weight for ABC's non-retail businesses accounted for 69.34%, and that of the retail businesses accounted for 25.95%; ABC's higher average weight was caused by the higher proportion of corporate business as well as the higher PD and loss given default (LGD). As IB adopted the weight approach to calculate the CRWA, the assets with 100% risk weight (creditor's rights to general enterprises and public institutions) accounted for 44% of its post-mitigation credit risk exposure, which directly led to a higher risk weight.

**Table 7: RWA Composition**

| | ICBC | CCB | ABC | BOC | PSBC | BOCOM | CMB | IB |
|---|---|---|---|---|---|---|---|---|
| CRWA | 92.10% | 91.99% | 92.73% | 93.14% | 91.90% | 91.26% | 86.80% | 90.96% |
| Market risk-weighted assets | 0.87% | 0.72% | 0.90% | 0.87% | 1.68% | 3.21% | 1.76% | 3.24% |
| Operational risk-weighted assets | 7.03% | 7.29% | 6.37% | 5.99% | 6.42% | 5.53% | 11.44% | 5.80% |
| RWA | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |

### With assets removed from the balance sheet, asset securitization significantly reduced capital occupancy

At the end of 2020, the average amount of domestic commercial banks' asset securitization pre-mitigation risk exposure was RMB58.6 billion, among which IB reached RMB129.6 billion, much higher than that of other state-owned commercial banks. Asset securitization of domestic commercial banks was all measured by the weight approach, including asset-backed securities (ABS) held by the banks as the issuer as well as that held by the banks as an investor.

According to the relevant provisions of the Administrative Measures for the Leverage Ratio of Commercial Banks (Revised ) and the Administrative Measures for the Capital of Commercial Banks (for Trial Implementation), the leverage ratio of consolidated statements and non-consolidated statements of commercial banks shall not be lower than 4%. Domestic commercial banks all met the regulatory requirements. Specifically, ICBC's leverage ratio was still the highest in the industry despite a slight decline from the end of the previous year; PSBC's leverage ratio rose 62 base points to 5.68% in the year, and CMB's rose 60 base points to 7.39%.

**Figure 59: Average Weight of RWA in Total Assets in 2020**

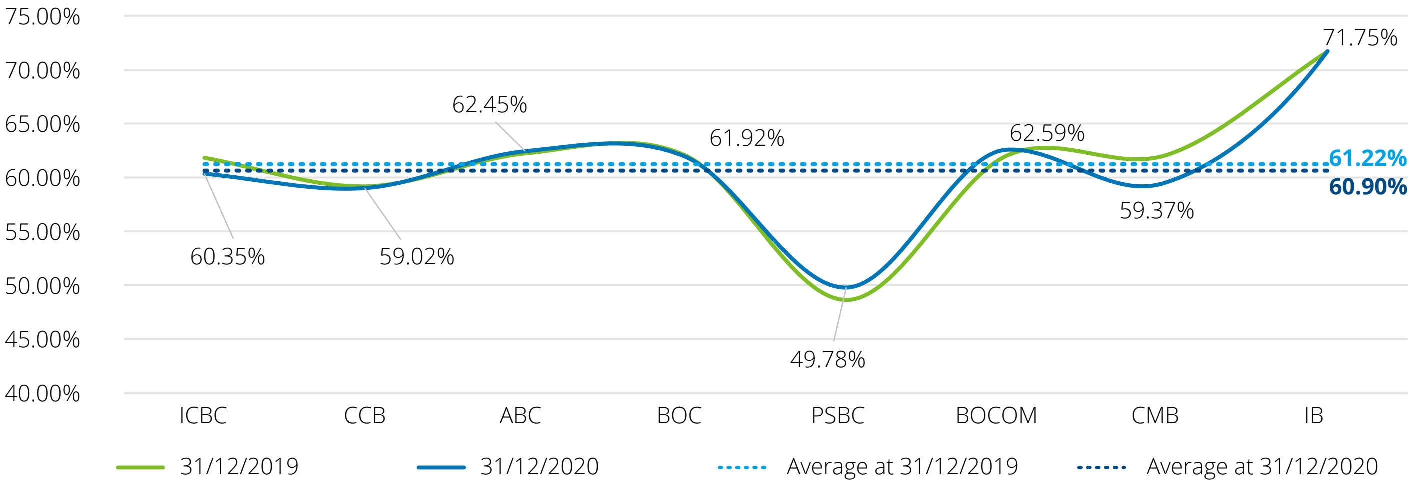



**Figure 60: Asset Securitization**

Unit: RMB100 million

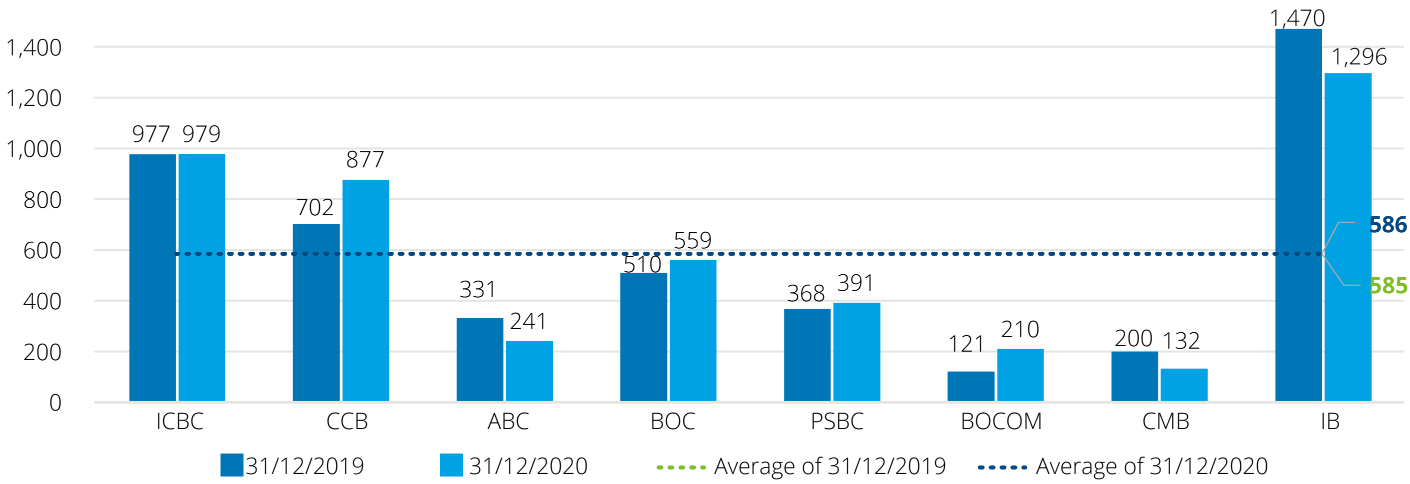
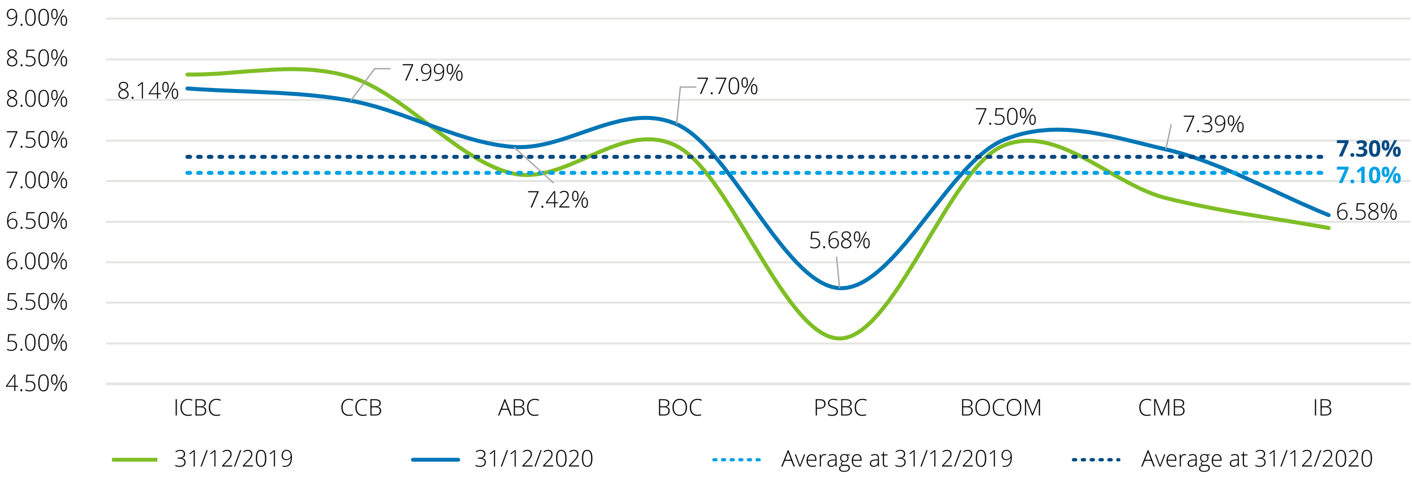


**Figure 61: Leverage Ratio**




# Author

**Charlotte Shen**
**Leader, Deloitte China Center for Financial Services**
**Partner, Audit & Assurance FSI**
Tel: +86 21 2312 7166
Email: charshen@deloitte.com.cn

**Jerry Han**
**Partner, Audit & Assurance FSI**
**Deloitte China**
Tel: +86 10 8512 5576
Email: jerrhan@deloitte.com.cn

**Rosemary Wu**
**Senior Manager, Audit & Assurance FSI**
**Deloitte China**
Tel: +86 10 8512 4511
Email: susawu@deloitte.com.cn

**Stephan Han**
**Manager, Audit & Assurance FSI**
**Deloitte China**
Tel: +86 10 8524 8575
Email: sthan@deloitte.com.cn

Data collection and collation: Rufeng Lv, Joseph Duan, Long Cheng, Estella Wu and Chris Li.

# 3. Observation of Listed Banks' Business in 2020

**3.1 Retail banking takes off; strategic transformation takes effect**

- Retail profits increased steadily; the pandemic boosted the development of mobile banking
- Multi-channel payment scenarios established; the amount of consumption increased gradually
- Consumption iteration and upgrading drove retail transformation
- Wealth management scale continued to expand; private banking enhanced high net worth stickiness

**3.2 Fulfillment of social responsibility and development of inclusive and green finance**

- Served the real economy; promoted the resumption of work and production
- Introduced contactless banking to benefit the people; facilitate the inclusive finance
- Jointly build a friendly environment; attach importance to green finance

**3.3 Net-value products oriented transformation**

- Transformation of net value-based management of financial products proceeded to the halfway point
- Wealth management subsidiaries continued to increase investment in equity products

**3.4 Accelerate empowerment by technology, explore innovative service models**

- Continued fund and personnel investment for Fintech development
- Fintech-empowered improvement of operation and management
- Fintech-empowered development of the financial industry
- Future opportunities and challenges for Fintech

# 3.1 Retail banking takes off, strategic transformation takes effect

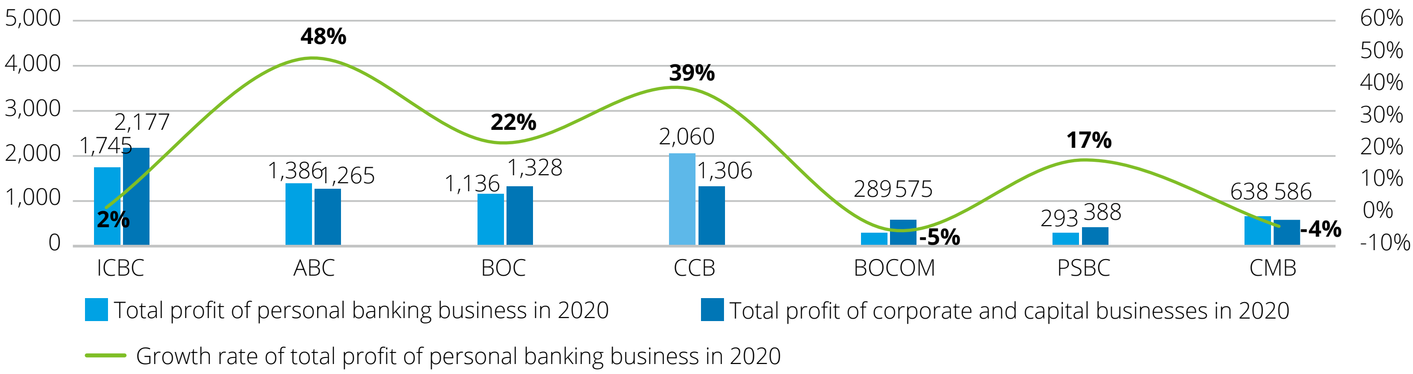
With the advancement of market-oriented interest rate reform and the vigorous development of capital markets, commercial banks are generally faced with narrowed interest margin, increased corporate credit risks and diverted corporate financing demand. Banks successively transformed to retail banking which features strong ability of premium and strong resistance to economic cycles, and enhanced resource investment in retail banking. At present, banks' retail businesses have showed a good momentum of development, and this strategic transformation has achieved initial success.

**Retail profits increased steadily; the pandemic boosted the development of mobile banking**

According to the business profits disclosed by the large domestic commercial banks in 2020, the retail businesses of CCB contributed 61.21% of its total profits, while that of other banks contributed more than 33% on average. The profit of CCB's personal banking exceeded RMB200 billion for the first time. Personal banking of ABC, BOC and CCB all achieved a total profit growth rate of over 20% in 2020. Specifically, ABC recorded the highest profit growth rate of 48% for personal banking; the overall profit of ICBC's personal banking was relatively high, with a steady growth rate of 2% in 2020, and the revenue of ICBC's retail businesses steadily increased in terms of both amount and proportion.

**Figure 62: Profit of Personal Banking Business**

Unit: RMB100 million



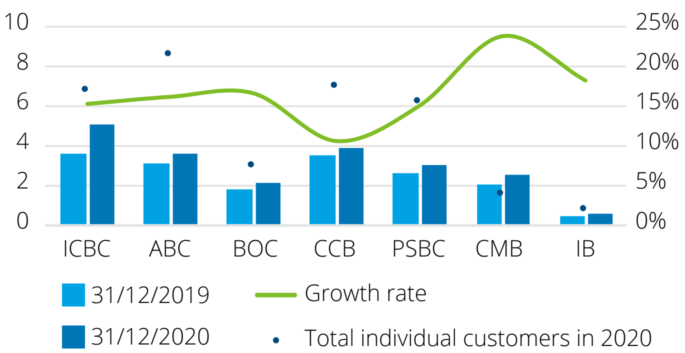

Note: IB did not disclose the information of personal banking business in its 2020 annual report.

## Mobile banking strengthened with greater ability to acquire and energize customers

Affected by the pandemic, the traditional banking business faced great challenges, and the demand for intelligent online services significantly increased. In 2020, the banks digital transformation accelerated and promoted online businesses, especially in retail businesses, where the number and activity level of customers rose rapidly. The number of individual customers increased steadily at all banks. As of the end of 2020, ABC's individual customers reached 860 million, ranking first among the four major state-owned commercial banks, forming a good customer base.

With mobile banking being the primary front-end channel for retail businesses, the banks actively built relevant digital models for customer acquisition, and strove to explore and create new growth points of customer acquisition by optimizing user experience, upgrading functions and services and establishing a scenario ecosystem. According to the 2020 annual reports, mobile banking users of all banks maintained a growth rate of over 10%. The ICBC Mobile users totalled 416 million; ICBC was the first in the industry to break the 100 million-mark in terms of monthly active users (MAU) of e-finance, and the number of ICBC e Life users reached 91 million; ICBC had the largest number of online users among large domestic commercial banks. CCB's personal mobile banking users rose to 388 million, an increase of 11% over 2019; CCB was among the top banks in the industry in terms of user scale, transaction volume, and app downloads. ABC's mobile banking users recorded a higher growth of 16%. The number and scale of mobile banking users of BOC were much smaller than that of other large state-owned banks, but it vigorously promoted mobile banking in 2020, with users growing by 17%.

**Figure 63: Number of Mobile Banking Users**




Note: The number of mobile banking users was the total number of mobile banking user and card APP users disclosed by each bank.
Note: The number of individual customers of BOC was the effective customers of personal banking.
Note: The individual customers of IB were the retail banking customers (including credit cards).
Note: ICBC and PSBC did not disclose the number of card APP users in 2019.
Note: BOCOM did not disclose the number of mobile banking users.

**Table 8:**

| Bank | Mobile Banking MAU | Card APP MAU |
|---|---|---|
| ICBC | Over 100 million | Undisclosed |
| ABC | Over 100 million | |
| BOC | Undisclosed | Undisclosed |
| CCB | 128 million | |
| BOCOM | 31 million | 24 million |
| PSBC | Over 40 million | 2 million |
| CMB | 61 million | 46 million |
| IB | 13 million | Undisclosed |

Note: ABC and CCB's mobile banking contains card functions, so they do not have separate card apps.

### Multi-channel payment scenarios established; the amount of consumption increased gradually

#### Consumption scenarios expanded through online channels; transaction scale repeatedly reaching new highs

Banks are scrambling to leverage open banking scenarios in retail, mobility, tourism and education. Commercial banks have made forward-looking plans regarding eco-banking and open banking to interact with customers: thanks to the development of Fintech, banks are increasingly using advanced technologies to help consumers better manage their financial lives; moreover, the development of the internet and the popularity of smart mobile terminals have given rise to more platform-based technology companies, thus making the marketing of financial scenarios increasingly rich and diversified.

In recent years, banks applied big data to tap user demands to provide more accurate and personalized services. By building service platforms, expanding external scenarios and conducting traffic operation, they have comprehensively promoted the digital transformation of retail, and the channel transaction volume of many banks has repeatedly surged to new highs.

**Table 9:**

| Bank | Measures and achievements of online scenario and channel development |
|---|---|
| **ICBC** | • ICBC Mobile: strengthened the application of technological innovations and implemented elderly-oriented reconstruction, with a total of 416 million customers and the MAU exceeding 100 million<br>• ICBC Mall: accelerated the layout in key areas such as procurement, travel and cross-border e-commerce, with the transaction amount of “5e+4” featured segments reaching RMB297.6 billion<br>• ICBC Link: 177 million users; the internet financial transaction amount reaching RMB640.38 trillion, increasing 1.2% from the previous year<br>• ICBC e Life: completed the comprehensive traffic operation transformation, built nine scenarios, and accumulated 91.08 million users<br>• ICBC e Wallet: over 380 projects launched, with more than 30 million individual customers |
| **CMB** | • CMB APP completed 1.803 billion transactions with a total transaction amount of RMB40.91 trillion, up 6.88% and 23.22% year-on-year, respectively<br>• The MAU of 23 scenarios exceeded 10 million, among which the transaction volume of “Meal Coupons” and “Movie Tickets” totalled nearly RMB10 billion |
| **CCB** | • The online banking transactions amounted to RMB80.7 trillion, with a growth rate of 36.9%<br>• Personal online banking transactions amounted to RMB22.5 trillion<br>• The transaction amount of CCB’s aggregated payment service grew by 33.9%, and the transactions of “Long Pay” products increased by 8.1% |

## Comprehensively optimized outlets and actively built intelligent channels

Online businesses were in full swing, and offline outlets were comprehensively upgraded. The banks transformed the outlets from traditional direct customer services to create intelligent operations. They optimized the layout, developed intelligent channels, and enhanced the synergy between online and offline services to improve comprehensive service capabilities.

**Table 10:**

| Bank | Outlet layout optimization | Intelligent channel building |
|---|---|---|
| ICBC | • At the end of 2020, ICBC had 15,800 outlets, 25,167 self-service banks, 79,672 intelligent devices and 73,059 ATMs<br>• Optimized more than 420 outlets in key areas such as the Beijing-Tianjin-Hebei region and the Yangtze River Delta<br>• Intensified renovation: completed overall renovation of 1,611 outlets to provide better hardware guarantee for customer service | • The offline intelligent self-service channels can handle 299 personal and corporate services, covering the services frequently used by customers<br>• Promoted the collaboration of outlets and online channels. Customers can complete more than 40 businesses through "Cloud Outlet"<br>• Introduced the pilot program of the "Customer self-service + Remote operator assistance and verification" |
| CCB | • Continued to optimize the self-service channel network, with 79,144 ATMs, 25,529 self-service banks and 48,733 smart teller machines<br>• Expanded service channels and networks, with 910 service outlets, 6,778 ATMs, 2,211 self-service banks and 4,021 smart teller machines in state-level poverty-stricken counties | • Enhanced the online and offline collaboration capacity, which was manifested by the facts that 28 counter businesses could be completed by retrieving account QR code through mobile banking APP instead of providing physical media, and 75 products were offered through "online order, centralized processing, physical distribution and doorstep service"<br>• Leveraged the WeChat official account "CCB Banking Centre" to effectively expand the service radius and efficiency of outlets. The cumulative number of users who followed the account reached 3,224,800, and the number of real-name authentication reached 644,400 |
| ABC | • Coordinated the transformation of retail banking businesses and foundation-level branch outlets. All 22,000 foundation-level branch outlets had completed intelligent transformation<br>• Built 69 sample 5G Smart Banking foundation-level branch outlets in 28 provincial branches, including 15 outlets in county areas<br>• Distributed a total of 1,333 Huinongtong electronic machines and 43 movable financial service vehicles to provide mobile financial services for more than 100,000 people in over 600 villages and towns without basic financial services | • Strengthened the integrated service channel network which comprises foundation-level branch outlets, self-service outlets, Huinongtong service stations, online channels, and movable services<br>• 75,700 sets of cash-related self-service online facilities and 24,300 sets of self-service terminals, with 13,181,300 daily average transactions |
| BOC | • 33,314 ATMs, 885 self-service terminals and 31,960 smart counters<br>• In 2020, the service capacities of smart counters were continually improved with 17 times of upgrading | • Pushed forward the establishment of an outlet scenario ecosystem, built featured outlets based on cross-border, education, sports, silver economy and other scenarios, and provided offline support for the implementation of scenario strategies |
| PSBC | • 39,631 outlets and around 149,700 self-service machines, serving 622 million individual customers<br>• Existing self-service equipment: 149,713 sets, among which, there were 49,760 sets of intelligent teller machines (ITM), accounting for 88.97% of the non-cash equipment | • Starting with PSBC Canteen, the bank continued to promote the development of relevant new scenarios, ecosystems and channels. As of the end of 2020, the total number of users of PSBC Canteen was around 50,942,200, an increase of 347.37% from the end of the previous year<br>• Continuously improved the intelligent services of self-service equipment and vigorously promoted the application of ITM |
| CMB | • 16,559 visual counters<br>• The replacement rate of comprehensive service counters through the retail electronic channels was 97.91%; the rate of rerouting customers from the service counters to visual counters was 94.29%<br>• The manual telephone access ratio reached 98.40%, the percentage of manual telephone responses within 20 seconds reached 95.42%, and the satisfaction ratio of its telephone customer service reached 99.73% | • Provided comprehensive services in the "outlet + APP + scenario ecology" and built core scenarios and multi-dimensional ecology to improve user stickiness<br>• Enhanced the AI service and closed-loop service capabilities of "Financial Advisor Xiao Zhao" (the smart customer service assistant of CMB APP) and "Assistant Xiao Zhao" (the smart customer service assistant of CMB Life APP), accelerated the "scenario-based transformation" of the service ecosystem, and continued to develop smart service products for customers |
| IB | • 2,003 outlets, including 1,140 traditional branches and 863 community branches that all provided financial services for small and micro enterprises | • Promoted the development of smart banking, launched "City Services" in mobile banking, built the "Finance + Life" ecosystem, and launched the "City Services" in 46 cities<br>• Innovated the construction of "online financial room" to empower business operation |

## Consumption iteration and upgrading drove retail transformation

### Increasing consumer loans became a powerful tool for retail transformation

Consumer credit recently emerged as a new growth point of banking businesses while benefiting the people.

In 2020, the pandemic did not deter state-owned banks from issuing consumer loans. Among the major domestic commercial banks, ICBC, PSBC, CCB and ABC released separately the data of consumer loans; their consumer loans in 2020 totalled RMB1,068.801 billion, an increase of RMB200.311 billion over 2019, or a year-on-year growth of 23.06%. CCB recorded the highest growth rate of 40%; ICBC's personal consumption loans decreased slightly.

However, the rampant growth of consumer credit products in some areas has triggered strict regulation. Recently, a series of regulatory policies were introduced, including the administrative measures for online small loans, the new regulations on internet deposits, and the prohibition against small loan companies on issuing internet consumer loans to college students, to address the market chaos and promote regulated development of consumer credit products.

Under the premise of compliant development, with China's economy shifting from a manufacturing-driven society to a consumption society, consumer credit will contribute significantly to the banks' future profits.

### Diverse consumption scenarios and continuously growing credit card business

Credit cards, as a main growth point of retail credit business, is a recent focus of banks. The improvement of online platforms and the establishment of consumption scenarios has greatly boosted the consumption demand of individual customers.

As of December 31, 2020, both credit card issuance and overdraft balance of large domestic commercial banks (except BOCOM) increased from the end of 2019. Specifically, CCB recorded the largest net increase in credit cards (up to 11 million) in 2020, and ABC, CCB, PSBC and CMB all saw an increase of over 10% in their credit card overdraft balance. In terms of total credit card consumption, CMB was the only bank to exceed RMB4 trillion in 2020.

**Table 11:**

Unit: RMB million

| Bank | Balance of Consumption Loans in 2020 | Balance of Consumption Loans in 2019 | Growth Rate |
|---|---|---|---|
| ICBC | 183,716 | 193,516 | -5% |
| ABC | 178,559 | 168,036 | 6% |
| CCB | 264,581 | 189,588 | 40% |
| PSBC | 441,945 | 317,350 | 39% |

**Figure 64: Number of Credit Cards Issued by the Banks**

Unit: 100 million

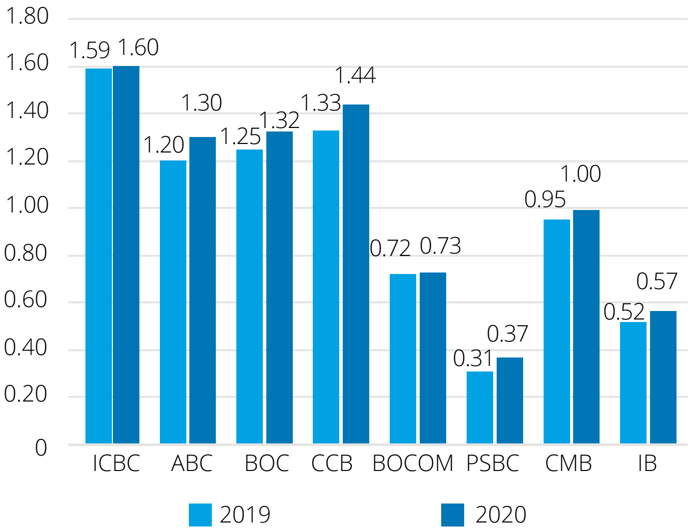
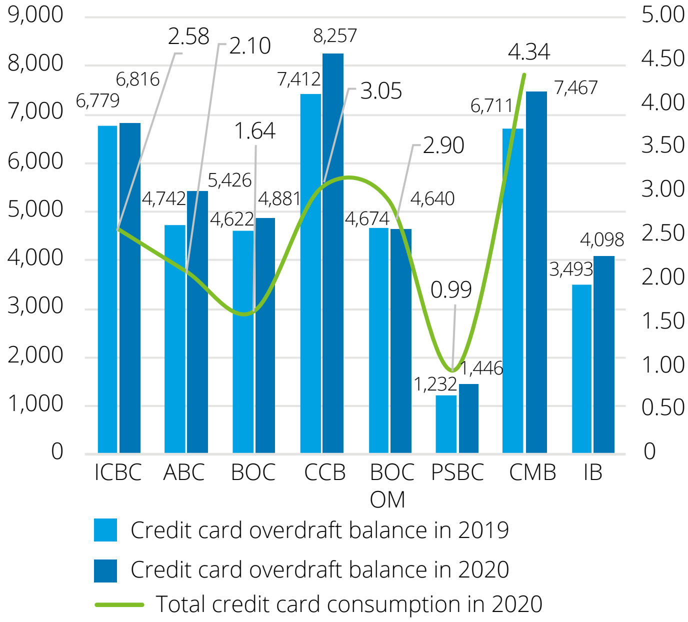



**Figure 65: Credit Card Consumption**

Unit: RMB100 million Unit: RMB trillion




Note: IB did not disclose the information of total credit card consumption

## Wealth management scale continued to expand; private banking enhanced high net worth stickiness

Wealth management is considered to be one of the major opportunities for the banking sector over the next decade. The leading banks are expected to seize the opportunities of wealth management and Fintech with their outstanding comprehensive financial service abilities, potent strategic transformation, large technological investment, and high penetration of internet strategy.

In addition to asset management, the six major state-owned banks have been actively laying out the wealth management businesses including private banking, and achieved remarkable results. The major state-owned banks have the first-mover advantages in the private banking business; among joint-stock banks, only CMB is comparable with these state-owned banks; almost all urban commercial banks are still in the initial stage.

As of the end of 2020, the private banking data disclosed in the annual reports of domestic large commercial banks all showed an upward trend. Specifically, CMB had the largest private banking assets under management (AUM) of RMB2.77 trillion, while BOCOM recorded the highest growth rate of 25.93%.

At present, as "big retail" develops with great momentum and "dual circulation" development pattern drives consumption upgrading, there are a wide range of development opportunities for retail businesses in areas such as people's livelihood, technological innovation, regional adjustment, and opening up to the outside world. It is becoming a strategic choice for more banks to vigorously promote the transformation of retail businesses. According to banks 2020 annual reports disclosed, retail transformation achieved preliminary results. It is expected that the banks will continue to improve their capabilities to provide professional scenario-based, online intelligent and collaborative services so as to gain a place in retail banking competition.

**Table 12:**

Unit: RMB trillion/10,000 customers

| Bank | Personal financial AUM | Growth rate of personal financial AUM | Private banking personal financial AUM | Growth rate of private banking personal financial AUM | Number of private banking customers |
|---|---|---|---|---|---|
| ICBC | 16 | 10% | 2.20 | 15% | 18.20[2] |
| ABC | Undisclosed | Undisclosed | 1.70 | 21% | 14.10 |
| BOC | 10 | Undisclosed | 1.85 | 16% | 13.29 |
| CCB | 13 | Undisclosed | 1.78 | 18% | 16.08 |
| BOCOM | 4 | 13% | 0.83 | 26% | 6.11 |
| PSBC | 11 | 10%[1] | Undisclosed | Undisclosed | 3,641.50[3] |
| CMB | 9 | 19% | 2.77 | 24% | 10.00[4] |
| IB | Undisclosed | Undisclosed | 0.63 | 20% | 4.86 |

Note 1 : PSBC's AUM increased more than RMB1 trillion from the end of 2019.
Note 2: ICBC's private banking customers referred to the retail customers whose average daily financial assets within six months reached RMB6 million
Note 3: PSBC's private banking customers referred to the retail customers with integrated assets of RMB100,000 and more
Note 4: CMB's private banking customers referred to the retail customers with a minimum total daily average assets of RMB10 million in one month

# 3.2 Fulfillment of social responsibility and development of inclusive and green finance

In early 2020, in the face of complex and grim business situations, because of the severe impact of COVID-19, global economic growth slowed, and world trade and investment were severely disrupted. Financial institutions played an important role in supporting the pandemic controls and stabilizing social and economic development. The banks rose to the challenge and introduced a number of financial services to help enterprises resume work and production, thus fulfilling their responsibilities and supporting the development of the real economy. They also implemented a strategy of sustainable development and focused on developing inclusive and green finance.

**Served the real economy; promoted the resumption of work and production**

Facing the COVID-19 pandemic, commercial banks took charge of their responsibilities and optimized financial resources in key areas and shore up weak links. The banks made full use of their comprehensive service capabilities and actively executed special plans to support the prevention and controls to fight the pandemic and resumption of work and production, providing a comprehensive financial guarantee for coordinating epidemic control with social and economic development.

**Accurate credit supply effectively supported the key areas and shore up weak links of the real economy**

Corporate credit business saw steady progress, which served the key economic areas and continuously promoted business transformation and structural adjustment. Harnessing the power of Fintech, credit was issued to key areas of the national economy.

As of December 31, 2020, domestic large commercial banks all saw increased balance of corporate loans, which totalled RMB49.39 trillion, an increase of RMB4.78 trillion or 10.70% from 2019.

To advance the national economic infrastructure, many banks actively supported the high-quality development of the manufacturing industry, accommodated the capital needs of customers in epidemic control-related manufacturing for continuing operations, implemented the policy for postponing principal and interest repayment to relieve pressure of customers', and earnestly executed the relevant regulatory policies.

**Figure 66: Corporate Loans**

Unit: RMB100 million

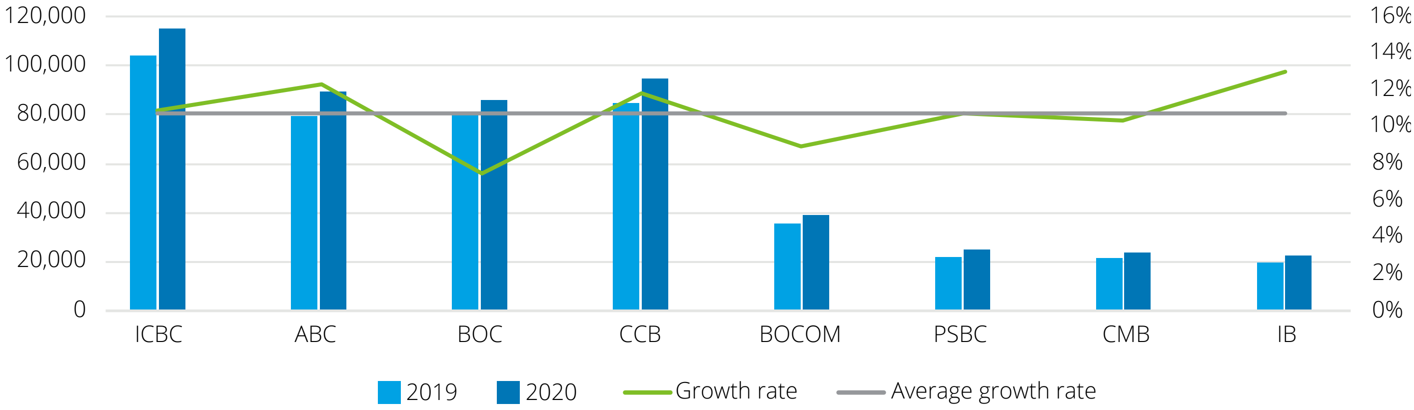



**Table 13:**

| Bank | Effective support to the real economy; accurate credits to key areas | Assistance in work resumption; postponement of principal and interest repayment |
|---|---|---|
| ICBC | RMB1.65 trillion loans to manufacturing enterprises in 2020, representing an increase of RMB220 billion over the previous year—an record high increase and also the largest increase in the industry | Over 100,000 customers (with a total loan balance of RMB1.5 trillion) were relieved of the pressure of principal and interest repayment. |
| CCB | The balance of loans to the infrastructure sector reached RMB4.33 trillion, an increase of RMB650,435 million or 17.66% from the previous year. | Fully implemented the policy for postponing principal and interest repayment, with the total loans of RMB339.5 billion benefiting 229,000 enterprises. |
| ABC | Supported the new economy and new growth drivers; the loans to strategic emerging industries and growing modern service industries increased by RMB110,853 million and RMB93,831 million respectively from the end of the previous year. | Actively postponed principal and interest repayments of the SMEs impacted by the pandemic, with a total loan balance of RMB131.6 billion benefiting over 80,000 customers. |
| BOC | The balance of medium and long-term loans to the manufacturing industry grew by 34.1% in 2020, and manufacturing loans accounted for 19.7% of total corporate loans, remaining at a relatively high level among the large Chinese banks. | Postponed principal and interest repayments on more than RMB140 billion loans of over 23,000 enterprises. |
| BOCOM | New loans were issued first to the manufacturing, service and transportation industries, and new loans to the manufacturing industry were more than twice the total increase of the previous three years. | Actively implemented the temporary policy of postponing principal and interest repayments on loans to micro, small and medium-sized enterprises, and assisted the small and micro enterprises with work and production resumption. |
| PSBC | Continuously strengthened the financial services for the development of "Agriculture, Rural Areas and Farmers", with a total loan balance of RMB1.41 trillion, an increase of RMB149,676 million from the end of the previous year. | Postponed principal and interest repayments of more than 20,000 small and micro businesses. |
| CMB | Loans mainly issued to strategic emerging industries and advanced manufacturing; active support for the new economic forms and modern service industries that value consumption upgrading and environmental protection. | Postponed principal and interest repayments on RMB152,572 million loans of customers in 2020. |
| IB | Actively accommodated the financing needs of the real economy, in particular, enhanced financial support for the key areas such as inclusive loans to small and micro businesses and medium and long-term loans to manufacturers. | Key regulatory targets, such as loans with postponed repayment of principal and interest, were exceeded. |

### Integration of investment banking and commercial banking improved the comprehensive service ability

In addition to supporting the real economy through corporate credit business, the banks gave full play to the comprehensive financial service ability of "investment banking + commercial banking". Through the new models of investment-loan combination and investment banking-commercial banking interaction, the banks increased support for modern service industries, strategic emerging industries, digital economy and private economy, greatly enhancing the ability of investment banking to serve the real economy.

**Table 14:**

| Bank | Investment banking-commercial banking combination to serve the real economy and facilitate work and production resumption |
|---|---|
| ABC | • ABC satisfied the direct financing needs of customers, with RMB521.8 billion debt financing instruments underwritten for non-financial corporates;<br>• It supported pandemic prevention and control and the resumption of work and production, and raised more than RMB30 billion through pandemic prevention and control debts and debt financing plans. |
| CCB | • CCB provided RMB732.2 billion standardized direct financing for non-financial enterprises; the bank's leading underwriting business contained 851 bonds issued for the real economy enterprises, raising the total funds of RMB532.2 billion;<br>• Its underwriting volume of asset-backed notes reached RMB57,154 million, ranking first in the market. |
| BOCOM | • The domestic branches accumulatively underwrote 745 different corporate bonds (excluding local treasury bonds), with an underwriting amount of RMB475,883 million, representing an increase of 51.19%;<br>• The bank underwrote 18 bonds related to the prevention and control of the pandemic, with an underwriting amount of RMB11.3 billion. The Hubei Branch ranked first in terms of the scale of underwriting debt financing instruments in the local market. |
| BOC | • BOC underwrote bonds in the China interbank market with a total amount of RMB1,575.925 billion;<br>• It actively supported COVID-19 prevention and control by underwriting a total amount of RMB33.65 billion of pandemic prevention and control bonds for nonfinancial enterprises and international development institutions. |
| IB | • The underwriting scale of debt financing instruments was RMB654,555 million for nonfinancial enterprises, ranking first in the market;<br>• It underwrote the first "green pandemic-prevention bond" in the market and the first corporate blue bond in China, helping enterprises reduce financing costs. |

### Contactless financial services benefited the people and promoted inclusive finance

The rapid development of big data, artificial intelligence (AI) and cloud computing has spawned continuous integration of digital technologies with inclusive financial services, driving the digital transformation of inclusive finance in China. In addition, as the pandemic promoted the evolution of digital technology to "contactless financial services", inclusive finance grew rapidly in developed cities as well as in rural areas, which continued to benefit low-income groups, serve small and micro enterprises, and bring more financial experience to rural households.

In combination with their digital transformation, the banks successively introduced measures to promote the development of inclusive finance to benefit the people.

**Figure 67: Scale of Inclusive Loans**

Unit: RMB trillion

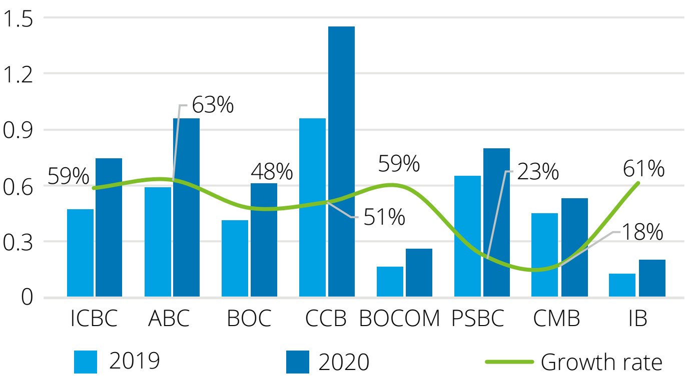
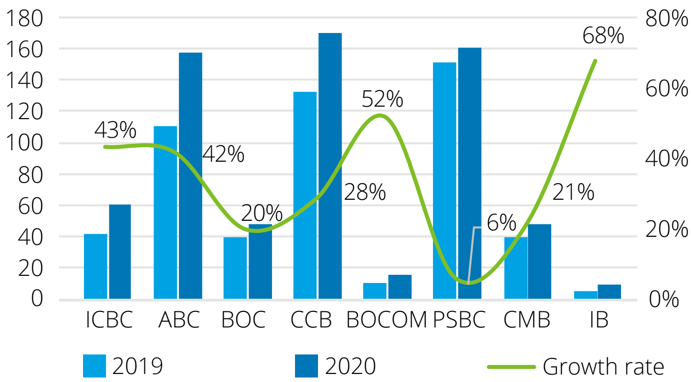



**Figure 68: Number of Customers with Inclusive Loans**

Unit: 10,000 customers




Note: The data disclosed by CCB referred to the inclusive finance customers of small and micro enterprises and individual businesses, while the data disclosed by other banks referred to the small and micro enterprises with inclusive loans.

**Table 15:**

| Bank | Interest rate of inclusive loans to small & micro businesses (%) | Change compared to 2019 | Inclusive financial measures |
|---|---|---|---|
| ICBC | 4.13 | down 0.39 percentage points | • Optimized three categories of online products<br>• Implemented the policy for postponing principal and interest repayments on loans to small and micro businesses<br>• Accelerated credit product innovation |
| CCB | 4.31 | down 0.64 percentage points | • Enriched digital products<br>• Enhanced platform operations<br>• Continued to improve the risk control ability |
| ABC | 4.18 | down 0.48 percentage points | • Deepened the inclusive financial service system driven by "Agriculture, Rural Areas and Farmers + small and micro businesses"<br>• Improved the digital system of inclusive finance<br>• Improved the policy system for inclusive finance |
| BOC | 3.93 | down 0.37 percentage points | • Provided targeted assistance for the resumption of work and production<br>• Improved the quality and efficiency of financial services<br>• Supported the development of small and micro enterprises<br>• Deepened cross-border matching services |
| PSBC | 5.46 | down 0.72 percentage points | • Continuously enhanced the convenience of online channels and comprehensively upgraded inclusive financial services through digital transformation<br>• Took advantage of the location of the directly-operated and agency outlets to improve the basic financial services in the poverty-stricken areas<br>• Assisted with the "Lushi Model" financial poverty alleviation, and explored effective development models (involving governments, banks and guarantee companies) of micro loans for targeted poverty alleviation. |
| BOCOM | 4.08 | down 0.96 percentage points | • Reengineered the business process of inclusive finance with a digital mindset<br>• Upgraded customer acquisition models through digital means<br>• Improved standardized products<br>• Promoted concentrated operation |
| CMB | 4.53 | down 0.48 percentage points | • Strengthened the supply of inclusive loans and reduced financing costs of enterprises<br>• Promoted innovation of inclusive products and services<br>• Adopted financial technologies to improve financial services to benefit the people |
| IB | 4.52 | Undisclosed | • Launched the "IB inclusive loan"<br>• Formulated the report of research on eight sub-industries of SMEs and the relevant sand table, focusing on people's livelihood-related consumption<br>• Built and operated the Fujian Financial Services Cloud Platform to provide the online "finance + technology + data + policy" financing services for small, medium and micro enterprises |

## Jointly build a friendly environment; attach importance to green finance

In recent years, China has initially established a green financial standard system covering green credits, green bonds and green industries, as well as an incentive mechanism including green re-lending, green MPA, guarantee and interest discount. Banks have vigorously developed green financial services and guided social funds to flow to green industries. Focusing on China's 14th Five-Year Plan and carbon-peak and carbon-neutrality goals, the banks have enhanced green finance, and responded actively to climate change to manage environmental risks. Some banks have incorporated environmental and climate risks into credit risk assessment when conducting green credit activities, striving to build a environmentally-friendly bank.

By the end of 2020, the green credit balance of China's 21 major banks exceeded RMB11 trillion, with the balance and growth of loans to include but not limited to green transportation, renewable energy, energy-saving and environmentally-friendly projects topping the list. The green loans of the eight domestic banks totalled RMB7.7 trillion. ICBC's green loan balance, which totalled RMB1.85 trillion as of the end of 2020, maintained an absolute advantage compared with that of its peers.

Some of the domestic large commercial banks' 2020 achievements in green finance are listed below:
In general, the banks' corporate business continued steady growth and the corporate credit structure was further optimized. The banks actively conducted investment-loan combination and gave full play to their comprehensive service ability to support the development of the real economy. In addition, by utilizing Fintech, the banks stepped up efforts to develop inclusive and green finance, and continued to improve the adaptability, competitiveness and sustainability of financial services. 2021 is the first year of the 14th Five-Year Plan period. As the external environment shows increasing uncertainties and further industry differentiation, banks need to maintain stable progress, advance strategic blueprints, strengthen advantages, and stick to the original intention of serving the real economy and the goal of high-quality development.

**Table 16:**

Unit: RMB100 million

| Bank | Scale of green loans | Green bond | Leading initiatives in green finance |
|---|---|---|---|
| ICBC | 18,457 | As of the end of the reporting period, the bank cumulatively issued USD9.83 billion green bonds;<br>The green bonds issued had won 10 international awards. | • Optimized the assessment mechanism and tightened green credit assessment; invested RMB8 billion in the National Green Development Fund to support the transformation and upgrading of green industries;<br>• Comprehensively applied the investment and financing instruments of the financial services integrating "loan, bond, stock, agency, leasing and advisory services" to continuously increase investment and financing support for green industries. |
| CCB | 13,427 | The Hong Kong branch issued two green bonds of USD1.2 billion;<br>CCB issued the first green credit asset-backed securities of RMB4.4 billion after the Bond Connect mechanism was introduced. | • The subsidiary, CCB Financial Leasing, led the industry in building a "Green Leasing" brand and completed green leases with a total amount of RMB91,395 million;<br>• It included environmental and climate risks into comprehensive risk management framework;<br>• The bank invested RMB8 billion in the National Green Development Fund to facilitate the transformation and upgrading of the green industries. |
| ABC | 15,149 | ABC issued two green asset securitization products amounting to RMB2.336 billion and four green bonds raising the total funds of RMB6 billion.<br>It was awarded the "Best Green Bond Bank" by the Asiamoney magazine. | • ABC invested RMB8 billion in the National Green Development Fund to facilitate the transformation and upgrading of the green industries;<br>• It carried out bank-wide training on green credit businesses and continuously expanded training coverage. |
| BOC | 8,968 | BOC issued a total of 7 green bonds, equivalent to USD8.3 billion. | • The bank formulated the Green Finance Development Plan, which embedded green finance into all of the bank's business and management links;<br>• It participated in the preparation of the National Green Development Fund and contributed RMB8 billion, accounting for 9.04% of the Fund's total endowment;<br>• It paid close attention to climate and environmental risks. |
| PSBC | 2,809 | The balance of green bond investment was worth RMB24,091 million as of the end of 2020;<br>The Bank had been continuously awarded the title of Outstanding Institution of Green Bank" by China Banking Association. | • PSBC developed and promoted green financial products suitable for small and micro businesses, consumers and rural households<br>• PSBC took the lead in cooperating with the Institute of Public and Environmental Affairs (IPE) to integrate the environmental protection data of the Blue Map into the "Jinjing" (Gold Eye) credit risk monitoring system, to enhance environmental and climate risk management. |
| BOCOM | 3,629 | BOCOM was awarded "Best Green Bond 2020 (China)" by The Asset. | • It actively participated in the establishment of the National Green Development Fund, with the balance of green credits accounting for 99.63%;<br>• It actively supported the development of green industries to contribute to China's carbon-peak and carbon-neutrality goals. |
| CMB | 2,071 | CMB issued USD1.1 billion of green bonds, sustainable bonds, etc. | • The bank strengthened research on green industries, improved the policy system, and formulated relevant credit policies;<br>• The subsidiary, China Merchants Fund Management Co., Ltd. (CMFM), joined the UN PRI and fully integrated the ESG concept into its investment activities. |
| IB | 11,558 (Note) | IB underwrote the first "green pandemic prevention bond" in the market, issued a total of RMB130 billion green financial bonds, with RMB100 billion existing domestic green financial bonds. | • IB took the lead in incorporating sustainable development in corporate strategy and corporate governance, and valued green finance as the Group's strategic core business;<br>• The bank gradually built a comprehensive, group-wide, and multilayered green financial product and service system;<br>• It launched the "Environmental Protection Loan", "Water Conservation Loan", "Green Ticket Pass", "Green Creative Loan", and other green products and services. |

Note: The balance and growth rate of IB were based on the financing data of green finance

# 3.3 Net-value products oriented transformation gains traction, non-fixed income assets increase

In April 2018, the Guiding Opinions on Regulating the Asset Management Business of Financial Institutions (hereinafter refer to as the New Asset Management Regulation) was implemented, and banks needed to transform wealth management. Since June 2019, major commercial banks have announced the establishment of wealth management subsidiaries. The registered capital of wealth management subsidiaries of the four major state-owned banks exceeds RMB10 billion; specifically, the registered capital of wealth management subsidiaries of ICBC, CCB, ABC and BOC were RMB16 billion, RMB15 billion, RMB12 billion and RMB10 billion, respectively, that of BOCOM and PSBC were both RMB8 billion, and that of CMB and IB were both RMB5 billion. The establishment of subsidiaries is an important institutional innovation of banks' wealth management services, which promote the specialization of banks' wealth management services as well as the professionalism of the entire asset management industry.

**Transformation of net value-based management of financial products proceeded to the halfway point**

In August 2020, considering the impact of the pandemic, financial stability and other factors, the regulators extended the transition period of the New Asset Management Regulation till the end of 2021, which eased the pressure of major banks to transform their existing products.

By the end of 2020, the proportion of products under net value-based management in large domestic commercial banks reached 50%. Specifically, IB and CMB achieved remarkable results in their net value-based product management transformation, with net value-based products respectively accounting for 76.76% and 67.76% of their total wealth management products at the end of the year. All of CMB's wealth management products were managed by its subsidiary, China Merchants Fund Management Co., Ltd.

According to the balance of wealth management products disclosed by the banks, as of the end of 2020, the principal-guaranteed wealth management products of ICBC, CCB and ABC accounted for 5.12%, 2.56% and 3.57% respectively, which was a decline compared with 2019; PSBC's principal-guaranteed wealth management products accounted for 13.59%. With continuous wealth management transformation, the proportion of non-principal guaranteed products and net value-based products of all banks continued to grow.

**Table 17: Wealth management balance of large domestic commercial banks at the end of 2020**

Unit: RMB100 million

| Bank | Balance of principal-guaranteed products | Proportion of principal-guaranteed products | Balance of non-principal-guaranteed products | Proportion of net value-based products |
|---|---|---|---|---|
| ICBC | 1,462.54 | 5% | 27,084.27 | 37% |
| ABC | 723.13 | 4% | 19,554.14 | 47% |
| BOC | Undisclosed | Undisclosed | 13,889.04 | Undisclosed |
| CCB | 569.62 | 3% | 21,678.86 | 44% |
| BOCOM | Undisclosed | Undisclosed | 12,119.59 | Undisclosed |
| PSBC | 1,361.12 | 14% | 8,653.19 | 55% |
| CMB | Undisclosed | Undisclosed | 24,500.00 | 68% |
| IB | Undisclosed | Undisclosed | 14,800.00 | 77% |

Note 1: The balance of net value-based products of ABC only referred to the data of the wealth management subsidiary.
Note 2: The net value-based products of CMB referred to the wealth management products that comply with the New Asset Management Regulation.

**Table 18: Existing Products of Wealth Management Subsidiaries at the End of 2020**

| | ICBC | ABC | BOC | CCB | BOCOM | PSBC | CMB | IB | Total |
|---|---|---|---|---|---|---|---|---|---|
| Fixed-income products | 611 | 139 | 386 | 588 | 451 | 53 | 278 | 262 | 2,768 |
| Proportion of fixed income products | 66% | 62% | 84% | 91% | 88% | 76% | 89% | 92 % | 81% |
| Hybrid products | 295 | 84 | 74 | 31 | 62 | 16 | 23 | 19 | 604 |
| Proportion of hybrid products | 32% | 38% | 16% | 5% | 12% | 23% | 8% | 7% | 17% |
| Equity products | 16 | - | - | 28 | - | 1 | 10 | 3 | 58 |
| Proportion of equity products | 2% | - | - | 4% | - | 1% | 3% | 1% | 2% |
| Total | 922 | 223 | 460 | 647 | 513 | 70 | 311 | 284 | 3,430 |

**Wealth management subsidiaries continued to increase investment in equity products**

At the end of 2020, the wealth management subsidiaries had a total of 3,430 products. From the perspective of product types, fixed-income products continued to account for the highest proportion (81%) among the year-end stock of wealth management products, hybrid products accounted for 17%, and equity products accounted for only 2%. In terms of the number of products, ICBC and CCB's subsidiaries led the industry—the hybrid products issued by ICBC's subsidiary accounted for 49% of the total hybrid products, and the equity products issued by CCB's subsidiary accounted for 48% of the total equity products of the industry. The industry generally showed insufficient ability to transform to non-fixed-income products, with asset allocation still focusing on fixed-income products.

With declining yield and intensified competition, equity assets became an important development direction of the wealth management subsidiaries. Increasing equity assets can get higher ROI, which also tests the industrial research ability and active management ability of the subsidiaries. In addition, the regulators also encourage wealth management funds to be put into the capital market, providing more diversified products for investors.

Wealth management subsidiaries will gradually straighten out the operation models, improve the incentive mechanisms, accumulate investment experience, and improve the product layout; in the meantime residents' investable assets continue to increase, their investment concepts mature, financial services for the elderly expand, and China's finance market fully opens up; Therefore, wealth management subsidiaries are expected to accelerate their professional transformation, reshape market competition, increase the proportion of equity investment, and continue to bring incremental funds to capital markets.

# 3.4 Accelerate empowerment by technology, explore innovative service models

In 2020, in the face of the COVID-19 outbreak, commercial banks were the first to launch "contactless banking" services by leveraging Fintech, which contributed greatly to pandemic prevention and control as well as economic and social recovery. In 2021, China's Fintech enters an important development stage of preservation, innovation and compliance. Commercial banks will continue to speed up Fintech development, enhance the penetration of Fintech, and explore new customer-oriented financial service models.

### Continued fund and personnel investment for Fintech development

In recent years, financial institutions have continued to enhance R&D investment and talent in Fintech. From the data disclosed in the 2020 annual reports, Fintech investment remained at around 3% of the banks' revenue. CMB's technological investment accounted for 4.45% of the revenue; ICBC, ABC and BOC significantly increased their Fintech investment, all with an increase of more than 40% compared with 2019. Moreover, the number and proportion of Fintech talent of banks that disclosed such information were also on the rise; specifically, the number of Fintech talent in PSBC's head office doubled compared with that of 2019. In addition, the banks (except PSBC) have all established their Fintech subsidiary.

**Table 19:**

Unit: RMB100 million

| Bank | Fintech investment | Growth rate | Proportion in revenue | Number of Fintech talent |
|---|---:|---:|---:|---|
| ICBC | 238.19 | 45.47% | 2.70% | 35,400 , accounting for 8.1% of the bank's total employees |
| ABC | 183.00 | 43.08% | 2.78% | Undisclosed |
| BOC | 167.07 | 43.36% | 2.95% | Undisclosed |
| CCB | 221.09 | 25.38% | 2.93% | 13,104, accounting for 3.51% of the Group's total employees |
| BOCOM | 57.24 | 13.45% | 2.85% | 3,976, accounting for 4.38% of the bank's total employees: 3,190 information technology talent accounting for 3.52% of the total employees |
| PSBC | 90.27 | 10.35% | 3.15% | The head office's technology personnel doubled in the year |
| CMB | 119.12 | 27.25% | 4.45% | Undisclosed |
| IB | 48.62 | 36.38% | 2.39% | 2,331 information technology employees, accounting for 4.82% of the total employees |

## Fintech-empowered improvement of operation and management

As banks vigorously implement Fintech strategies and continuously increase input in product innovation and information technology, Fintech-empowered operation and management achieved notable results, laying a solid foundation for the banks' high-quality development in the future.

The core value of Fintech to commercial banks is to improve their core competitiveness by applying advanced technologies—the improvement mainly resides in intelligent services, operations, and risk controls.

### Intelligent service

Commercial banks fully applied Fintech means and launched "contactless banking" services in payment & settlement, credit supply, investment & wealth management, and other aspects, which effectively reduced various risks that may arise from gatherings and improved the convenience and accessibility of services. Fintech helps banks deliver comprehensive, easily accessible financial services, which will be a major development direction of banks in the future.

Some examples of banks applying Fintech to provide remote customer services are listed in the table below:

**Table 20:**

| Bank | Intelligent service (Remote customer service) |
|---|---|
| ICBC | Launched Personal Mobile Banking Version 6.0 to accelerate the "integrated connection" between mobile banking and physical outlets and made innovations in Personal Mobile Banking and WeChat applets to launch the interactive online "cloud outlets" and "cloud studios" of customer managers so as to provide "screen to screen" contactless financial services. |
| ABC | In 2020, ABC's all-media customer service (including voice, online and video) reached 203 million customers, among which, 86.98 million calls were handled by customer service staff with a customer satisfaction rate of 99.63%. |
| CCB | In 2020, the total number of customers served across all channels was 1,607 million. 91.95% of manual inquiries were successfully connected to customer service representatives. The bank also accelerated its application of AI robots in ten fields, such as consulting services, voice navigation, debt collection and marketing. Its WeChat official account "CCB Customer Service" had 9.6 million followers and cumulatively served more than 48 million customers. |
| PSBC | In 2020, the manual response rate in the remote banking center was 95.66%, and the intelligent customer service volume accounted for 63.59% of all the business volume in the center, with the accuracy in answering questions at 95.91%. |

### Intelligent operation and intelligent risk control

With Fintech concepts and methods, banks transformed their business management models, expanded technology application, promoted the integration of technology with business, and enhanced technological agility to drive business agility, to achieve intelligent operation and upgrade risk control.

**Table 21:**

| Bank | Achievements of intelligent operation | Achievements of intelligent risk control |
|---|---|---|
| CCB | Built digital operation and delivery capabilities, saved an average of 5,036 working hours per day with the application of robotic process automation (RPA), and increased information collection via intelligent character recognition (which replaced outsourced businesses) by 12.3 percentage points year-on-year. | Promoted the integration of intelligent risk control into the four communities of Business, Customer, Government and internal Management to build four general capabilities for mobile risk control, RPA, anti-fraud and anti-money laundering; optimized the comprehensive risk alert and detection system (RAD), the "Intelligent Risk Control" mobile application, and the "God Pitcher" for negative news monitoring, and enhanced mobile risk control capability for more forward-looking and accurate risk early warning. |
| BOCOM | An enterprise-class RPA platform was adopted in operation, custody, wealth management and other fields. Meanwhile, the bank applied intelligent voice in intelligent customer service bots, intelligent calls and intelligent voice analysis, with the overall recognition accuracy rate exceeding 90%. Furthermore, the unified diagram engine platform was used in 32 business scenarios. The bank completed IPV6 retrofit of 49 sets of Internet-to-customer application system. | The bank improved the accuracy, coverage and timeliness of risk identification through knowledge diagram, doubled the overdue forecast accuracy of the forecast model for loans approaching due dates, improved the identification accuracy of anti-telecommunication fraud model to over 75% and reduced the workload of manual risk investigation by 75%. |
| CMB | RPA, Optical Character Recognition (OCR), Natural Language Processing (NLP) and other financial technologies were applied to 49 middle- and back-office scenarios such as verification, entry and consulting, and the number of replaced businesses reached 27.23 million. | The intelligent risk control platform named "Libra" lowered the percentage of non-cardholders' counterfeited and embezzled amount to three in ten millionths; the corporate intelligent early-warning system had an early-warning accuracy rate of 75.21% for potentially risky corporate customers. As it could issue an early-warning signal averagely 20 months before a customer became financially risky, the coverage rate of newly risky customers reached 86.75%. |

### Fintech-empowered development of the financial industry

In addition to benefiting their own businesses, operation and management, large domestic commercial banks and their technology subsidiaries can apply Fintech to contribute to the development of the industry.

On January 26, 2021, the CBIRC annual work conference proposed to "promote the large banks to provide risk control tools and technologies to small and medium-sized banks". As large domestic commercial banks have a high proportion of technological investment and independent R&D, their capabilities can fully cover the businesses of small and medium-sized financial institutions. In addition, the products and solutions of the banks' technology subsidiaries can help small and medium-sized banks expand new business scenarios and explore new business sources, promoting coordinated development of the financial industry.

### Future opportunities and challenges for Fintech

The current situations have given rise to new scenarios, new business forms and new technologies, bringing both opportunities and challenges for the financial industry. The outbreak of the pandemic has accelerated Fintech innovation and adjustment of regulatory policies. Fintech empowers banks' intelligent upgrading, which generates new development opportunities and challenges. How to effectively integrate finance with technology? How to develop Fintech in a more compliant manner and ensure technological innovation to improve financial institutions' efficiency in serving the real economy and promote regulated development of financial services? These will be important issues to address during the rapid development of Fintech in the future.

**Table 22:**

| Bank | Fintech output |
|---|---|
| ICBC | The market-oriented technology capacity of the bank was strengthened. The bank enhanced cooperation for mutual benefits, improved the blockchain platform for resettlement fund management, the smart social security public service platform, etc. It promoted cooperation experiences in Xiongan New Area in Jiangsu Province, Beijing and other cities and provinces. It launched 18 financial ecosphere cloud products in the fields of education, medical care and enterprise services, facilitating intelligent government affairs and digital transformation of enterprises. |
| CCB | The bank empowered small and medium-sized financial institutions and provided risk control tools to 328 small and medium-sized banks to promote co-governance of risks. It actively explored a new pattern of collaborative risk governance with peers, and successfully marketed the "Intelligent" series of intelligent risk control products, cooperating with 397 customers and processing 19.43 million queries. |
| BOC | BOC supported the IT construction of its integrated operation companies, and developed the three basic public platforms of operation and management, business synergy, and information sharing. It provided support for key regions, pushed forward the integrated business synergy of the Yangtze River Delta with its technological strength, and comprehensively boosted the construction of Smart Hainan and Digital Xiongan, achieving its goal of exporting financial technology products and services. |

# Author

**Scort Zhang**
**Partner, Audit & Assurance FSI**
**Deloitte China**
Tel: +86 21 6141 1859
Email: sczhang@deloitte.com.cn

**Davy Cui**
**Manager, Audit & Assurance FSI**
**Deloitte China**
Tel: +86 21 2316 6191
Email: dacui@deloitte.com.cn

Dendise Liu
**Senior Manager, Audit & Assurance FSI**
**Deloitte China**
Tel: +86 21 6141 2307
Email: denliu@deloitte.com.cn

**Lucy Li**
**Manager, Audit & Assurance FSI**
**Deloitte China**
Tel: +86 21 6141 1405
Email: lucyli@deloitte.com.cn

Data collection and collation: Ada Zhou, Tyran Qu and Yvonne Cai

# 4. Hot Topics Insights

4.1 Observation and analysis of banking sector’s strategic deployment at the beginning of the 14th Five-Year Plan

4.2 Fintech regulation strengthened: trends and tips

4.3 Data governance and applications to enhance value realization

4.4 Bank value measurement: identify value composition, drivers, and growth by "The Fourth Report"

4.5 Integration of business and finance drives sustainable business and profit growth

4.6 Big banks seek to replenish capital via implementation of China's TLAC

4.7 Digital tools assist institutions with targeted and effective AML self-assessment

4.8 How can banks achieve low-carbon transition to align with China’s carbon neutrality goals

# 4.1 Observation and analysis of banking sector's strategic deployment at the beginning of the 14th Five-Year Plan

**International economy: During the pandemic global market demand across all industries severely weakened. Certain economies recovered to varying degrees. Accommodative fiscal policies of various countries, although effective in the short term, will have an uncertain impact on international business and the RMB's international position in the long term.**

**A number of fiscal subsidies and accommodative monetary policies in the US will bring great uncertainty to the RMB's international status, foreign trade and foreign capital investment.** While the US economy gradually recovers, the changes in liquidity will trigger great volatility in the global market, leading to huge fluctuations to the Chinese or even the global financial market. The shrinking value of USD assets will boost the purchasing power of RMB in international markets and spur more speculative capital to flow to China, but it will also weigh on China's exports.

**Europe and Japan, as important trading partners of China, are recovering slowly, building up pressure in the international trade and industrial chain.** In response, the European Central Bank (ECB) continuously implemented the Asset Purchase Program (APP), Targeted Long-Term Refinancing Operations (LTRO) and other accommodative monetary policies; combined with the EU's EUR1.8 trillion stimulus package in 2020, as the economy of European countries gradually picks up and is expected to fully recover in 2022.

### Domestic economy: the 14th Five-Year Plan focuses on high-quality development and specifies key areas of China's strategic layout

**"Keeping major economic indicators within an appropriate range" has become the theme for future economic development, which reflects that China has stepped into to the high-quality development stage, with focus on economic structure and quality rather than on speed.**The Outline of the 14th Five-Year Plan adopted at the fourth Session of the 13th National People's Congress (ended on March 11, 2021) and for the first time did not set anticipated goals for annual GDP growth over the next five years, instead, it pointed out that we will keep major economic indicators within an appropriate range and set annual targets in light of actual conditions. Weakening the growth targets signals China's greater focus on economic quality and efficiency, and drives economic growth to be around the potential level of output, aiming to achieve high-quality development with a proper and reliable growth rate.

**Technology-intensive industrial chains will be less dependent on imports, and businesses throughout the entire-chain will shift to domestically independent R&D and manufacturing.** The Central Conference on Economic Work in December 2020 outlined the key tasks of strengthening our strategic scientific and technological strength and making industrial and supply chains more independent and controllable. These two imperative and urgent tasks demonstrate China's attitude and initiatives in promoting independent technological innovation and ensuring the security of the industrial chains while dealing with the challenges of international market turmoil, headwinds against economic globalization, and reconstruction of global industrial layout. With such strategic deployment, the resources needed for core technology R&D will converge rapidly in the domestic market, and China's new infrastructure, high-tech R&D, intelligent manufacturing and other key areas will be further upgraded. The upstream and downstream industries of the technology industry will be promoted and improved to see more refined division of work within the industrial chain.

**Expanding domestic demand and unleashing consumption potential is becoming a priority of the central and local government; promoting new consumption markets and new business forms; paying more attention to areas related to people's livelihoods, identifying key areas, and solving social problems by economic strength.** In the second half of 2020, the consumer market rebounded, the housing and automobile markets recovered at a faster pace, and new retail business forms emerged. Meanwhile, the Central Conference on Economic Work made it clear to expand domestic demand as a strategic priority, strengthen the domestic market as the mainstay, consolidate China's pivotal role in the global industrial chain, and build a new pattern of opening up and a new development paradigm with domestic and overseas markets reinforcing each other. On the demand side, we need to establish a long-term mechanism to combine the expansion of consumption with the improvement of people's quality of life, and improve people's income, education, health care, elderly care, housing and other areas to provide them with stable and optimistic consumption expectation. In addition, we should value the influence of investment on economic growth and the spillovers of government-guided investment, guiding and driving social investment to new infrastructure, new urbanization initiatives and major projects as well as major national strategic regions, and encouraging effective investment. On the supply side, we should further promote structural reform, generate new demand with high-quality supply, guide financial and other resources to flow to the national strategic key areas, upgrade products and technologies, encourage the new operation models of contactless consumption, experience consumption, intelligent consumption, etc., and promote the application and development of new business forms.

**The objectives and market positioning of various entities in China's financial system are clarified. The entities complement each other and cover financial needs at different levels and in different regions.** In 2020, a number of regulatory policies were introduced, which restricted the blind business expansion of regional banks, private banks, and consumer finance companies, further guided large banks to support national strategic deployment, and prompted small and medium-sized banks to focus on local markets and to expand inclusive customer groups. In the future, all entities will complement each other's development and determine business development direction based on their main responsibilities so as to serve the economic entities in a targeted way.

### Strategic adjustment and upgrading of banks

#### Key trends

Since 2020, the regulators have issued over 500 financial policies, and a new competition pattern has emerged in the financial industry. Trends in the banking sector: (1) large state-owned banks and joint-stock banks refocused on their main responsibilities and businesses; (2) small and medium-sized banks vigorously conducted regional business exploration and integration; (3) banks accelerated establishment of various kinds of subsidiaries; (4) innovative banks increased.

**Large state-owned banks and joint-stock banks remain committed to implementing national policies and plans, and generally support the development of China's key industries, tending to step up deployment in strategic regions and industries.** In response to the changing pandemic situation and drastically fluctuating international market, large state-owned banks and joint-stock banks refocused on their main responsibilities and businesses; they undertook their mission to support the country's strategic layout, serve the real economy, enhance support for inclusive finance, carbon neutrality and  beautiful countryside construction, and reduce fees and interest to assist small, medium and micro enterprises in resuming work and production. In terms of business layout, there was an obvious tendency towards key national strategic industries and regions, including the regions along the Belt and Road, Xiong'an New Area, Yangtze River Economic Belt, Beijing-Tianjin-Hebei region, Guangdong-Hong Kong-Macao Greater Bay Area (GBA), and Yangtze River Delta. Banks focused on serving the new infrastructure, new urbanization initiatives, and major projects, and remedying the weaknesses in infrastructure. In addition, they supported strategic emerging industries, modern service industries, and advanced manufacturing, and promoted the high-quality development of manufacturing and the transformation and upgrading traditional industries.

**Regional banks face greater challenges and must pay more attention to improving operation efficiency and activating and deeply exploring opportunities to expand the local market.** Baoshang Bank was taken over by the government and regulator and reorganized to be Mengshang Bank. A number of city commercial banks and rural commercial banks in Shanxi, Shaanxi, Jiangsu, Sichuan and Liaoning provinces have taken the initiative to apply for merger and reorganization—Sichuan Bank and Shanxi Bank have been established. Small and medium-sized banks' business channels are constantly restricted, and high-cost liability products are strictly regulated, resulting in rising challenges of liability sources and costs. In the face of intensified competition, merger and reorganization of small and medium-sized banks will become an important trend in the future. It should be noted that banks' asset quality risks have not been fully exposed. Thus, they need to accelerate capital replenishment, reduce risks, diversify asset disposal means, focus on business development, and promote mechanism reform.

**A number of market entities emerge in the financial field, innovative banks grow under the extensive development mode, and the banking groups internally develop more specialized entities.** Currently, 24 banks have been approved to establish wealth management subsidiaries, and 20 of the subsidiaries have been approved for opening. The licenses for direct banks with independent legal person status are liberalized with the approval and establishment of PSBC Online and Topology Bank, and more banks are expected to accelerate their application. Many banks are deploying new strategies in the consumer credit market and try to grab the market shares of by controlling interests or holding equity interests of consumer finance companies, while banks' existing consumer finance companies seek internal collaboration and omni-channel strategies to deal with market changes. In addition, following the establishment of the central bank's Zhonghui Fintech, ABC Fintech, CPIC Fintech and HSBC Fintech, it is expected that more banks will accelerate the deployment and establishment of Fintech subsidiaries to realize different values.

**The public health emergency have accelerated digitization and put urgent requirements for capital adequacy and asset quality, driving banks to explore innovative operations.** The development and evolution of the COVID-19 pandemic has brought great challenges and far-reaching implications to the banking sector. As banks faced increasing pressure in assets quality, they increased the proportion of provisions to deal with potential credit risks. Therefore, the pressure of asset quality was gradually transmitted to capital adequacy. Banks desperately needed to explore more efficient and low-cost ways for capital replenishment. They actively considered cooperation with professional institutions. In the face of the global public health crisis, the government implemented accommodative monetary policies on a massive scale, maintaining a low-interest rate economic environment; the net interest margin of the banking sector narrowed; some banks were not fully prepared to transform the profit models to businesses such as investment banking and wealth management, and transfer the businesses online. Therefore, the banking sector has a long way to go in optimizing the overall strategy and innovating business development, requiring further quickening the pace of exploration and layout.

### Corporate finance: the position as the cornerstone of business development resurfaced; industrial finance and supply chain finance showed strong momentum of development

**The government guided the development of banks to support the real economy and national key strategic areas; in particular, under the impact of the pandemic, corporate finance again demonstrated its position as the cornerstone of banks' business development.**
(1) In 2021, the start of the 14th Five-Year Plan and the year of post-epidemic economic recovery, the central government formulated clear plans and implementation outlines for objectives of economic development to ensure steady operation of China's economy as well as stable employment and production. In this special period, banks allocated more corporate business resources to emerging industries, regional construction, and environmental protection; they returned to their main financial business and supported the real economy. The layout of corporate business has become the focus of the banking sector, which also plays a critical role in the overall social and economic development. (2) Impacted by the pandemic, banks generally began to reconsider the proportion of strategic investment in corporate and retail businesses. During the pandemic, retail business, with its inherent characteristics, was severely challenged in supporting the banks' basic survival and development. The banks with dominant corporate business had a more solid foundation for recovery, and corporate business' position as the cornerstone of the banks' strategic development was valued again.

**With headwinds against globalization and strengthened geo-economic landscape, maintaining the stability of the industrial chain and supply chain has become a major challenge; the banking sector became aware of the relevant opportunities; the industrial finance and supply chain finance gained momentum.** From the perspective of national strategic policies, the advanced manufacturing, high-tech manufacturing and other key industries were badly hit, and maintaining the long-term completeness, independence, controllability of domestic industrial chain and supply chain has risen to a strategic height. In terms of market demand, major global economies still need to prevent and control the pandemic, with slow economic recovery in 2021, which will impact the stability of the domestic industrial chain. With the accelerated domestic economic recovery, production demand will continue to rise. All banks will increase investment in industrial finance and supply chain finance. Banks focus on fostering the growth of sci-tech innovation enterprises in the industrial chain to support the development of the industry in the long run. Many banks have created the "finance + incubation + industry" comprehensive service platforms, shifting from simply providing financing support to nurturing potential sci-tech innovation enterprises to go public. Meanwhile, in terms of business operation, many banks and their eco partners jointly integrate financing products such as M&A loans, M&A funds and private equity funds to provide equity financing services to core enterprises; they cooperate to serve all enterprises of the industrial chain and explore new ways to support industrial development. Moreover, the banking sector supports especially the economic entities at the upstream and downstream weak links of the supply chain. With the deep integration of supply chain and capital chain, as well as the advantages of natural connection of financial services with supply chain scenarios, it is an important move for the banking sector to promote supply chain finance and serve more micro, small and medium-sized enterprises. Considering the narrowed net interest margin, weakened profitability of general corporate business, and the continuous ROE decline of the banking sector for years, pooling resources to expand industrial finance and supply chain finance will gradually become the development focus of corporate business.

**Facing the pain points of inadequate experience in industrial finance and supply chain finance product innovation, insufficient cooperation among core enterprises and great difficulty in risk control and prevention, banks upgrade their businesses by strengthening the offline promotion ability and digital empowerment.** Banks with strong technologies focus on building an intelligent service platform to expand the customer data links, improve big data integration and analysis, expand and enrich online and offline one-stop comprehensive services, tap the ecological customer groups with strategic customers as the core, and improve customer acquisition ability. By building high-quality platform scenarios, online finance & taxation and other government affairs scenarios, transaction settlement and other scenarios for enterprises in the industrial chain, and bank-enterprise connection and other transaction scenarios, more efficient service channels have been opened. Besides, inputting various scientific and technological means into the platforms helps improve pre-loan investigation efficiency and control loan risks. In the future, digitalization will allow banks to have new ability to dig deep into the upstream and downstream industries of the industrial chain and supply chain to expand the corporate business.

### Retail finance: auto theme and consumer finance subsidiaries are essential for banks to ease the over-reliance on internet platforms and enhance offline and risk control capabilities

**With regulatory requirements specified for online businesses, the development mode of retail business has regained rationality and is faced with the challenges of rapidly reshaping the online and risk control capabilities.** In the past year, a number of new regulations were introduced to control the over-reliance of retail business on internet platforms, including: (1) the regulatory rules for the online lending business of commercial banks were gradually clarified; (2) commercial banks were restrained from selling financial products on internet platforms; (3) new quantitative indicators were added for joint loans, requiring commercial banks to independently implement the core risk control links; (4) high-interest retail products were explicitly prohibited, retail business gradually returned to serving consumers' demands, and banks returned to their main responsibility of risk control. In addition, stricter regulation has restricted commercial banks' large-scale business model shifting from offline to online. In the future, expanding sales through the internet will be limited, the importance of outlets to business development will increase rapidly, and banks will gradually pay attention to the refinement of outlets and quickly reshape the business growth models. It is no longer feasible for commercial banks to merely rely on internet risk control, instead, they need to further enhance their ability to identify and control risks.

Many banks see the development and upgrading of auto finance as an important way to break the bottleneck of retail business; thus, auto finance becomes increasingly important to retail business. Due to the support of national policies for consumption, some banks take auto finance as one of the most valuable markets to explore. They upgrade the themes of auto finance, jointly deploy the full ecosystem scenarios with the mainstream online platforms of the auto industry, and extend the financial services from car loan to parking space, mobility, and auto aftermarket.

**Holding or joint-stock consumer finance companies, as a way to flexibly develop retail customers, are complementary with the banks' consumer finance business to form a competitive-cooperative relationship.** Retail customers are significantly different in credit level and pricing sensitivity, which leads to the weakness of traditional banks in expanding consumer finance business. Therefore, most traditional banks work with the scenario and data providers that have abundant consumer and scenario resources to establish consumer finance subsidiaries; they make full use of their funding advantages, other parties' technology, data and scenario strengths, as well as the advantage of compensating for the risk losses with pricing much higher than the banks' credit rates, to form an operation model where the banks and their subsidiaries complement each other in many aspects, including customer groups of consumer finance business.

### Wealth management: banks attach great importance to and accelerate the deployment of wealth management business; many large banks value products for the elderly as the strategic layout focus

**Wealth management plays an active role in promoting high-quality economic development, enhancing the national economy, establishing a long-term mechanism, and expanding domestic demand.** In December 2020, the Central Conference on Economic Work set the development direction of the capital market. With steady GDP growth, the booming period of national wealth has gradually passed. In the future, the high-quality growth of national wealth will be partly reflected in wealth management ability. Meanwhile, promoting the development of wealth management business contributes to the national economic strength, laying a solid foundation for expanding domestic demand.

**The wealth management market is considerable. Banks' wealth management business will target a large customer group.** By the end of 2020, China's per capita GDP had exceeded USD10,000, the national disposable income had increased, and residents' asset allocation demand had also risen significantly. With the introduction of the New Asset Management Regulation, the continuous emphasis on "houses are for living in, not for speculation", the gradual opening up of the market, people's rising awareness of wealth investment, and asset value maintenance and enhancement being the main purpose, the national demand will feature: (1) diversified asset allocation; (2) asset allocation tilting towards financial assets; (3) gradually rising proportion of medium and high-risk assets. At present, cash/savings account for more than 50% of the financial assets held by Chinese residents. The potential wealth of inclusive customer groups is yet to be explored. In the future, wealth management business will rapidly shift from a professional service for "rich people" to serving a "large" customer group of an inclusive market.

**Some leading banks deeply integrated their business lines to form a circular value chain of "wealth management - asset management - investment banking".** Mainstream banks link wealth management, asset management and investment banking with the customers of corporate and retail businesses to tap their potential wealth and investment demands. As regulatory requirements for compliance have been gradually raised and the stock market and bond market mechanisms have been rapidly improved, financial institutions can better control investment risks. The application of digital banking is accelerated, intelligent application scenarios are properly connected, and intelligent investment advisory service as well as customer services are popularized both online and offline, which will greatly reduce banks' costs of serving the inclusive customer groups.

**Products for the elderly become the focus of most large banks' business strategic layout; "fixed income +" products are the mainstay; large banks seize the opportunity to develop private banking and explore customer value.** (1) It is expected that by the end of the 14th Five-Year Plan period, China will have a moderate aging society, and the aged population will peak in 2050. At the end of 2020, the State Council executive meeting planned to include commercial pension insurance into the third pillar of private pensions. Elderly care was a major concern at the NPC and the CPPCC closed on March 11, 2021. In addition to old-age insurance, financial institutions are encouraged to enrich old-age financial products. Some banks with complete layout of elderly care business have made products for the elderly a key business area. They accelerated the construction of a "healthy elderly care circle", launched comprehensive products for the elderly, including deposits, wealth management, funds, and insurance, and promoted the advancement of old-age finance through online services, investment supervision enhancement and other measures. In the future, with residents' increasing demand for health, elderly care, safety and security, as well as the support of the government's active strategies, the elderly care market will embrace more development opportunities. (2) After the introduction of the new regulations for wealth management and asset management, banks began to actively change product design and promotion plans considering that they were facing mostly risk-averse customers; they replaced "principal-guaranteed" products with "fixed income +" products, making them fill the gap of sound investment products. (3) The major banks have grasped the market opportunity to increase investment in private banking wealth business, explore the value of high net worth (HNW) customers, continuously promote online and intelligent scenario layout, channel construction and service experience, and provided value-added services, customized information and equity services based on personalized needs.

**Asset management: business transformation has not been completed, and the transformation path of different banks varies greatly**

**The transformation of banks to active management is not over yet, and new issues emerge continuously during business transformation. The capital management business model and profit model will be reshaped.** After the release of New Asset Management Regulation, large state-owned banks and joint-stock banks mainly achieve active management through (1) enhancing the cultivation of investment research and credit rating talent; (2) establishing an investment research system centered on allocating assets of major categories; (3) empowering investment decision-making and asset allocation via data platform construction; (4) using Fintech to monitor the net value of products at any time; (5) timely communicating with investors, making great progress in net value-based product management transformation, and accelerating the risk mitigation of existing businesses. As regional small and medium-sized banks have limited active management ability, plus the impact of the pandemic on the existing businesses, their business transformation faces more difficulties. Data show that as of the end of 2020, less than 30% of small and medium-sized banks achieved stock assets rectification and net value-based product management transformation. 73% banks failed to complete stock assets rectification on schedule, and for over 40% of these banks, their unrectified stock assets accounted for over 20% of the total wealth management assets. However, many banks claimed that they had made considerable progress in net value-based product management transformation. In fact, their expansion of scale was mainly achieved through special products derived from the transition of cash management-based wealth management products; they has not yet realized true active management and net value-based product management. In addition, the release of regulations on cash management-based wealth management products restricted banks' space for business development. Banks need to face the challenges, fundamentally strengthen the investment research ability, cultivate investment talent, accelerate technology application, enhance risk management, and proactively transform to self-management

**Regional small and medium-sized banks have limited ability of product development, investment research, system construction, and risk control; they tend to provide investment advisory services and be a sales agent of wealth management subsidiaries.** Banks' asset management business transformation depends fundamentally on their ability of asset allocation, investment research, channel sales, business collaboration, risk management and financial technology application. Most small and medium-sized banks are not capable of engaging in asset management business after the implementation of the New Asset Management Regulation; therefore, they tend to transform by developing the investment advisory business that collaborates with external organizations to optimize investment strategies and design product structure, or they utilize their regional outlet advantage to directly become a sales agent of the wealth management subsidiaries.

**Digital Transformation: digitalization of different sizes of banks differs significantly; exploring and activating system and mechanism innovation is one of the key indicators of success.**

**All banks have proceeded with digital construction layout, but the digitalization progress varies significantly among banks of different sizes.** State-owned banks formulated clear long-term Fintech development plans. Large state-owned banks have invested heavily and made in-depth exploration in Fintech. Focusing on internal development, they have built solid digital infrastructure and extensively applied financial technology in their businesses. Joint-stock banks and large city commercial banks vigorously proceed with digitalization: they have clear key targets, combine internal development with external cooperation, and emphasize more on-site services, platform building and ecosystem construction. Regional small and medium-sized banks follow the development paths of these two categories of banks, but they mainly seek external support due to their limited scale and weak customer base. They have limited investment capacity and unclear digitalization positioning, and lack long-term planning, leading to their uneven development and slow overall progress.

**Digital transformation of large commercial banks heats up; digital development shifts to intelligent construction.** Large state-owned banks and joint-stock banks have established sound cloud computing, big data other supporting infrastructure, and have completed the tasks of the preliminary stage of transformation, such as online business layout and data governance. Their digitalization has shifted focus to intelligent construction: most banks have proposed to focus on the construction of intelligent ecosystems, intelligent platforms, and smart channels and operations. They tap deeply into block chain, artificial intelligence, distributed and cloud technologies. In addition, many banks have further increased their Fintech investment, and developed Fintech talent plans as well as innovation funds and other mechanisms to accelerate team building and address the pain point of insufficient digital talent during business transformation. In terms of business practice, all banks accelerated the advanced development of open banking. Many banks established a unified external ecosystem platform, integrating the new production, operation, and living payment scenarios, such as financial payment, artificial intelligence, smart parking and smart healthcare, into the open ecosystem. Recently, leading banks put forward the concept "panoramic banking" at the new development stage of open banking, aiming to create a diversified ecological system of win-win cooperation, expand connections among scenarios, and guide customers to quickly shift between scenarios, to achieve data and scenario connectivity.

**Digital infrastructure is a top priority for small and medium-sized banks.** Small and medium-sized banks already fell behind in internet finance, so before everything they need to strengthen their digital infrastructure: (1) positioning of their digital transformation should not blindly follow the large well-capitalized banks to conduct all-round R&D; (2) they should give full play to their advantage of being "small and flexible", strengthen organizational reform, accelerate technology talent cultivation, and make clear the overall development goal; (3) they need to build big data capability and strengthen data governance. Small and medium-sized banks should clearly know the essential difference between digitalization and informatization. Data governance, as the foundation of digital transformation, is the most important and difficult task. Therefore, they need to make long-term efforts and conduct in-depth analysis of internal and external data properties to fully transform data value.

**Small and medium-sized banks shall utilize regional advantages to make up for inefficient capital investment and late start of transformation by "practicality" and "speed".** Small and medium-sized banks have long been exploring the local market, so they have extensive information sources, fast information transmission mechanism, and more non-standardized soft information input. They can fully utilize their regional advantages through "intensive cultivation" and quick access. During the competition of digital transformation, small and medium-sized banks may prioritize the front end of business, deploy mobile and intelligent grass-roots equipment, develop intelligent services, and empower grass-roots employees by intelligent means, to facilitate customer acquisition and marketing channels, and quickly achieve transformation results in a radiating way.

### Focuses in the second half of the year

- Overall banking sector, business focus, and regional non-performing loans;
- Merger and reorganization of regional banks;
- Further promotion of regional and business scenarios of digital RMB;
- Opening of PSBC online and Topology Bank, and possible establishment permission of more direct banks with independent legal person status;
- Financial practices for "carbon neutrality" and "beautiful countryside".

# Author

**Liu, Shaolun**
**tner, Consulting FSI**
**Deloitte China**
Tel: +86 10 8512 5598
Email: shaolliu@deloitte.com.cn

**Wang, Zhuo**
**Senior Manager, Consulting FSI**
**Deloitte China**
Tel: +86 10 8534 2253
Email: zhuwang@deloitte.com.cn

# 4.2 Fintech regulation strengthened: trends and tips

On November 3, 2020, Ant Group announced the suspension of IPO on both the Shanghai Stock Exchange and the Hong Kong Stock Exchange, signaling a fundamental shift of China's Fintech regulatory policies. China has introduced a series of regulatory policies since the end of 2020, indicating that the emphasis of Fintech regulation has been diverted from FinTech companies to BigTech companies. Instead of being tolerant, regulators have become prudent to BigTech companies. To prevent systemic financial risks and maintain national financial stability, regulators started to include BigTech companies into the financial regulatory framework. In this context, BigTech companies need to study the policy changes of Fintech regulation before deciding their future development direction, and traditional financial organizations also need to consider proper cooperation with BigTech companies and review their Fintech development strategies.

## Highlights of China's new Fintech regulatory policies

Chinese financial regulators have issued a series of policies since the end of 2020, which clarified the basic principles of Fintech regulation, and established regulatory principles for platform monopoly and fair competition, internet financial businesses (including internet deposits and loans of commercial banks, online micro-credit, and sales of wealth management products), and protection of financial consumers' rights and interests.

### Fintech regulatory principles

The CBIRC has recently clarified the basic Fintech regulatory principles, including the following four major aspects:

- Financial innovation must be conducted under prudent regulation;
- All financial activities must be regulated in accordance with laws; operation with license; illegal regulatory arbitrage must be prevented;
- Treat all types of entities equally, protect the legitimate rights and interests of entrepreneurs in accordance with laws, and preserve fair competition with impartial regulation.
- Maintain financial stability and security, and prevent systemic risks.

### Platform monopoly and fair competition

In February 2021, the Anti-Monopoly Commission of the State Council issued the Anti-monopoly Guide for the Platform Economy Sector (hereinafter referred to as the "Anti-Monopoly Guide") (Guo Fan Long Fa [2021] No.1). The Anti-Monopoly Guide is formulated "with a view to preventing and stopping monopolistic practices in the platform economy sector, protecting fair market competition, promoting standardized, orderly, innovative and sound development of the platform economy, and safeguarding consumer interests and public interests."

In March 2021, the State Administration for Market Regulation issued the Measures for the Supervision and Administration of Online Transactions (hereinafter referred to as the "Measures"). These Measures are formulated with a view to regulating online transaction activities, maintaining the order of online transactions, protecting the legitimate rights and interests of all parties to online transactions, and promoting the sustainable and healthy development of the digital economy, and it consolidates platform responsibilities, enhances consumer rights and personal information protection, and prohibits all kinds of online consumption infringements.

### New regulations for internet financial business

From November 2020 to February 2021, the CBIRC issued documents to regulate the sales of wealth management products, internet personal deposit business, and internet loan business of micro-credit companies and commercial banks' wealth management subsidiaries. These policies are formulated to raise the threshold for financial institutions to carry out joint loan business with internet platform enterprises, restrict financial institutions from carrying out time deposit or time-demand optional deposit business through third-party internet platforms, which virtually disqualifies internet platform enterprises to act as agents to sell wealth management products, and imposes geographical restrictions on internet platform enterprises to conduct online micro-credit business. These new regulations are expected to slow the pace of BigTech companies' quickly seizing the limited market of financial services through cooperation with financial institutions, and completely change internet platform enterprises' business model of utilizing the technology, customer and data advantages to pursue high leverage and high yield and transferring risks to their partners. Table 23 summarizes the main points of these policies.

### Protection of financial consumers' rights and interests

It is an international trend for Fintech regulation to emphasize protection of financial consumers' rights and interests. As BigTech companies enter various areas of the financial services industry,

**Table 23: New internet Financial Business Regulations Issued by the CBIRC**

| Date ofissuance | Document name | Highlights |
|---|---|---|
| November 2020 | Interim Administrative Measures for Online Micro-credit Business (Draft for Comment) | • Imposing geographical restrictions on the operation of online micro-credit business. A micro-credit companies shall mainly engage in online micro-credit business in the provincial-level administrative region to which its place of registration belongs. Without the approval of the CBIRC, no micro-credit company may carry out online micro-credit business across provincial-level administrative regions.;<br>• Raising the requirement for registered capital of online micro-credit companies. The registered capital of a micro-credit company which engages in online micro-credit business shall not be less than RMB1 billion and shall be one-off paid-up monetary capital. The registered capital of a micro-credit company which engages in online micro-credit business across provincial-level administrative regions shall not be less than RMB5 billion and shall be one-off paid-up monetary capital;<br>• Imposing restrictions on the capital contribution and core risk control function of cooperative institutions that act as the main fund provider in joint loans (including assistance loans). In a joint loan, the proportion of capital contribution made by the micro-credit company shall not be less than 30%, meaning that the capital contribution of the cooperative institution shall not be higher than 70%. Meanwhile, the cooperative institution shall not outsource any core business such as credit review and risk control;<br>• A micro-credit company shall, in accordance with relevant legal provisions, carry out anti-money laundering and counter-terrorism work. |
| December 2020 | Interim Measures for the Sales Management of Wealth Management Products of Wealth Management Subsidiaries of Commercial Banks (Draft for Comment) | • Currently, institutions that are allowed to sell wealth management products include wealth management subsidiaries of banks and sales agencies permitted by financial regulators;<br>• Without the approval of financial regulators, no non-financial institution or individual shall directly or indirectly work as an agent to sell wealth management products. Currently, wealth management subsidiaries of banks and banking financial institutions accepting deposits from the general public are allowed to act as sales agents. |
| January 2021 | Circular on Matters Relating to Regulating the Personal Deposit Business Conducted by Commercial Banks through the internet | • No commercial bank may conduct time deposit or time-demand optional deposit business through any non-self-operated online platform, including but not limited to, providing such services as marketing publicity, product display, information transmission, purchase access, and interest subsidy through a non-self-operated online platform;<br>• Local corporate commercial banks shall ensure that deposit business conducted through the internet is based on serving customers in the regions where their establishments are located. |
| February 2021 | Circular on Further Regulating the internet Loan Business of Commercial Banks | • Implementing risk control requirements. Commercial banks shall strengthen their role as the responsible party for risk control, independently manage internet loan risks, complete on their own the risk control links that have important influences on loan risk assessment and loan risk control, and refrain from outsourcing key links to external parties;<br>• Specifying three quantitative indicators. 1) fund contribution rate: where a commercial bank issues internet loans with funds contributed jointly with any partner institution, the rate of the fund contribution by the partner in a single loan issued shall not be less than 30%; 2) concentration management: the balance of loans issued by a commercial bank jointly with a single partner shall not exceed 25% of the bank's net Tier 1 capital; 3) quota management: the balance of all internet loans issued by a commercial bank with funds contributed jointly with its partner institutions shall not exceed 50% of the balance of all of the loans issued by the bank.<br>• Implementing strict control over cross-regional operations. Local incorporated banks are not allowed to conduct internet loan business beyond the local administrative area of their registered place. |

Source: relevant policy documents

their technology and data advantages may help them improve the coverage, efficiency and inclusiveness of financial services, which may also cause them to design and conduct more diverse and insidious infringements of financial consumers' rights and interests to gain higher returns.

In September 2020, the Implementing Measures of the People's Bank of China for Safeguarding Financial Consumers' Rights and Interests (Order of the People's Bank of China [2020] No.5) (hereinafter referred to as the "Implementing Measures") were issued. The Implementing Measures require financial institutions to formulate rules and regulations and clarify relevant codes of conduct to protect financial consumers' rights and interests, and to establish internal control mechanisms for protecting personal financial information, disclosing financial product and service information, assessing risk levels of financial consumers, handling complaints of financial consumers, popularizing financial knowledge and educating financial consumers. The Implementing Measures emphasize the responsibilities of financial institutions in protecting personal financial information, requiring them to collect personal financial information in line with the principle of legitimacy, reasonableness and necessity, fulfill the confidentiality obligation, and properly process, keep, store and use personal financial information for the purpose and within the scope authorized by the customers and prescribed by laws and regulations.

## Suggestions for commercial banks to address Fintech regulatory challenges

As financial regulators strengthen Fintech regulation, it is necessary for commercial banks to review and adjust their Fintech development strategies, strengthen the compliance risk management for digital financial business, and enhance the protection of financial consumers' rights and interests from both the governance and management perspectives.

### Review and adjustment of Fintech development strategies

Banks shall adjust their development strategies based on the changes in the financial regulatory environment. Given the enhanced and upgraded Fintech regulation, the board and senior management of commercial banks shall review and assess their Fintech development strategies, and make timely and proper adjustments. Specifically:

- Increasing investment in Fintech continuously. Financial regulators still encourage and support Fintech innovation while requiring financial institutions to balance innovation and risk. Commercial banks should seize the opportunity of market adjustment caused by the intensive regulation on BigTech companies, and promptly introduce Fintech talent, and actively utilize the space for development of internet financial services brought by the business shrinkage of BigTech companies.
- Strengthening independent Fintech innovation ability. The new Fintech regulations prohibit commercial banks outsourcing the core risk control functions when cooperating with BigTech companies to issue loans online; in addition, commercial banks must use their own online platforms to conduct internet time deposit and time-demand optional deposit businesses. Commercial banks need independent Fintech innovation ability to establish their online platforms for online financial services, and to execute core risk control functions. Therefore, commercial banks with poor infrastructure and capabilities for Fintech innovation should develop a systematic strategic plan to enhance their independent Fintech innovation ability.

### Enhancing compliance risk management of digital financial business

The enhanced Fintech regulation brings higher compliance risks for commercial banks in conducting digital financial business. Many commercial banks have incurred risk events and heavy fines due to flawed internal control mechanism of compliance. Therefore, commercial banks should strengthen the compliance risk management of digital financial business, including but not limited to:

- Banks shall incorporate relevant regulatory requirements into their digital financial business processes to ensure compliance. For example, when conducting internet loan business, banks shall perform the functions such as credit review and risk control independently; banks must use their own online platform to conduct internet time deposit and time-demand optional deposit businesses; they should only choose institutions and individuals permitted by the financial regulators as the sales agent of their wealth management products.
- Commercial banks shall not violate regulatory requirements when cooperating with internet platform companies to provide financial services. For example, the banks' capital contribution shall not exceed 70% in internet joint loans, the banks must not reach any monopoly agreement with internet platform companies, and they must not outsource any core risk control function to the internet platform companies.

### Strengthening the protection of financial consumers' rights and interests from both the governance and management perspectives

The management of commercial banks has realized the importance of protecting financial consumers' rights and interests. Nevertheless, the regulators have continuously imposed heavy fines, indicating that the governance and management mechanisms for protecting financial consumers' rights and interests have not been widely established.

Therefore, it is necessary for commercial banks to enhance both government and management to meet the regulatory requirements and objectives for protecting financial consumers' rights and interests. Specifically:

- Most commercial banks have included protection of financial consumers' rights and interests into the agenda of the board of directors, but the board still needs to place greater emphasis on the relevant issues. Chinese commercial banks' board shall consider adding expert directors in consumer protection and conducting relevant training and performance evaluation within the board to improve the directors' ability and efficiency in performing the duties relating to protection of financial consumers' rights and interests.
- Commercial banks shall, in accordance with the Measures of the People's Bank of China for Safeguarding Financial Consumers' Rights and Interests, formulate their general plan and specific measures for protecting financial consumers' rights and interests, establish internal control mechanisms for protecting personal financial information, disclosing financial product and service information, assessing risk levels of financial consumers, handling consumer complaints, popularizing financial knowledge and educating financial consumers, and set up a sound mechanism to control all processes of consumer protection, ensuring effective implementation of the relevant regulatory requirements throughout the design, marketing, and after-sales of financial products and services.

# Author

**Lawrence Chen**
**Director, Center for Financial Services**
**Deloitte China**
Tel: +86 10 8512 4058
Email: lawrchen@deloitte.com.cn

**Kelly Xu**
**Senior Manager, FSI**
**Deloitte China**
Tel: +86 8512 4569
Email: kelxu@deloitte.com.cn

# 4.3 Data governance and applications to enhance value realization

In 2020, data played an especially important role in national, regulatory and bank management systems. The COVID-19 pandemic accelerated digitalization. Online consumption, teleworking, online risk control, and digital supervision became popular during the pandemic, imposing higher requirements for data quality and security.

## Data regulation highlights review

### Data included into the five factors of production with further emphasis on data security and protection

**Data included into the five factors of production**

On March 30, 2020, the official document, the Opinions on Instituting More Thorough Systems and Mechanisms for Market-based Allocation of Production Factors (hereinafter referred to as the "Opinions"), included data into the five factors of production for the first time, alongside of the traditional factors: land, labor, capital, and technology. The Opinions also put forward the requirements of strengthening data resource integration and protection, establishing a unified and standardized data management system, improving data quality and standardization, and enriching data products. This move has laid the foundation for data transaction and valuation and pointed out the future development direction of digital economy.

**Figure 69: Review of Data Regulation Policies in 2020**

**Data security legislation**

On July 3, 2020, the 20th Session of the Standing Committee of the 13th National People's Congress reviewed and adopted the Data Security Law of the People's Republic of China (Draft), which proposed that the State shall implement a classified and graded data protection system, and that conducting data activities must in the meantime fulfil data security and protection obligations and discharge social responsibilities. This law is a supporting system to the Cybersecurity Law of 2017, reflecting the importance of data in the current era of intelligence.

**Stricter requirements for personal information and privacy protection and cross-border data provision**

On October 21, 2020, the Personal Information Protection Law of the People's Republic of China (Draft) (hereinafter referred to as the “Personal Information Protection Law (Draft)”) was published on the website of the National People's Congress for public comments. Over the past four years, China has introduced five regulations and Specifications regarding personal information and privacy protection:

**Figure 70: Development Path of Privacy-related Laws and Regulations in China**

| June 1, 2017 | May 1, 2018 | February 13, 2020 | March 6, 2020 | October 13, 2020 |
|---|---|---|---|---|
| The Cybersecurity Law took effect | Personal Information Security Specifications | Technical Specifications for Personal Financial Information Protection | Personal Information Security Specifications released | The Personal Information Protection Law entered the deliberation stage |

**Development Path of Privacy-related Laws and Regulations in China**

The Personal Information Protection Law (Draft) defines **sensitive personal information**, clarifies the legal obligations of the personal information handlers and the rights of personal information owners, and imposes stricter requirements for public security and **cross-border data provision**.

**Table 24:**

| | |
|---|---|
| **Obligations of personal information handlers** | |
| Audit | They should, on a regular basis, audit their handling and protection of personal information. |
| Risk assessment | They should assess the risks of handling the personal information, including disclosure, entrusted processing, automatic decision, etc. |
| **Individual rights** | |
| Right | Individuals have the right to know, limit or refuse the handling of their personal information by others. |
| Mechanism | The personal information handler should establish a mechanism to deal with individuals’ applications for excise of their rights. |
| **Legal responsibilities of personal information handlers** | |
| Organization | A fine of up to RMB50 million or 5% of previous year's annual revenue |
| Individual | A fine of up to RMB1 million |

## EAST reporting was included in the scope of punishment for the first time; requirements for regulatory data quality were strengthened

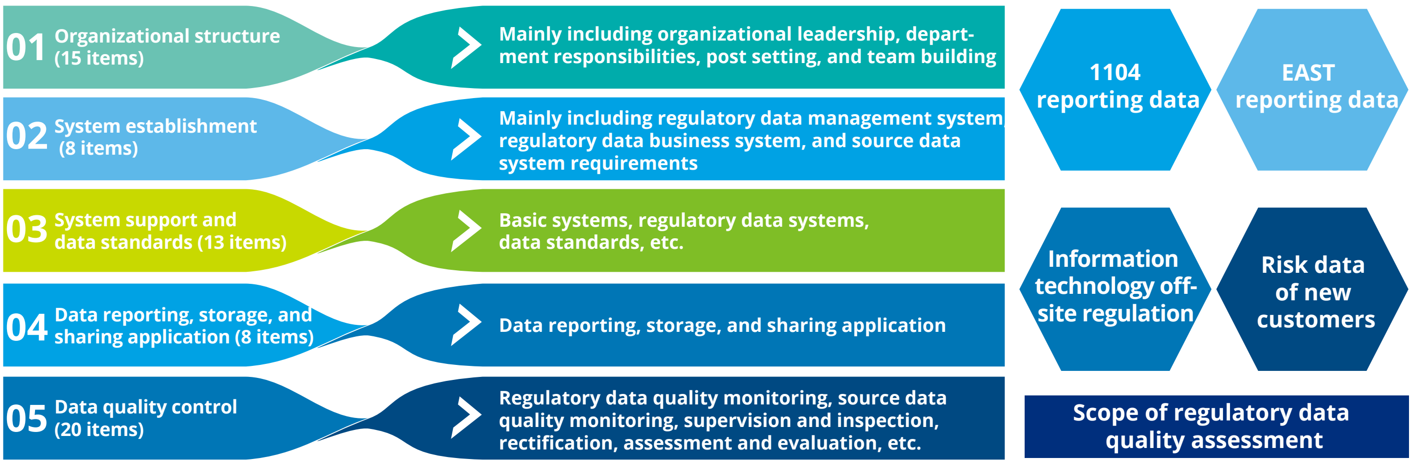
### EAST reporting included in the scope of punishment for the first time

In 2020, the CBIRC issued several circulars to further enhance the quality of EAST off-site regulatory data. On May 9, 2020, the CBIRC imposed regulatory fines against eight banks, including six state-owned banks and two joint-stock banks for substandard data quality of the EAST system and non-conforming reporting. The eight banks were fined a total of RMB19.7 million, marking the first time of EAST data quality being included into the scope of regulatory punishment.

### Requirements for special rectification of regulatory data quality

On May 28, 2020, the General Office of the CBIRC issued the Circular on the Special Rectification of Regulatory Data Quality (No. 45), requiring banks to conduct self-inspection and self-assessment in accordance with the regulatory data quality assessment template, and complete rectification of regulatory data quality by April 30, 2021. Improving regulatory data quality became the priority of all banks in 2020.

**Figure 71: Self-inspection Contents of CBIRC's No.45 Document**




## The People's Bank of China collected basic financial data, and guided data capability building of the financial industry

### Expanded scope of off-site regulatory data collection

In May 2020, the People's Bank of China (PBC) took the lead to launch the off-site pilot collection of loan data, and issued the circular on the establishment of a basic financial data statistical system in July. PBC established the basic financial data statistical system (the PBC version EAST) and further expanded the scope of off-site regulatory data collection. PBC's Department of Investigation and Statistics has transformed its role of undertaking the tasks of data aggregation, macroeconomic analysis and forecast, and compilation of national financial statistical data and reports to a basic financial data center to build the national basic financial database and conduct financial statistical investigations. In the meantime, PBC was stepping up efforts in building off-site regulatory systems, and organizing data preparation tests, design of monitoring model, and joint regulatory mechanism construction, further expanding the application of API, big data and other regulatory technologies.

**Figure 72: Positioning and Future Trends of PBC Basic Financial Data Center**

| Basic financial data center | Future trends |
|---|---|
| • Provide core data to support state macro-control and financial regulation<br>• Provide valuable data and information services for financial institutions and the society | • Deal with information asymmetry in macro financial decision-making<br>• Cover all financial institutions, financial activities, and all national financial infrastructure<br>• Financial data aggregation center, and leading data and information service platform |

**PBC issued guidelines for data capacity building of the financial industry**

At the beginning of 2021, the People's Bank of **China issued the Guidelines on Data Capacity Building of the Financial Industry** (hereinafter referred to as the Guidelines or No.56 Document), which came into effect on February 9. The Guidelines have clarified the basic principles for data work of the financial industry, and defined eight capability domains with 29 corresponding capabilities from the aspects of data strategy, data governance, data architecture, data specification, data protection, data quality, data application, and data lifecycle management. The Guidelines' capability building requirements involve data elements, reference data and master data, secure multi-party computation, payment tokenization and other financial industry standards promulgated by the PBC; the Guidelines have also set targets and provide ideas for building each of the 29 capabilities, providing comprehensive guidance to facilitate financial institutions' data work.

**Table 25: 29 Capabilities of Eight Capability Domains in PBC's Data Capability Building Guidelines**

| Data strategy | Data governance | Data structure | Data specification | Data protection | Data quality | Data application | Data lifecycle |
|---|---|---|---|---|---|---|---|
| • Strategy planning<br>• Strategy implementation<br>• Strategy evaluation | • Organizational construction<br>• System construction<br>• Process specification<br>• Technical support | • Metadata management<br>• Data model<br>• Data distribution<br>• Data integration | • Data elements<br>• Master data<br>• Detail data<br>• Indicator data | • Protection strategy<br>• Protection management<br>• Protection audit | • Quality requirements<br>• Quality inspection<br>• Quality analysis<br>• Quality improvement | • Data analysis<br>• Data exchange<br>• Data service | • Demand management<br>• Development management<br>• Maintenance management<br>• Historical data management |

## Review of commercial banks' data governance work

In 2020, with the emphasis of national legislation and regulation on data governance, all commercial banks attached great importance to data governance, especially the improvement of regulatory data quality. They continued to improve their data governance from the aspects of data system, data standard, metadata, data quality control and data platform.

**State-owned banks focused on data compliance and group-level data capacity upgrading**

With years of experience in data governance, state-owned banks focused on the compliance of introducing external data, special rectification of regulatory data quality, and construction of their own data middle office in 2020. They continued to standardize the group-level data governance system and develop unified group-level data standards.

**Joint-stock banks focused on the data governance relating to data asset integration**

Joint-stock commercial banks focused on the data governance relating to data asset integration. They connected various data governance tasks through data asset management, and actively explored data applications for unified customers or unified risks.

**Foreign-invested banks focused on the establishment of a unified regulatory data mart and a unified platform**

For foreign-invested banks, regulatory compliance was their priority. In 2020, foreign-invested banks concentrated on establishing a unified regulatory data mart and a unified platform, actively improved the automatic reporting rate, and focused on conducting special rectification to improve EAST and other regulatory data quality as well as formulating regulatory data standards.

**City commercial banks coordinated data management and diversified data application**

Many leading city commercial banks chose to establish an independent first-level data management department. With all data management tasks unified, the effectiveness and efficiency of data governance and data application were better guaranteed, and the banks' enterprise-level data model and data standards were improved. These banks formulated a new three-year data strategy in alignment with the first-level data management department, and innovated and diversified data application.

**Rural commercial banks established data governance systems and confirmed organizational structure for data governance**

Rural commercial banks also paid high attention to data governance in 2020. They faced many challenges due to insufficient data infrastructure and talent. Therefore, some of the leading rural commercial banks established a top-down organizational structure for data governance, organized a professional team, improved the supporting systems and processes of data planning, data standard formulation, data control platform construction, and data quality closed-loop management. Meanwhile, they upgraded the business systems, such as the credit processes, put forward clear requirements for source data entry quality and standards, and were actively exploring suitable data governance strategies.

## Future trends

### Data management is transforming towards data asset management

As data have been included as one of the five factors of production, some listed banks have introduced the concepts of data capitalization and data asset management, which will facilitate data value-based transformation of data management.

### Definition of data assets

According to DAMA, data asset management is the business function of planning for, controlling and delivering data and information assets, including development, execution and supervision of plans, policies, programs, projects, processes, practices and procedures that control, protect, deliver and enhance the value of data and information assets.

Not all data of an enterprise constitute data assets. Data assets are the data resources that generate value for the enterprise. According to the annual report of CMB, the management level of data assets of the whole bank was improved greatly by launching a business intelligence platform that can provide visual data products for the whole bank, and an artificial intelligence platform that allows data access personnel to conduct self-service data analysis. At the same time, the bank further purified data assets and made the use of data more convenient and efficient. Also, it provided one-stop data services based on the intelligent search, intelligent navigation, and intelligent recommendation functions of data assets, which effectively lowered the threshold for the use of data assets and empowered the digital transformation of businesses.

BOCOM launched the construction of an enterprise-level data middle office, with the driving force of the two wheels of "financial assets + data assets", and continued to improve the capability of data asset management. The bank set up enterprise-level data standards and reinforced data quality control.

By improving the data capitalization management system, the Bank of Ningbo (NBCB) constantly explored the value and efficacy of data assets. Through the standardization, tagging, granulation of customer data and big data analysis, it promoted the systematization of marketing opportunities and continuously improve customer management efficiency.

Data asset-oriented data management can connect the various management tasks of data standard, data quality, data security, data model and metadata, and bring out the value of data in businesses, which will be financial institutions' main idea of data management in the future.

### Retail finance is becoming a key area of data application

In 2020, financial institutions stepped up efforts in developing retail finance. As online consumption and online loans gain popularity, retail finance is becoming a key business area for data application of banks.

**Figure 73: Data Assets Definition**

| Traditional assets | Data assets |
| --- | --- |
| **According to the definition of "assets" in the Accounting Standards for Business Enterprises, assets are identified by the following criteria:**<br>• The assets are formed **from past events of the enterprise**.<br>• They are owned or controlled by the enterprise;<br>• They are expected to generate economic benefits for the enterprise;<br>• The costs or value can be **reliably measured**;<br>**With further reference to the definition of "intangible assets", they must satisfy the following conditions :**<br>• Being able to be separated or divided from the enterprise;<br>• Being sourced from **any contractual right or other statutory rights**. | **Identification criteria for data assets**<br>• The assets are existing data derived from past events, and can be continuously **updated or expanded in the future**;<br>• They are bound by contracts, **without any law clarifying their ownership**;<br>• Data without economic benefits are not regarded as data assets;<br>• The value of data assets is difficult to measure;<br>• **It is possible but difficult to separate them from the enterprise**;<br>• The legal ownership of data assets remains to be determined. |
| **Limited to financial statements** | **When measuring the value of companies, investors usually pay at a premium much higher than the asset book value for those with large amounts of data assets** |

Many banks created retail customer tags based on data governance systems. They actively utilized big data and internet technologies to develop multi-dimensional customer profiles, build and optimize retail mobile marketing platforms, and improve team management and customer service efficiency. They can meet diversified customer needs through customer data mining and behavior analysis. For example:

CMB mentioned in its annual report that it would build a new model of online user acquisition and operation, which will be Fintech-armed, big data-driven, and MAU-guided, and further promote the digital transformation of retail finance 3.0. The bank has launched customer data analysis products such as Zhitu (智图), Zhiwang (智网), Zhice (智策), Xianji (先机) and Shenbi (神笔) to help its branches improve their accurate marketing capabilities.

According to its annual report, BOCOM constantly improved the integrated retail marketing platform, enriched the bank's data models and data assets, and iteratively optimized the operational strategies throughout the customer life cycle. By maximizing the effect of dual-line synergy, it improved wealth management service system.

It is evident that the integration of retail customers' settlement, credit and wealth transaction with behavior data has positive implications for the transformation of commercial banks' retail business. In the future, banks shall continuously improve the data asset quality of retail finance and establish customer acquisition channels to provide customers with the best lifecycle experience.

### Digital risk control is improving banks' pre-management capability

All banks focused on digital risk control in 2020. Many banks have linked the underlying system data, and built diverse intelligent risk control systems and data applications based on the big data of internal and external risks.

Digital risk control is changing the traditional risk management model of financial institutions. The integration and analysis of internal and external data improve banks' risk pre-management capability. Therefore, banks should continue to improve the data standard construction for risk data marts in the future, and achieve unified customers and risks, group-level penetration risk management, as well as real-time risk warning and intelligent decision-making.

### Data platform optimization continued to improve banks' data infrastructure

In 2020, banks further strengthened their data and technology facilities and furthered the construction of the cloud computing, big data and artificial intelligence technology platforms.

ICBC built a artificial intelligence big data platform with "in-depth perception and open application". The bank was ahead of its peers to enable its big data system to comply with the "Six Integrations" standard as set at CCSA (China Communications Standards Association) TC601. An automatically controllable and industry-leading enterprise-level artificial intelligence (AI) technical system was fully built so as to perform the five core functions of "reading, listening, thinking, speaking and acting" of AI. A one-stop AI modelling workstation was constructed, achieving wide application of mainstream AI technologies such as machine learning, Optical Character Recognition (OCR), Robot Process Automation (RPA), and knowledge map by using facial, voiceprint, iris recognition and other biometric features recognition capabilities.

ABC accelerated the introduction of external data of industry & commerce, insurance, and telecommunication, and vigorously promoted the integration and sharing of internal data. Regarding application of big data technology, it upgraded and expanded the big data platform. The bank promoted the application of the data analysis and mining platform as well as the branch data mart, and launched the management cockpit system to assist managers at all levels with operation decision-making by using visible core indicators.

BOCOM launched the construction of an enterprise-level data middle office and a unified foundation of big data, and continuously improved the capacity of data storage and computing.

IB actively built a strong business, data and technology middle office, refined the sharing and reuse capability, enhanced the data application capability, and improved the support capability.

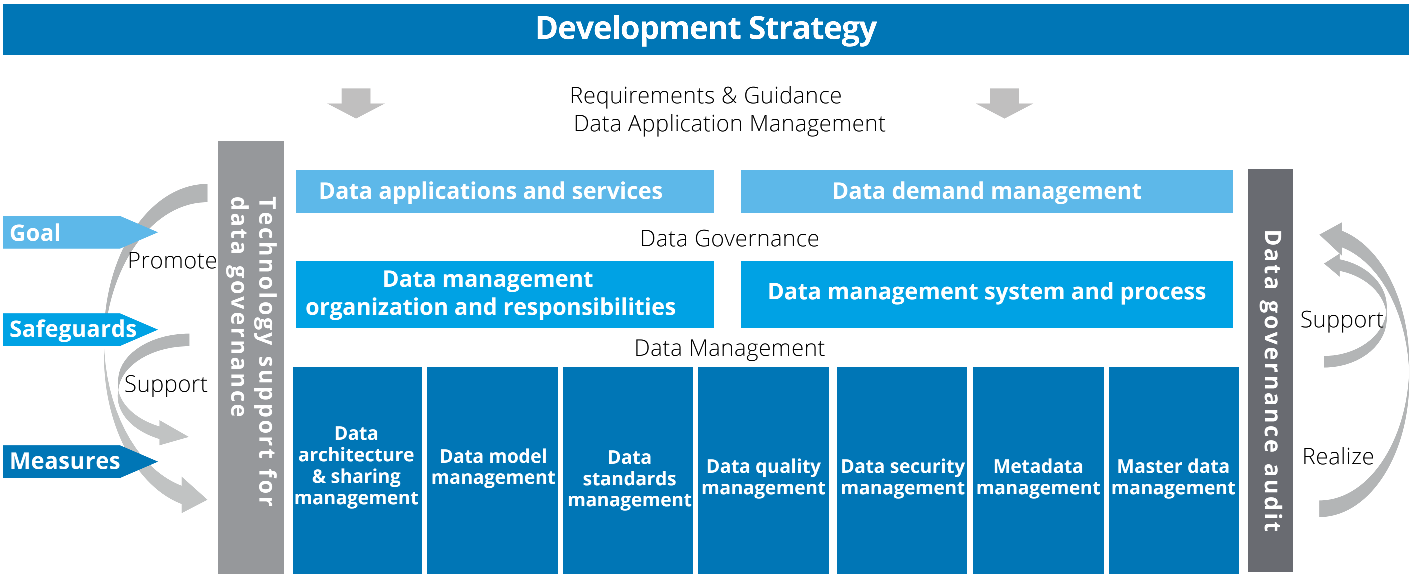
It can be concluded that upgrading data platform capabilities consolidates the banks' data infrastructure. Planning of an automatically controllable data platform architecture and construction of data model are essential for upgrading data platform capabilities. In the future, banks shall pay more attention to the technical trends such as quantum computing and secure multi-party computation while building a data platform of high operation efficiency.

**Table 26:**

| Financial institutions | Digital risk control measures |
|---|---|
| ICBC | • The bank was the first among its peers to create a new mode of voiceprint risk control, which uses voiceprint recognition to quickly and insensibly provide customer managers with identification and fraud risk judgment basis, thereby comprehensively improving the level of intelligent risk control and customer service experience;<br>• In adherence to the whole-process risk prevention and control of inclusive loans, the bank followed the development direction of “digital inclusiveness”, and created an inclusive loan risk management system featuring “data-driven, intelligent warning, dynamic management, and continuous operation”.<br>• The bank optimized customer selection and model access. The duration management model in combination with on-site inspection and off-site monitoring was constantly prompted, with the performance of on-site inspection responsibilities, to continuously enrich off-site monitoring data sources. |
| CCB | • The intelligent risk control system is user-oriented. The system is based on data, driven by technologies and supported by agile organisational structure and innovative mechanism to promote the integration of intelligent risk control into the four communities of Business, Customer, Government and internal Management to build four general capabilities for mobile risk control, robotic process automation (RPA), anti-fraud and anti-money laundering, enabling the extensive risk management for all channels, all institutions, all customers and all employees;<br>• The bank expanded the application of the online business risk scanning and detection system (RSD) to cover business lines of inclusive finance, housing finance, and credit cards, etc. and offered a unified threshold of business access at the bank level;<br>• The bank promoted the risk management decision-making support system (RMD) to help its grass-roots institutions to independently and flexibly use models and tools to solve difficulties in risk control;<br>• The bank optimized the comprehensive risk alert and detection system (RAD), “Intelligent Risk Control” mobile application, and “God Pitcher” for negative news monitoring, and enhanced mobile risk control capability for more forward-looking and accurate risk early warning;<br>• The bank built a unified risk view at the group level and supported the real-time summing up and level-by-level drilling of all risk exposures of customers;<br>• The bank developed functions of anti-fraud screening for online business, piloted anti-fraud verification process, and realized real-time single calls and millisecond response and interception. |
| BOCOM | • The bank actively introduced various types of risk information data, explored the application of advanced technologies such as big data, artificial intelligence and knowledge diagram to build models, upgraded the unified risk monitoring system of the Group and enhanced the intellectualization of risk management. |
| CMB | • The bank integrated multiple modules for risk management from the perspective of users, and consolidated and made accessible the underlying system data, to realize one-click inquiry of customer basic information, risk information and relationship map information, and automatically generate risk reports and pre-credit reports;<br>• The intelligent risk control platform named “Libra” lowered the percentage of non-cardholders’ counterfeited and embezzled amount to three in ten millionths. |
| IB | • The bank established a management mechanism for risk information collection, integration, display and confirmation, launched an intelligent risk control platform, and actively expanded external risk data sources through sharing and purchase to continuously improve the comprehensiveness of risk warning information. |
| NBCB | • The bank strengthened data governance, built risk management data mart that covers client risk information in all directions, and laid a solid foundation for risk management;<br>• It built a risk monitoring platform, supported the rapid and independent construction of monitoring rules and scenarios, and improved the intelligent level of risk monitoring;<br>• It implemented the machine learning model, built an anti-fraud platform and introduced the related mapping technology to realize the full management of modeling, case investigation and back testing;<br>• It continued to promote the optimization of internal evaluation model of retail business and the application of results, and improved the efficiency and automation level of decision approval;<br>• It started the construction of "new generation of credit risk management system group" and built a credit risk management carrier throughout the Group. |

Note: the measures were excerpted from the banks’ 2020 annual report.

**Figure 74: Deloitte Data Governance Framework**




## Deloitte suggestions

Deloitte suggests that financial institutions may refer to the Deloitte Data Governance Framework to build and improve their data governance systems. Specifically:

### Improving the top-level architecture of the data governance system

Data strategy is an important component of a bank's development strategy and the highest principle for guiding data governance, and all data governance tasks are designed and executed accordingly. The effectiveness of the top-level architecture largely depends on the decision-makers' commitment to data governance as well as the operation and collaboration models of the parties involving in data governance. Banks can weigh the advantages and disadvantages according to their actual situations and develop the optimal solution.

It is recommended that financial institutions should develop data strategy based on internal and external analysis as well as their own development strategy. Data strategy should contain clear and quantifiable targets and a breakdown of the implementation plan.

At the same time, financial institutions should establish a data governance architecture with sound organizational structure and clear boundaries of responsibilities, clarify the division of responsibilities of the board of directors, board of supervisors, senior management, and relevant departments, determine the responsible departments for data governance, and establish a multi-layered, interconnected operational mechanism.

### Focusing on regulatory data governance and quality

The financial market is still under intensive regulation. Thus, all banks should attach importance to regulatory data quality. Special rectification of the regulatory data can be the first step for enterprise-level data governance, which is also a means to ensure regulatory compliance of data application.

**Figure 75:**


Financial institutions are recommended to conduct regulatory data governance and improve data quality by the following means:

- **Regulatory data accountability:** Banks shall identify the regulatory data and source data responsible departments in accordance with the accountability principle, and conduct regular data quality assessment and monitoring.
- **Establish regulatory data standards:** Banks shall establish data standards covering all regulatory data, based on regulatory requirements. The data standards shall comply with national standardization policies and regulatory data regulations, and shall be implemented properly in the business areas and systems involving regulatory data.
- **Unify regulatory data sources:** Banks shall design a unified regulatory data mart and a unified regulatory reporting platform to cluster regulatory reporting resources and improve the timeliness and accuracy of regulatory data reporting.
- **Firm up data quality tracking and problem reporting process:** Banks shall implement closed-loop data quality lifecycle management, execute automatic data quality monitoring of the system, and firm up the problem reporting process.
- **Strengthen source data collection and quality control:** Banks shall strengthen the automatic control of source systems, define credible data, standardize data collection, and improve source data quality.
- **Strengthen regulatory data application:** Banks shall accumulate regulatory data and actively explore the application scenarios of regulatory data in detecting compliance risks and monitoring risks.

### Improving bank-level data standards

Basic data standards and indicator data standards are the foundation for the digital transformation of financial institutions. By standardizing banks' business, technology, and management attributes, data standards determine the definition of business terms, report specifications, and data interaction standards during business operation. Meanwhile, data standards can be used as the norms for controlling data quality as well as the reference for designing data models and information systems.

It is recommended that financial institutions should employ internal and external standards and consider data application scenarios and demands to build and improve bank-level basic data standards and indicator data standards, formulate standardized specifications, conduct standardized assessments and implement standardized requirements, to ensure unified collection, processing, application, and governance of data.

### Establishing data governance system based on data assets

The challenges of data governance are mainly caused by the different views on data from the business and IT perspectives, while such problem can be solved by data assets. Data asset management connects all data management tasks, thus solving the problems of where the data are and how they can be used.

It is recommended that financial institutions should revitalize data assets during data asset management, identify key data assets from the business perspective, confirm the data processing logic and links, provide a data asset map for the business departments from the business perspective, achieve value-oriented high-efficiency data asset service system and data mining analysis.

### Steadily promoting the construction of various applications of data assets

In addition to applications in precision marketing for retail customers and big data risk control, some banks are constantly exploring the application value of data in smart marketing & services, intelligent compliance, smart audit, and big data hosting.

It is recommended that financial institutions should first consider their business development strategies and demands to have clear planning for data application construction, including but not limited to: 1) customer profiling; 2) precision marketing; 3) intelligent risk control; 4) intelligent operation; 5) intelligent decision-making; 6) smart audit, etc., and next steadily promote the construction of various data assets applications.

### Developing a good culture of data identification, management and application

It is recommended that financial institutions should establish a sound bank-wide data talent training mechanism, conduct various activities to publicize and apply data governance knowledge, cultivate a bank-wide data culture, and establish a performance evaluation system with proper reward and punishment. Banks should set up a reasonable and effective incentive and accountability mechanism to standardize the data management process and fulfill the responsibilities of the relevant parties, so as to improve the quality of basic data and regulatory data and encourage data application and value exploration, to ultimately achieve the performance goals and realize the data strategies.

### Conclusion

With the iteration and acceleration of commercial banks' online operations, digital regulation requirements become increasingly stringent, and data have become the most important assets and production factor of commercial banks. Commercial banks should develop suitable data strategies in line with their business blueprints and goals, pay attention to adjustment of data governance architecture, value regulatory data governance, improve bank-level data standards, establish a data governance system based on data assets, steadily promote various data assets-based applications, and build a good culture of data identification, management and application.

# Author

**Henry Cao**
**Partner, Risk Advisory FSI**
**Deloitte China**
Tel: +86 21 2312 7154
Email: hencao@deloitte.com.cn

**Cynthia Cai**
**Director, Risk Advisory FSI**
**Deloitte China**
Tel: +86 21 2316 6368
Email: cycai@deloitte.com.cn

# 4.4 Bank value measurement: identify value composition, drivers, and growth by "The Fourth Report"

Entering the era of digital economy, the core drivers for bank value are changing significantly. According to the analysis of the past 10 years of banks' annual reports, the impact of traditional factors, such as growth in asset size, net interest margin and asset quality, on bank value continued to diminish. The figure below indicated that despite the declined assets growth rate, narrowed net interest margin and rising non-performing loan ratio, banking market value still showed steady growth.

Evidently, new growth drivers are changing the banks' value connotation. Research institutions, including Deloitte, are looking for new growth points for bank value. The multifactorial, diversified value drivers brought about new approaches of value assessment. The Fourth Report, jointly developed by Deloitte, Shanghai National Accounting Institute and other professional institutions, is a tool for value insight, measurement and management. It develops insights into value drivers and identifies value measurement indicators from the aspects of users, products, channels and digital technologies of enterprises to facilitate value management.

The Fourth Report suggests that new retail transformation, product innovation and data & technology empowerment will be the core drivers of value growth in the future. The following sections are excerpts from the article series of Banks' Annual Report—The Fourth Report, which discusses and shares insights on the value of banks from the aspects of new retail transformation, product innovation as well as data and technology.

**Figure 76:**

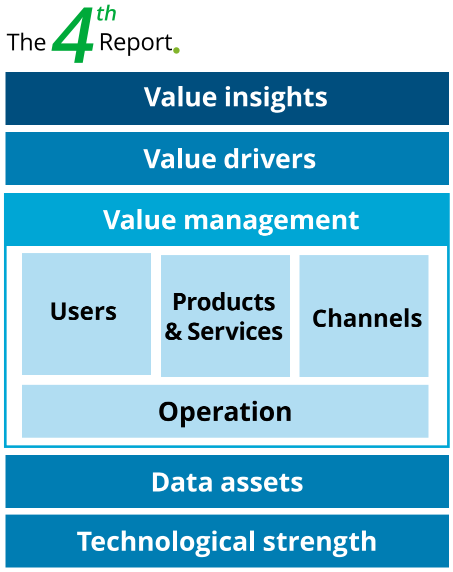
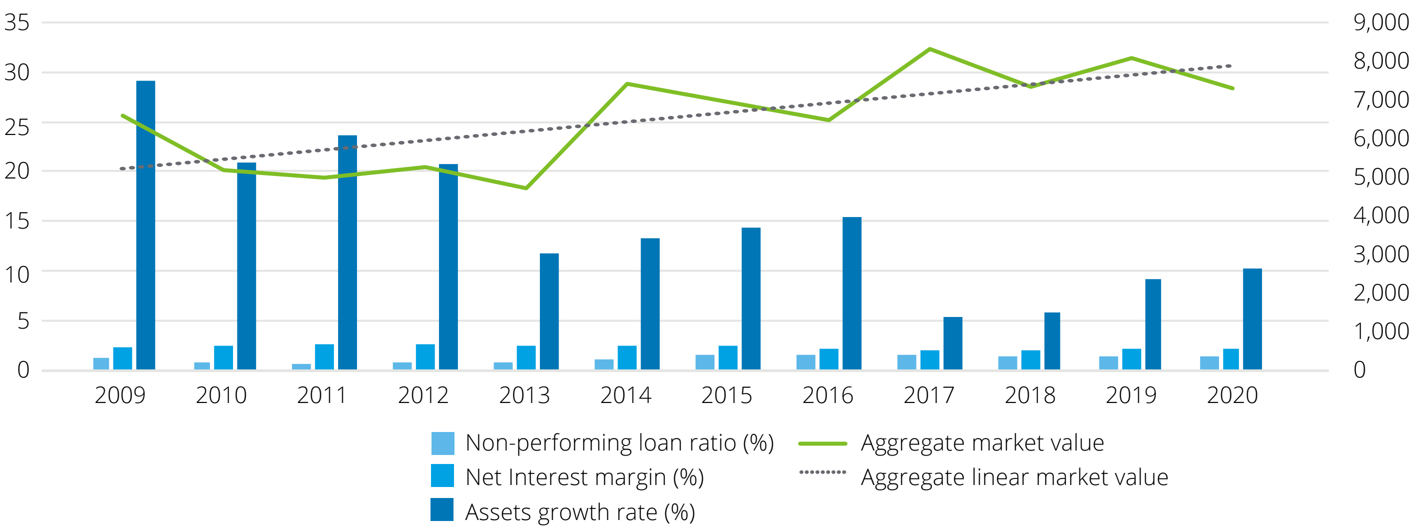



**Figure 77: Trends of Banks' Market Value, Assets Growth Rate, Net Interest Margin and Non-performing Loan Ratio**

Unit: RMB100 million



## New retail transformation

### Increasing the proportion of retail business income to boost unit asset market value

In the era of incremental development of banks, with prominent scale effect, rapid expansion became the core development strategy of most banks. After entering the era of digital economy, many banks switched their strategy to retail business transformation and building light banks and value-based banks. The philosophy of "those who secure retail business will lead in the industry" is widely accepted in the banking sector. **The Fourth Report emphasizes both scale and efficiency, and selects two indicators—"unit asset market value" and "proportion of retail business income", to further analyze the drivers of bank value.**

According to the analysis of 12 major banks' 2020 annual reports and comparison of their relevant data with that of previous years, CMB and Ping An Bank (PAB) stood out in terms of unit asset market value (CMB ranking first with unit asset market value at RMB0.13). Seen from their business and income structure, both CMB and PAB enhanced retail business layout, with retail business income accounting for the largest proportion of their total revenue, while the retail business income of other banks accounted for less than half of the total revenue.

Based on the comprehensive analysis of unit asset market value and proportion of retail business income, we can see that a **higher proportion of retail income comes with a higher unit asset market value, which reflects the necessity and market recognition of comprehensive strategic layout of retail transformation for banks.**

### Digital light retail: on-demand services anytime and anywhere

**To secure retail business is to gain the key driver for future profit growth.** CMB started retail transformation as early as in 2005 and solved the problem of "light capital" and "light assets" development; in 2014, CMB formulated a five-year plan for the second transformation of retail banking, proposing to address "light operation" by digital technological transformation; in 2018, CMB formally moved towards the retail finance 3.0 Era and proposed to implement the "mobile priority" development strategy. Through constant improvement in mobile apps and replacement of transaction-oriented customers with light interaction-oriented users, CMB achieved explosive growth. By the end of 2020, CMB's MAU had reached 107 million, creating a considerable customer base for steady growth of retail business.

Over the past five years, the MAU of major banks trended upward. Both CMB and PAB focused on the mobile banking channel in their strategic layout of retail business; besides, they used technology to empower retail business, and broke through the limitations of location, time and experience by optimizing customer experience, upgrading functions and services and expanding scenario ecosystem via the mobile channel, thus exploring and creating new customer growth points.

**Figure 78: Ranking of Banks by Unit Asset Market Value in 2020**

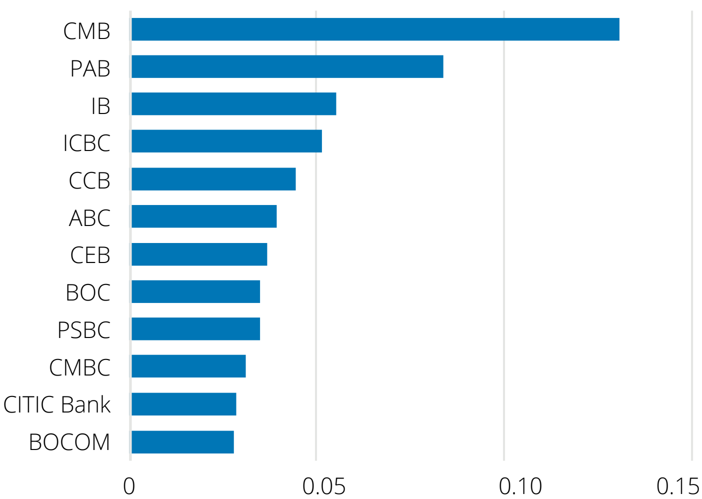
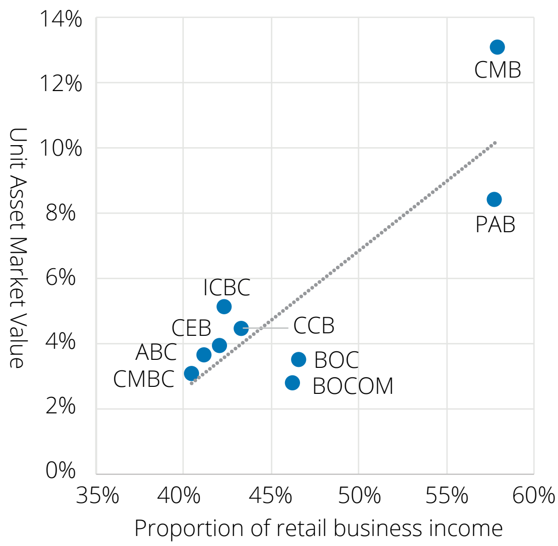


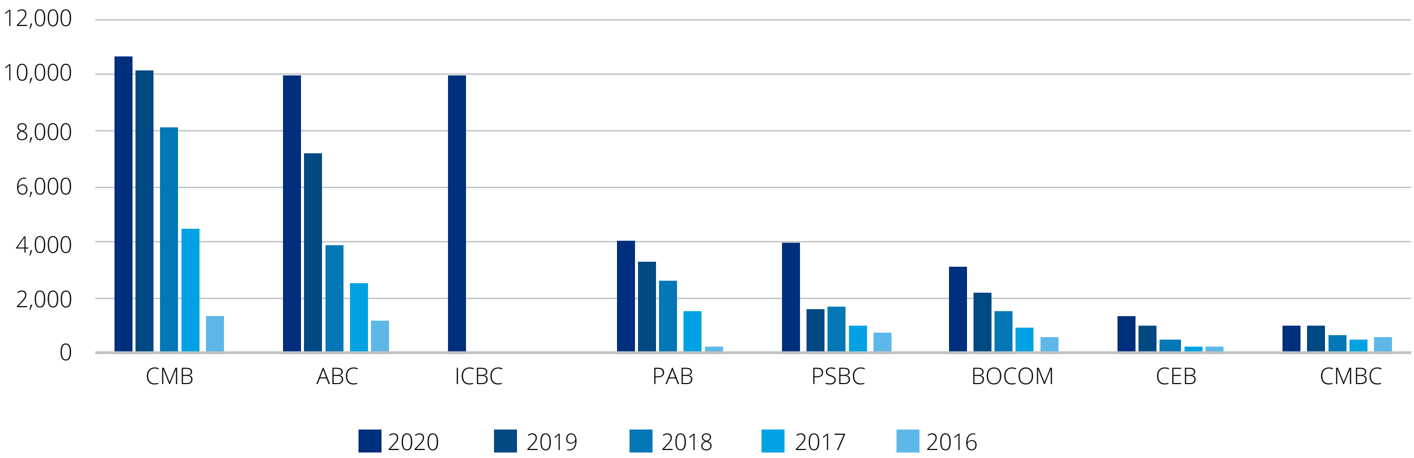

**Figure 79: Correlation between Unit Asset Market Value and Proportion of Retail Business Income**




Source: 2020 annual reports of listed banks, Wind
Note: Unit asset market value = 2020 year-end aggregate market value of the bank / 2020 year-end total assets of the bank

**Figure 80: Ranking of Banks by APP MAU during 2016-2020**

Unit: 10,000 users




Source: 2020 annual reports of listed banks
Note 1: The banks' MAU statistic specification may vary from each other, and the data were in line with the banks' annual report.
Note 2: ICBC did not disclose the MAU information of the 2016-2019 period.

### The Fourth Report develops insights into banks' transformation achievements

The user analysis of the Fourth Report formed a retail business evaluation indicator system from the quantity and quality perspectives. For example, according to CMB's 2020 annual report, "North Star Metric" MAU was the core evaluation indicator of user quality, which was used as the guidance for reshaping the digital system of retail finance. CMB achieved good results in terms of both scale and quality of online users, and comprehensively realized its "digital and light retail" transformation.

Similarly, in 2012 PAB put forward a three-step strategy for retail transformation. In 2016, PAB developed the retail transformation 2.0 strategy. It emphasized acquiring customers via digital channels, empowering retail business with technology, and improving the quality of the retail business. The MAU of PAB's mobile app has increased 1,317.13% since 2016 (the largest growth in the industry) thanks to the digital retail operation strategy.

**Figure 81: Retail Business Evaluation Indicator System of the Fourth Report (Partial)**

#### Number of users

| User scale | User composition | Customer acquisition method |
|---|---|---|
| Accumulative number of CMB APP users: 145 million<br>Accumulative number of CMB Life APP users: 110 million | Retail customers with minimum daily average total assets of RMB500,000 for each month: 3,101,800 | Percentage of debit card customers acquired through digital channel: 19.98%<br>Percentage of credit card customers acquired through digital channel: 62.28% |

#### User quality

| Participation | Activity | Value |
|---|---|---|
| Number of logins to the CMB APP: 6.86 billion<br>Monthly average individual logins: 11.98 | Aggregate MAU of CMB APP and CMB Life APP: 107 million, up 4.9% from the end of the previous year; MAU exceeds 10 million in 23 CMB APP and CMB Life APP scenarios | The wealth management transactions via CMB APP amounted to RMB10.09 trillion, up by 28.21% year-on-year. |

Source: CMB's 2020 Annual Report

### Product innovation

In 2020, the banking sector was affected by the fluctuation of the real economy during the pandemic; Fintech drove business development during digital transformation; the industry was guided by various policies and requirements for regulated business. Product innovation and transformation in the banking sector also showed new trends. The 2020 annual reports of many banks mentioned changes in product innovation and management: intelligent and digital technologies are guiding banking product transformation, and changes lie especially in process management, product risk control, and products-going-online; banking products and services are more closely connected, providing not only capital services and financial advisory, but also life services and other value-added services; banking products are tightly linked to platforms and online channels, gradually forming the concept of "Platform As A Product".

### Expanding products and services around scenarios

Banks' products and services have gradually expanded from traditional asset and liability businesses to capital services, financial advisory, even life services and other value-added services. For example, Shanghai Pudong Development Bank Co., Ltd. (SPD) launched the SPD Life Service app that embedded financial and non-financial services into clothing, food, housing, transportation, and other scenarios, to provide services to individual customers and empower businesses, benefiting over 4,800 enterprises. As of the end of the reporting period, the app had 11 million registered users. CMB achieved a transaction volume of nearly RMB10 billion from the two major scenarios of "Meal Coupons" and "Movie Tickets", and a total of 11.7 million customers from the CMB APP and CMB Life APP. The motive force for product innovation is expanding banking services and creating new products and services centering around the daily life, financial transactions, and other scenarios of individual customers and businesses.

### Innovating product delivery method with technology

Fintech technologies such as Robotics Process Automation (RPA), Optical Character Recognition (OCR) and Natural Language Processing (NLP) are widely applied in the upgrading and iteration of product management process, which contributes to innovation in banks' product and service delivery methods, higher operational efficiency and lower labor costs. For example, Fintech helped CMB greatly reduce manual work in self-service of proprietary businesses, with a value-added tax e-invoicing ratio of nearly 80% and 3.9 million invoices verified by the invoice cloud; PAB embedded intelligent voice in 97 business scenarios with 171 million annual calls.

### Innovating product promotion mode based on platforms

Many banks are integrating products and services with platforms to facilitate the promotion of online services and products. For example, China Zheshang Bank Co., Ltd (CZBank) implemented the platform-based service strategy and launched the pooled financing platform, Yiqiyin platform and accounts receivable chain platform, with a financing balance of RMB678.461 billion during the reporting period; PAB's online platform "Ping An Good Chain" had a total of 13,152 customers, with a trading volume of RMB82.715 billion.

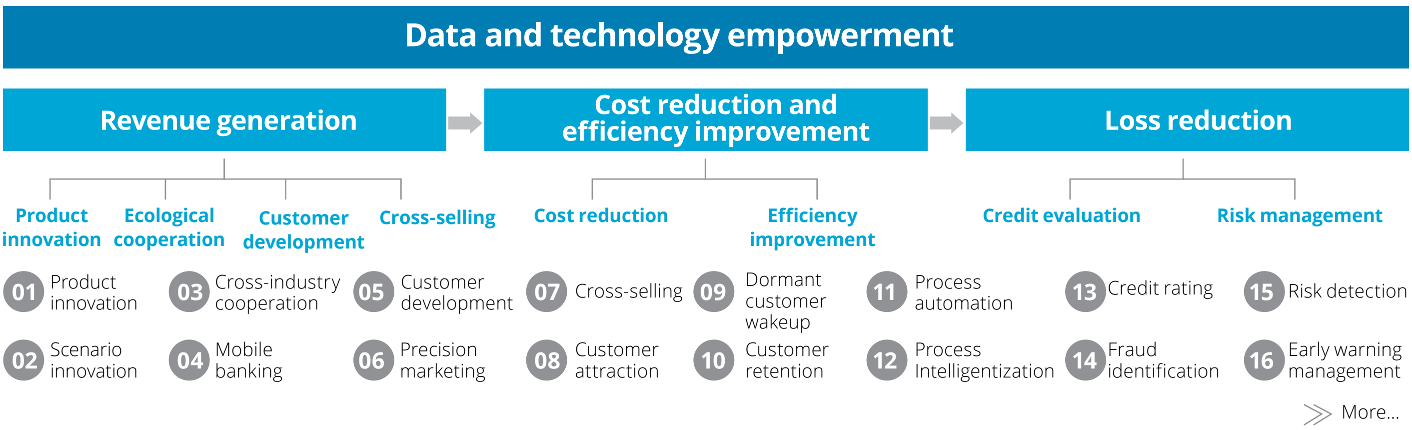
Banking products are evolving to be more intelligent, service-oriented and platform-based, which also affects banks' internal product management. Banks should align their product management model with the development of new products and services while also paying attention to product integration. Banks should adjust their product management to facilitate their transformation.

### Data and technology empowerment

Digital transformation, Fintech and data governance have become "regular" topics and are frequently mentioned in banks' annual reports, reflecting the increasingly important strategic position of data and technology empowerment.

The Fourth Report took retail business as an example and constructed a blueprint of data and technology empowerment, to assist banks

**Figure 82:**

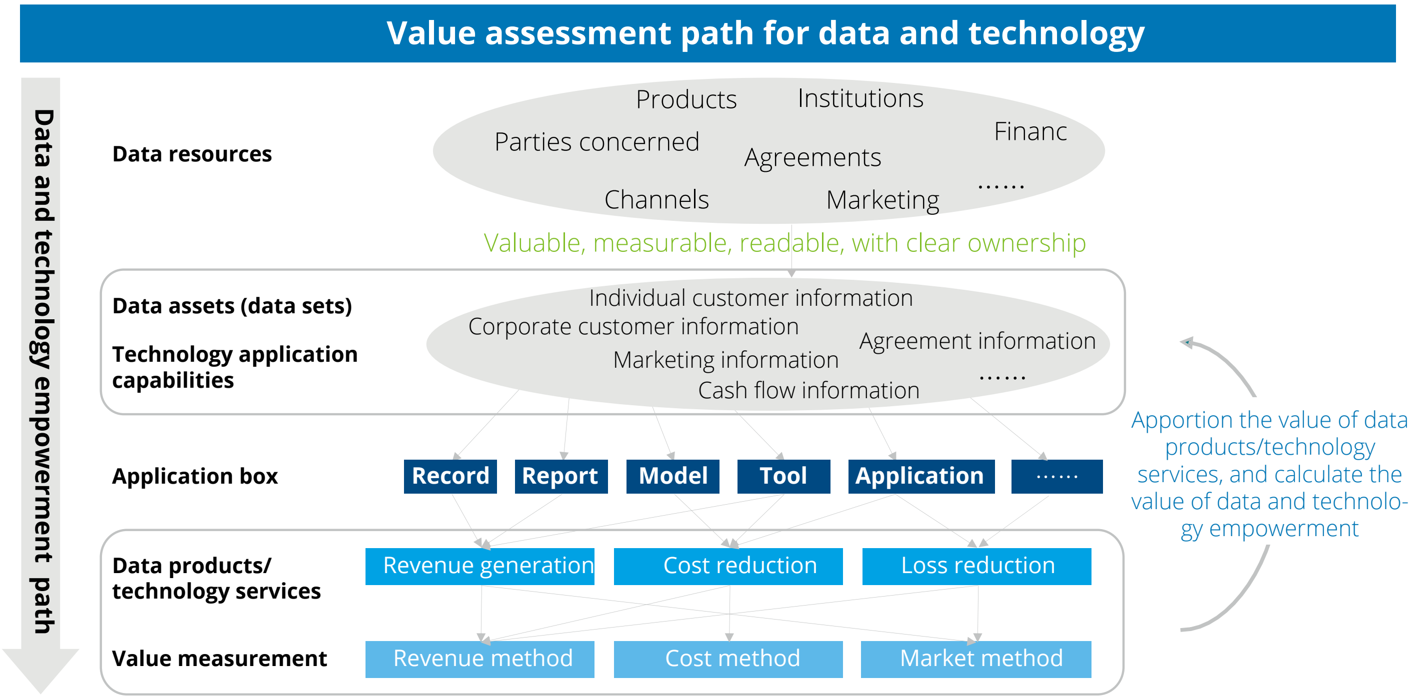


in assessing the value of data and technology.

**Value assessment path for data and technology empowerment**

The Fourth Report follows the data and technology empowerment process to introduce the value assessment path for data and technology empowerment: **data products/technology services are the ultimate embodiment of the value of data and technology empowerment. The value of data and technology empowerment is derived from quantifying the value of data products/**

**Figure 83:**




**technology services and properly apportioning it to data sets.**

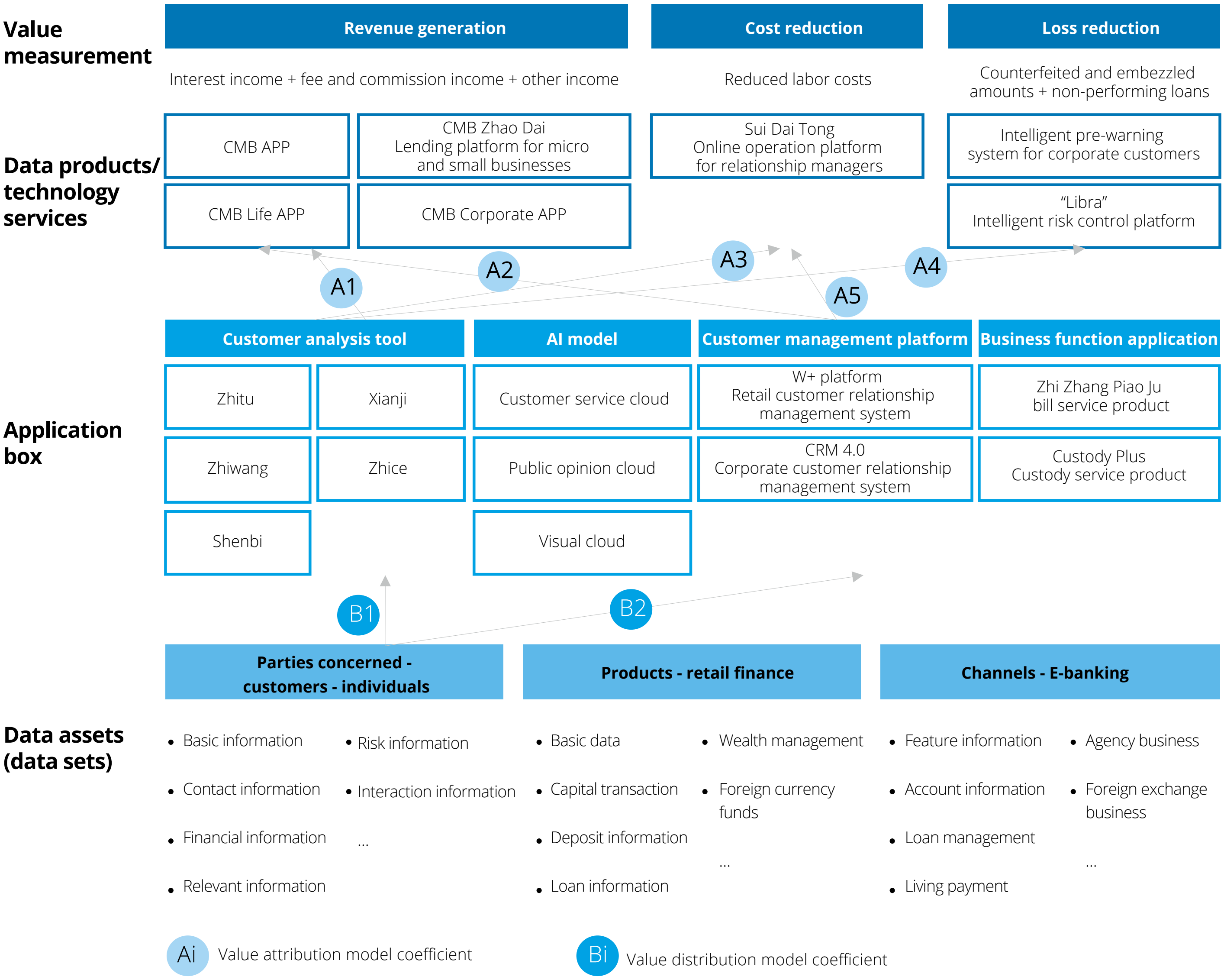
**Case study—CMB: assess the value of data and technology**

CMB disclosed the digital transformation achievements in its 2020 annual report. The data products and services helped release the bank's capacity from the aspects of revenue generation, cost reduction & efficiency improvement, and loss reduction, and improved operational efficiency. Valuation indicators vary by applications:

**Table 27:**

| Data product | Valuation indicator |
|---|---|
| Mobile Banking | Interest income, fee and commission income, and other income generated through the Mobile Banking APP |
| CMB Zhao Dai | Interest income generated through CMB Zhao Dai |
| Sui Dai Tong | Reduced labor costs |
| Libra System | Lowered non-cardholders' counterfeited and embezzled amounts |
| Intelligent pre-warning system for corporate customers | Potential non-performing loans |

**Figure 84: Example of Data and Technology Empowerment Value Assessment**



**Conclusion**

The Fourth Report, based on value insights, assists banks with value measurement and management. We analyzed the main drivers of bank profits, including new retail transformation, product innovation, as well as data and technology empowerment. A more detailed assessment and analysis of customer management, product innovation, outlet transformation, and data/technology empowerment from the perspective of the Fourth Report will be shared in the article series Banks' Annual Report—The Fourth Report , which analyzes banks' value from more dimensions to help banks identify the drivers for value growth and value management.

# Author

**Jacky Zhu**
**Lead Partner**
**Innovation & Digital Development Center**
**Deloitte China**
Tel: +86 21 6141 1547
Email: jaczhu@deloitte.com.cn

**Christine Li**
**Director**
**Innovation & Digital Development Center**
**Deloitte China**
Tel: +86 21 2312 7160
Email: christli@deloitte.com.cn

**Cindy Sun**
**Senior Manager**
**Innovation & Digital Development Center**
**Deloitte China**
Tel: +86 6141 2711
Email: cisun@deloitte.com.cn

# 4.5 Integration of business and finance drives sustainable business and profit growth

This report discusses some hot topics of financial management in the banking sector, such as ROI of innovation activities and valuation of Fintech. It also introduces the whole-process management of resource allocation, acquisition, consumption and evaluation by using the example of constructing a total cost chain management system.

**Hot topics of financial management**

The extensive application of Fintech brought banks competitors from other industries, such as internet financial enterprises, as well as opportunities for banks to make significant changes in customer acquisition, customer activation, management, and operation models, resulting in tremendous changes in banks' business strategies. How to support the determination, implementation and evaluation of business strategies? How to align resource allocation with the upgrading and iteration of business strategies? These are the biggest challenges for banks' financial management, and also obstacles during financial management transformation.

What hinders optimized allocation of resources is the lack of insights into the resources efficiency and effectiveness. However, we found that most banks blamed it on data deficiency:

- The financial management departments do not know if the costs incurred from customer acquisition or customer management;
- The financial management departments do not know the costs of customer acquisition;
- The financial management departments do not know from what activities different customers are acquired;
- The financial management departments do not know from what activities different customers have purchased the products/ services;
- .....

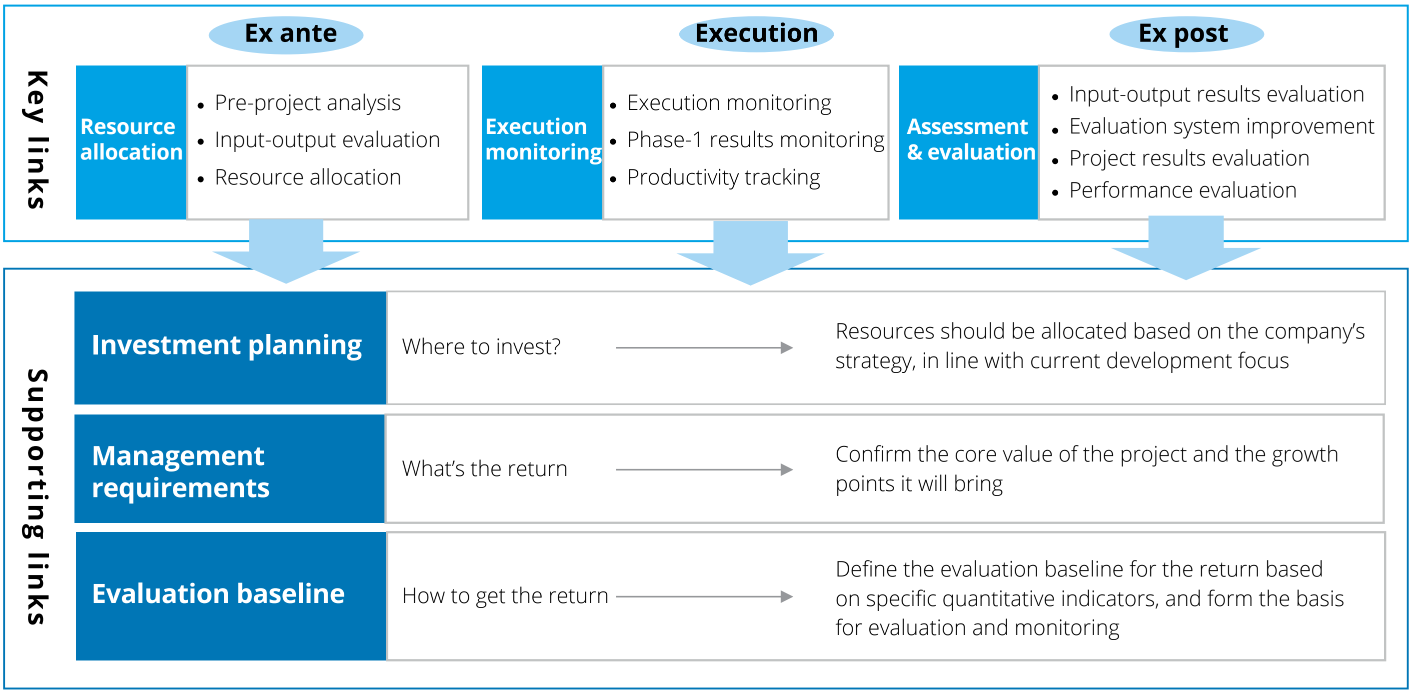
Therefore, financial management cannot provide a clear "standard" for business activities to accurately allocate expenses, human and other resources, and conduct real-time monitoring and ex-post evaluation.

In fact, data are never static, and no bank can solve all data problems at one point-in-time. As the external environment changes, management demands change continuously, so do the demands for data.

The “standard” is also changing. If the cost of RMB100 could generate a return of RMB120 over the past year, will the return be RMB130 or RMB110 this year? What about next year? We can’t wait until the data are completely accurate to set a standard, because the data can never be exactly right. We must apply the management model of internet enterprise—quickly build a management model based on existing data, optimize front-end data, and make continuous optimization and iteration in management practices, to form the model of “standard establishment—standard application—standard upgrading—standard application...”. The standard can never match exactly with the actual situations, so we can only make it as consistent as possible.

Therefore, with the incomplete database, how to establish a "standard" for non-traditional financial management (innovation, Fintech, etc.), then apply it and make continuous optimization, is now a popular practice in financial management of leading banks. We find that the most popular words in financial management are no longer "reimbursement", "accounting", "expenses", but “Fintech", "traffic attraction", "customer acquisition", "valuation", and "integrated value". We will try to explain through case studies the ROI-oriented process of standard establishment, standard application and standard optimization.

**Figure 85:**




### Customer acquisition input-output analysis of Fintech projects

How to assess the reasonableness of resource application for an innovation project? How to monitor the execution of an innovation activity? How to evaluate the cost effectiveness of an innovation activity? How to allocate the limited resources to the most efficient and effective innovation activity? Nowadays, Fintech is widely used and enormous resources are invested in innovation activities. Therefore, effective management of such activities is an important task for banks' financial management personnel.

A bank once mentioned in its interim report that it "established a centralized team to conduct direct marketing, with an aim of empowering branches in the area of direct marketing and frontline selling, and accelerate the breakthrough in digital customer acquisition model as well as other new customer acquisition models to facilitate the continuous increase in users and customers." It is obvious that more and more banks are learning and experimenting with the model of internet companies. The first breakthrough they should make is in customer acquisition. For the input-output evaluation of Fintech customer acquisition, banks should first conduct pre-project evaluation, set goals, allocate resources, then execute real-time monitoring, and finally conduct evaluations on customer acquisitions as well as input-output results.

At present, it is difficult for banks to accurately evaluate customer acquisition and value results in one go. Therefore, based on the objective of Fintech customer acquisition input-output analysis, banks can achieve data buried-point, improve closed-loop project management, and enhance refined accounting ability, ultimately forming initial ex post evaluation data; with subsequent continuous optimization, banks can improve their comprehensive capabilities of budget approval, progress monitoring and customer acquisition results evaluation.

### Valuation system for Fintech projects

Currently, domestic financial enterprises, through the construction of financial ecological scenarios, have transformed their marketing channel from merely offline or online operation to integrated online and offline operation. However, the current financial management ability is incapable of addressing the rapidly developing front-end resource allocation and management demands. Financial management is face with huge challenges, including how to calculate the input and output of innovation activities, how to conduct digital evaluation of innovation businesses, and how to fully exert its ability during the whole-process management of innovation businesses.

Valuation of Fintech projects is the prerequisite for innovation business management. In the past, the value assessment mechanism focused more on the short-term financial value of the projects. However, the value generated by Fintech projects far exceeds the short-

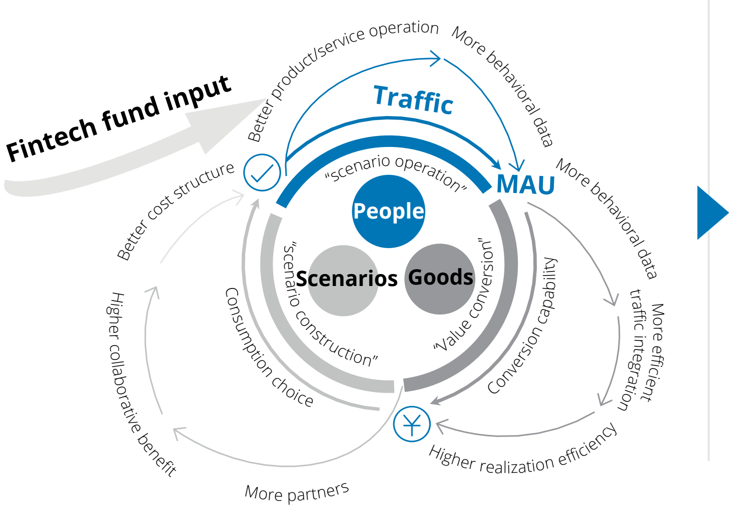
term financial benefits. Value creation of successful Fintech projects is driven primarily by "user experience", and features a positive feedback cycle from "diversified scenarios" to "operation engine", which activates the value growth flywheel to drive the exponential growth of project output. Currently, banks are trying to seek breakthrough in Fintech fund investment and valuation, mainly including: first, measure the direct value generated by the scenarios; second, calculate the indirect value; third, apply advanced intelligent models to evaluate the flywheel effect value generated from the "people - goods - scenarios" connection.

### Analysis of comprehensive value contribution of customers

Analysis of comprehensive customer value contribution is the foundation for input-output evaluation of various business activities, as well as for customer pricing and other management activities. However, the current reporting systems of many banks are mainly financial value analysis systems, which are based on direct profits brought by customers, EVA (economic value added) and other core indicators. These systems conduct top-down analysis from different perspectives to obtain customization results, which lack comprehensive and fair measurement of collaboration; thus the collaborative contributions of departments and customers were not objectively evaluated.

**Figure 86:**

**"Flywheel Effect" during Fintech Fund Value Creation**




**User experience flywheel:** increase Fintech fund investment to enhance the operation of CMB's two major app platforms from product selection to customer service, to bring better experience for customers/users and boost the growth of MAU of the "North Star" metric

User experience flywheel

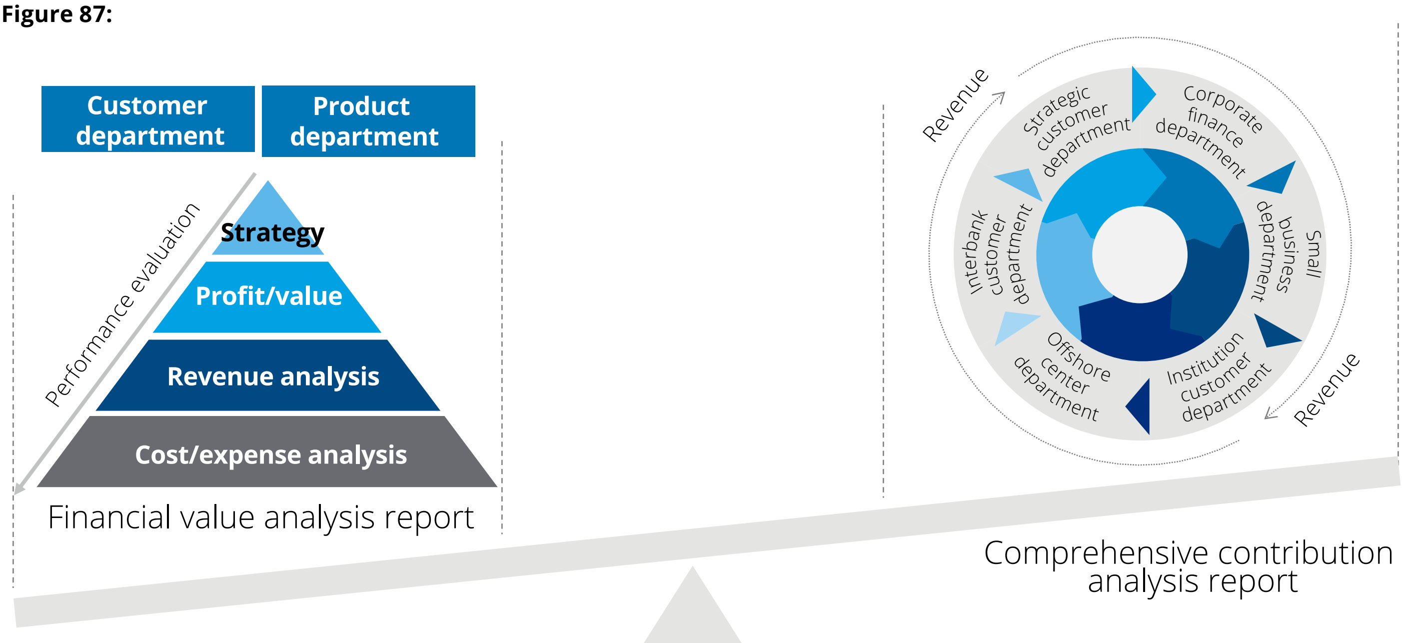
**Operation engine flywheel:** Improve the traffic integration capability by strengthening data and technology application; expand business models to output products/services and enrich realization scenarios; apply technology to continuously optimize management costs, improve efficiency, and optimize profitability

Operation engine flywheel

**Diversified scenario flywheel:** the continuously increasing user scale and activity, as well the as high realization efficiency attract more partners, further enhancing the scale effect and the ecological growth potential of platform, which drives sustainable GMV growth and realize a positive cycle of fund input and output.

Diversified scenario flywheel

**Figure 87:**




Therefore, many banks intend to fully reveal the value contribution of customers and find more valuable customers for their business departments. Thus, the report of customers' comprehensive contribution is prepared to contain not only financial value analysis, but also the analysis of the synergy effect among business departments and customer groups. It provides a more comprehensive analysis perspective for customer selection and enhances the banks' customer pricing capability, thus improving the bank's customer acquisition, activation and management capabilities.

### Improving strategic supporting capability for financial management based on the total cost management chain

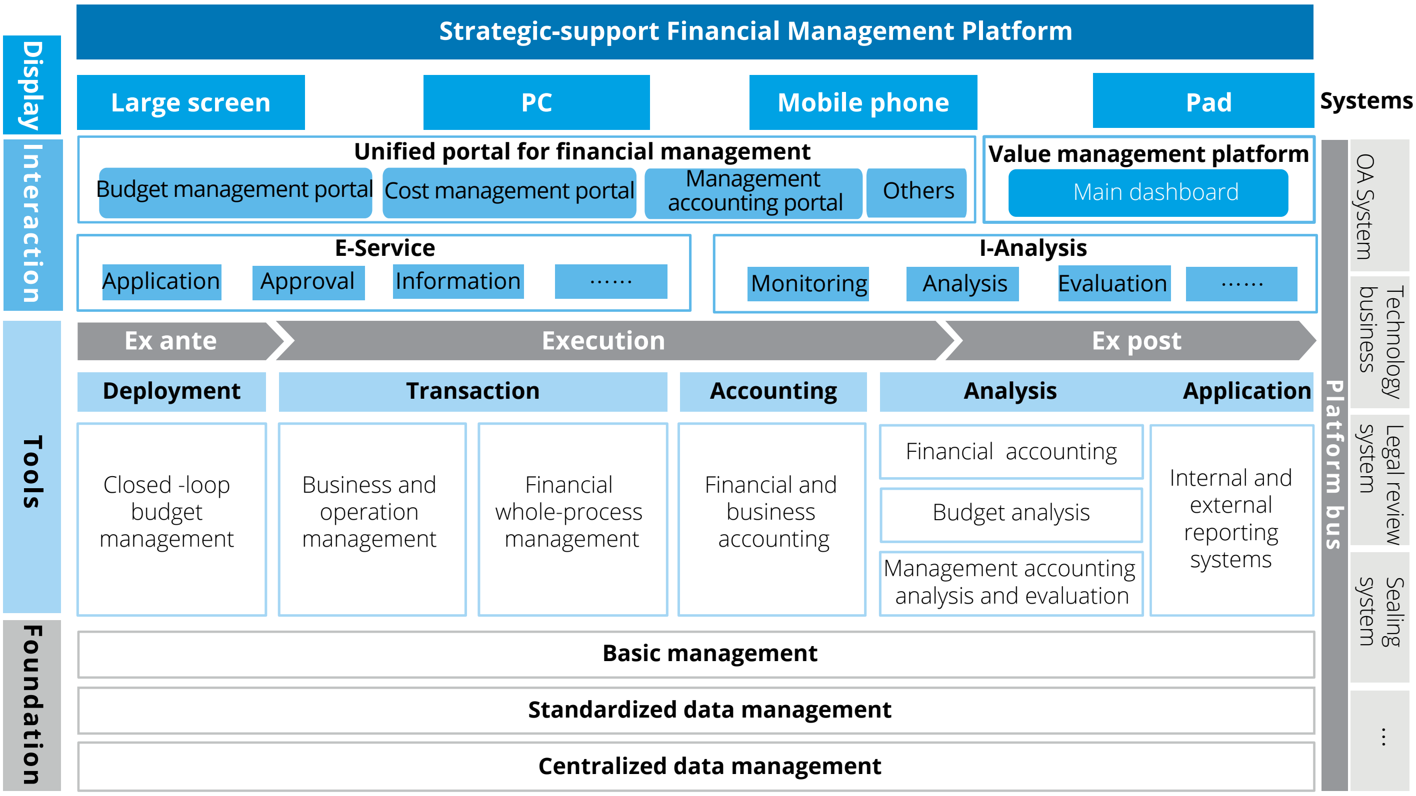
For most new financial management methods, it is difficult to obtain complete data from the existing information systems. Therefore, based on the existing incomplete data, banks should first build corresponding input-output analysis models, and establish initial standards and apply them to management practices. However, this is only the first step of a long journey. To build a long-term sustainable, effective, and constantly improving mechanism, banks shall start from the total cost management chain, and transform the management of the whole process— resource allocation, acquisition, consumption and evaluation—into standardized, online, intelligent and value-based management, so as to truly realize whole-process (Ex ante— execution—ex post) control, thus achieving:

- Better resource allocation: an expected return of RMB150, instead of RMB149, from RMB100;
- Better resource utilization: real-time monitoring on investment returns; rapid optimization, iteration and termination;
- Better resource adjustment: quick evaluation of resource utilization efficiency and adjustment of resource allocation.

Realizing the total cost management chain requires refined and accurate whole-process management, including ex ante: comprehensive planning and resource allocation; execution: connection of business, operation and finance, financial whole-process management, and financial and business information accounting; and ex post: financial accounting, budget analysis, management accounting evaluation, and internal and external analysis reporting systems.

- Ex-ante budget: in addition to the traditional budget organizations and items, project (matter) budget needs to be added, including the budget management for multiyear projects. The definition and management of project (matter)  need to be systematized;

**Figure 88:**




- Execution management: it is necessary to add matter management modules, and strengthen the integration of operation management (such as SMS, rights and interests, vehicles, space, salary, etc.), matter management & procurement, contract, payment, settlement and other related systems and modules. Among them, matter management is the most important link of the total cost management chain, which needs to clarify the project's objectives, resource demand, budget sources, resource departments, input-output forecast, etc. Matter management is the most important link for promoting total cost management online, and also the sufficient condition for the financial department and business departments to have an equal dialogue regarding resource allocation and business output;
- Ex post management: for past cost management, fine management was often carried out ex-post, such as adding multi-dimensional accounting in the reimbursement or accounting link, hoping to improve the level of fine management of cost. The total cost management chain brings forward this link to the matter management link, and realizes intelligent settlement in its true sense through integration with procurement management, contract management and other systems. Meanwhile, ex post management should focus more on evaluation to achieve optimization and iteration of the "standard", and improve the total cost management chain of resource allocation, acquisition, consumption and evaluation.

**Conclusion**

Today, banks' financial management no longer plays the single role of management. It needs to "control", "support", and "serve"—to achieve risk compliance by "control", to achieve efficient operation by "serve", and to promote businesses by "support", which are three indispensable aspects. To achieve the three-in-one financial management system, banks need to combine the best management practices of leading banks, the roles and responsibilities of their financial management, and the current management situation to determine objectives and detailed implementation plans. We should not only look up to the sky, but also be down-to-earth to upgrade our financial management capabilities.

# Author

**Jane Luan**
**Partner**
**Finance & Performance, Consulting FSI**
**Deloitte China**
Tel: +86 10 8512 5831
Email: yluan@deloitte.com.cn

**Gavin Zhou**
**Director**
**Finance & Performance, Consulting FSI**
**Deloitte China**
Tel: +86 28 6225 6193
Email: gazhou@deloitte.com.cn

**Mandy Li**
**Senior Consultant**
**Finance & Performance, Consulting FSI**
**Deloitte China**
Tel: +86 10 8524 8324
Email: manli@deloitte.com.cn

# 4.6 Big banks seek to replenish capital via implementation of China's TLAC—innovation in regulatory top-level design and eligible debt instruments help big banks meet TLAC requirements

In the 2008 financial crisis, the loss absorbing capacity of capital instruments within the framework of Basel Accord could not fully cover the actual losses, the governments used public financial funds to rescue big banks and prevent further spread of the systemic crisis. Such rescue, though meeting the pressing needs, increased the burden on taxpayers and made the public question the moral hazard of big financial institutions. To prevent the risk of "Too-big-to-fail" of global systemically important banks (G-SIBs), in November 2015, the leaders of the G20 adopted the Financial Stability Board or FSB's Guiding Principles on Loss-Absorbing and Recapitalization of G-SIBs and Total Loss-Absorbing Capacity ("TLAC") Term Sheet of G-SIBs (collectively referred to as "TLAC Principles and Term Sheet") at the G20 Leaders' Summit in Antalya, Turkey. Apart from Basel III regulatory capital, the G-SIBs were required to hold more debt instruments of secondary attributes that can absorb losses through write-downs or share conversion, so as to ensure that the G-SIBs have adequate ability to absorb losses and recapitalize when entering the risk resolution process, and that the regulators have sufficient policy tools to maintain financial market stability, keep operation of the core functions of troubled institutions, prevent damage to public resources, and preserve public confidence for the financial system when the G-SIBs facing operation difficulties. Since the introduction of the TLAC Term Sheet, regulators of all countries have developed the local external TLAC requirements, and all economies have introduced a series of policies based on their actual situations to guide commercial banks to meet the TLAC requirements, and extended the application to regionally important banks and foreign institutions, which plays an important role in maintaining local financial stability.

### G-SIBs in developed economies have met the first stage TLAC requirements

According to TLAC Principles and the Term Sheet, from January 1, 2019, G-SIBs were required to hold a TLAC amount of 16% in terms of risk-weighted assets (RWA) and then 18% of RWA as from 1 January 2022. In addition, banks should also meet the buffer requirements: capital conservation buffer of 2.5% or higher, countercyclical buffer of 0-2.5%, and G-SIB surcharge of 1%-3.5%, which means that the TLAC adequacy ratio of G-SIBs should reach at least 19.5% in the first stage, and at least 21.5% in the second stage.

G-SIBs in developed economies have basically reached the first stage TLAC requirements by January 1, 2019. The US G-SIBs were required by the US regulators to meet the second stage TLAC requirements by January 1, 2019. At the end of 2019, among the G-SIBs of bucket 1, the TLAC adequacy ratio of UBS, Credit Suisse and WFC reached 34.6%, 31.3% and 23.3%, respectively; that of the bucket-2 Deutsche Bank, Barclays and Bank of America reached 34.7%, 32.8% and 24.6%, respectively; and that of the bucket-3 HSBC, JPM and Citi reached 30.1%, 25.5% and 24.7%, respectively. The average TLAC adequacy ratio (27.3%) of European G-SIBs far exceeded the regulatory requirements.

### China's TLAC management measures with Chinese characteristics are highly consistent with the FSB framework documents

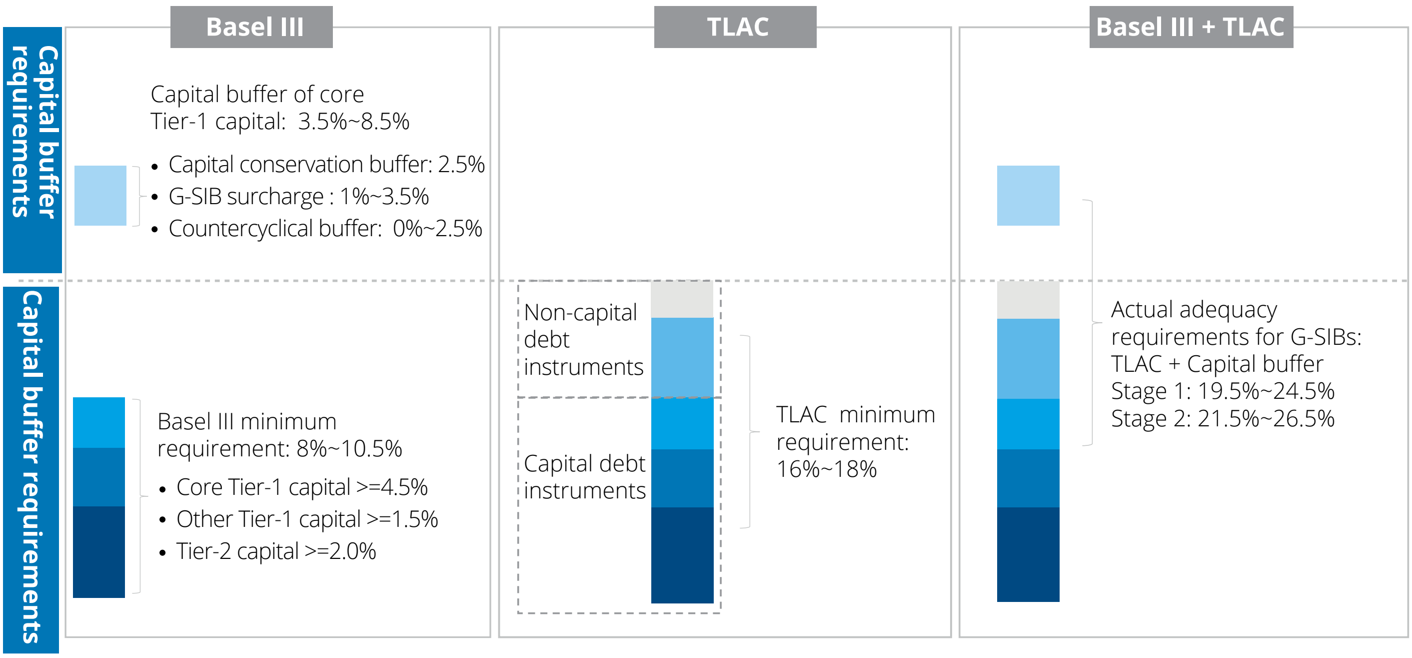
On September 30, 2020, the PBC and CBIRC issued the Measures for the Administration of Total Loss-absorbing Capacity of Global Systemically Important Banks (Draft for Comment) (hereinafter referred to as the "TLAC Administration Measures" or "Measures") and the Circular on Establishing A Countercyclical Capital Buffer Mechanism, which is in alignment with the international regulatory requirements and aims to promote China's G-SIBs to timely reach the international standards, so as to further enhance the stability and health of China's financial system, strengthen Chinese G-SIBs' loss-absorbing and recapitalization capabilities, and prevent systemic financial risks.

The TLAC Management Measures have clarified TLAC regulatory indicators and minimum regulatory requirements, regulated the TLAC composition and the standards for eligible TLAC instruments, and specified the TLAC deduction rules and supervisory requirements. Generally, the TLAC Management Measures are highly consistent with the FSB framework documents. However, the TLAC Management Measures demonstrate Chinese characteristics. First, the Draft reasonably employed the FSB rules and learned from the practices of Japan, which allows an maximum exemption of 2.5-3.5% for the deposit insurance fund to support China's G-SIBs to meet the requirements; second, the FSB's expectation of a minimum proportion of TLAC debt instruments of 33% was not mentioned in the Draft, which was a decision made after comprehensively considering the impact of COVID-19 as well as the current situation of capital instruments and the debt structure of China's banking sector.

### Differences exist in TLAC's and Basel III's capital requirements; TLAC framework significantly increases the capital requirements for G-SIBs

The TLAC and Basel III's capital requirements differ in loss absorption, applicable targets, indicator composition, and minimum requirements. First, the Basel III regulatory capital functions earlier than the TLAC tools: the Basel III framework is more about loss absorbing capacity during the banks' continuing operation, while the TLAC framework aims to ensure that G-SIBs have adequate ability for loss absorbing and recapitalization when entering the risk resolution

**Figure 89: Basel III Minimum Capital Requirements, TLAC Minimum Adequacy Ratio Requirements and G-SIBs Actual Adequacy Ratio Requirements**



process. Second, Basel III framework only calculates a set of capital adequacy ratio and leverage ratio for G-SIBs as a whole, whereas TLAC requires the G-SIBs to generally meet a minimum external TLAC and each resolution entity to meet the corresponding minimum external TLAC. Moreover, compared with the Basel III framework, the denominators of TLAC minimum adequacy ratios are all RWA. In addition to Basel III capital supplement instruments, TLAC instruments also include non-capital debt instruments. The TLAC minimum adequacy requirements are much higher than the Basel III capital regulatory requirements.

## Main challenges for the four major banks to reach TLAC standards

### Large capital consumption

The domestic capital market is characterized by indirect financing, and economic growth has a rigid demand for banks' credit supply, making it difficult for banks to increase their capital adequacy ratio by shrinking their balance sheet. The COVID-19 pandemic has caused greater pressure on banks' assets quality. In 2020, the four major banks' provisions for loan impairment increased by about 13% on average year-on-year, loss absorption consumed much capital. Besides, the four major banks assume national missions and need to support the national strategies such as financial reform, the Belt and Road Initiative and "Made in China 2025", thus, some of their businesses (e.g. debt-to-equity swaps with risk weight of 400%) are highly capital-consuming. Under the New Asset Management Regulation, unmatured non-standard assets that cannot be applied to the new products are transferred back to the balance sheet and included in ordinary corporate loans or accounts receivable with 100% risk weight, which also caused certain capital consumption for banks.

### Slow internal capital supplement

The average year-on-year net profit growth rate of the four major banks was only 1.55% in 2020, and 4.70% in 2019. As COVID-19 brought an unprecedented impact on the economy, banks took the initiative to make interest concessions for the real economy and reduce the financing cost of enterprises. The LPR reform will continue to guide the overall market interest rate and loan interest rate to go down. However, the decline of deposit interest rate is rigid. Banks' profits are and will still be facing great pressure with the post-epidemic low interest rates.

### Limited external capital supplement

The regulatory recognition of eligible capital instruments is limited, and regulators have strict requirements for the issuers and holders. Compared with the developed countries' financial markets, China's debt capital and stock markets are undeveloped, and there is a big gap between the structure of bond investors and the requirements for TLAC debt instrument investors. Taking debt capital financing for example, TLAC debt instruments are not suitable for individual and ordinary institution investors due to their lower priority in repayment, while cross-holding of TLAC debt instruments by commercial banks needs to offset the corresponding TLAC. The senior unsecured debt is the main instrument adopted by the European and US G-SIBs to supplement TLAC; however in China, the four major banks do not have a holding company—an operation hierarchy, thus they cannot issue senior unsecured debts to accommodate the requirement for lower priority in repayment of TLAC instruments. Therefore, external capital supplement not only requires the regulators to optimize the top-level design, cultivate and develop eligible TLAC instrument markets, but also demands that the four major banks continue to optimize the eligible TLAC instruments in combination with China's national conditions.

### Enhanced capital regulatory requirements

According to FSB's latest list of G-SIBs, the BOC, ICBC and CCB were allocated to bucket 2 with an additional capital buffer requirement of 1.5%, while ABC was to bucket 1 with an additional capital buffer requirement of 1%. In the 2020 list, CCB has moved from bucket 1 to bucket 2. In the next five years, the global systemic importance of the four big banks is likely to improve, and the additional capital buffer requirements will increase accordingly. The circular issued in September 2020 has specified that the countercyclical capital buffer ratio is initially set at 0, with no higher capital requirements for financial institutions in the short term, and dynamic adjustment through capital constraint in the long term. By 2025, the four major banks will be required to have a minimum TLAC ratio of 16%, and meet the current regulatory capital buffer requirements: 2.5% capital conservation buffer, 0-2.5% countercyclical buffer, and 1%-2% G-SIB surcharge. Even if the regulators maintain the initial countercyclical capital buffer ratio for the next five years, the four major banks will need to reach the minimum capital adequacy ratio of 19.5% (the maximum may be 20.5%) as from January 1, 2025.

## Estimation of TLAC capital supplement gap of the four major banks

Based on the 2020 annual reports, by subtracting the capital buffer from the four major banks' regulatory capital adequacy ratio, we got the approximate TLAC ratios (between 12.22% and 13.56%), with TLAC ratio gaps between 2.44% and 3.78% in 2025 and between 4.44% and 5.78% in 2028. Statically, using the current risk-weighted assets, the total TLAC capital gap of the four major banks is estimated to be about RMB2.1 trillion in 2025 and RMB3.5 trillion in 2028; dynamically, assuming an 8% annual growth rate of risk-weighted assets, the total TLAC capital gap of the four major banks is estimated to be about RMB3.1 trillion in 2025 and RMB6.4 trillion in 2028.

**Table 28: Estimation of TLAC Capital Gap of the Four Major Banks**

RMB100 million

| Index | ICBC | CCB | ABC | BOC |
|---|---|---|---|---|
| (1) Capital adequacy ratio | 16.88% | 17.06% | 16.59% | 16.22% |
| (2) Including: Capital buffer | 4.00% | 3.50% | 3.50% | 4.00% |
| (3) Current approximate TLAC ratio(=(1)-(2) ) | 12.88% | 13.56% | 13.09% | 12.22% |
| (4) Current risk-weighted assets | 201,241.4 | 166,045.9 | 169,896.7 | 151,090.9 |
| **Static gap estimation for 2025** | | | | |
| (5) TLAC ratio gap (=16%-(3) ) | 3.12% | 2.44% | 2.91% | 3.78% |
| (6) TLAC capital gap (=(4)*(5) ) | 6,278.7 | 4,051.5 | 4,944.0 | 5,711.2 |
| (7) Total TLAC capital gap | | 20,985.5 | | |
| **Static gap estimation for 2028** | | | | |
| (8) TLAC ratio gap (=18%-(3) ) | 5.12% | 4.44% | 4.91% | 5.78% |
| (9) TLAC capital gap (=(4)*(8) ) | 10,303.6 | 7,372.4 | 8,341.9 | 8,733.1 |
| (10) Total TLAC capital gap | | 34,751.0 | | |
| (11) Additional TLAC capital gap (=(9)-(6) ) | 4,024.8 | 3,320.9 | 3,397.9 | 3,021.8 |
| (12) Total additional TLAC capital gap | | 13,765.5 | | |
| **Dynamic gap estimation for 2025** | | | | |
| (13) Risk-weighted assets | 295,689.6 | 243,975.9 | 249,634 | 222,002.1 |
| (14) TLAC ratio gap (=16%-(3) ) | 3.12% | 2.44% | 2.91% | 3.78% |
| (15) TLAC capital gap (=(13)*(14) ) | 9,225.5 | 5,953.0 | 7,264.3 | 8,391.7 |
| (16) Total TLAC capital gap | | 30,834.6 | | |
| **Dynamic gap estimation for 2028** | | | | |
| (17) Risk-weighted assets | 372,483.8 | 307,339.4 | 314,466.9 | 279,658.7 |
| (18) TLAC ratio gap (=18%-(3) ) | 5.12% | 4.44% | 4.91% | 5.78% |
| (19) TLAC capital gap (=(17)*(18) ) | 19,071.2 | 13645.9 | 15440.3 | 161,64.3 |
| (20) Total TLAC capital gap | | 643,21.6 | | |
| (21) Additional TLAC capital gap(=(19)-(15)) | 9,845.7 | 7,692.9 | 8,176.0 | 7,772.6 |
| (22) Total additional TLAC capital gap | | 33,487.1 | | |

Note: for dynamic gap estimation, if with a constant TLAC ratio gap and 8% annual growth rate of risk-weighted assets, it approximates to the compound annual growth rate of 2014-2019.

**Figure 90: Static TLAC Capital Gap Estimation in 2020**

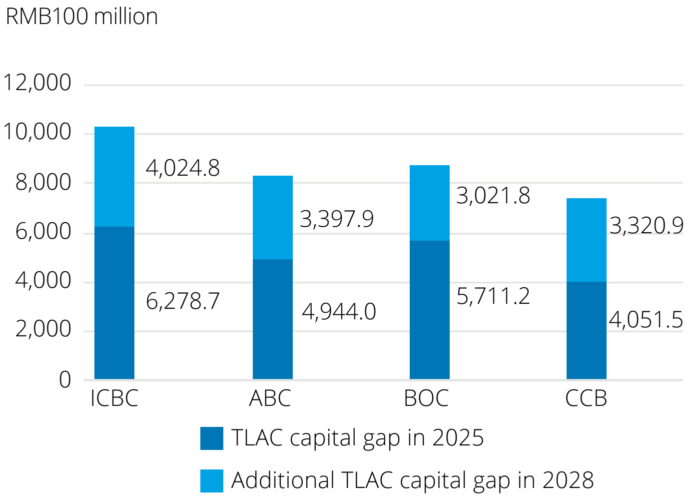
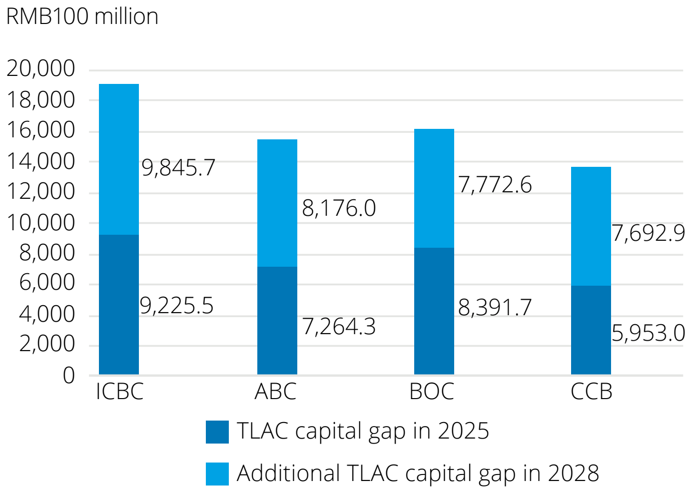



**Figure 91: Dynamic TLAC Capital Gap Estimation in 2020**




### TLAC capital supplement measures of international G-SIBs

From 2016 to 2019, global G-SIBs issued TLAC debt instruments that totaled more than USD1.3 trillion, among which the senior unsecured debt was the main instrument for banks to supplement TLAC capital, and the debt instruments were mainly US dollar debts. Asset management companies, pension fund and insurance companies, and other non-bank financial institutions are the main purchasers of TLAC debt instruments.

France included in Article 613-30-3 of the Code monétaire et financier the scope for definition of TLAC debt instruments and the priority level during risk resolution and insolvency liquidation, requiring that TLAC debt instruments must the debts specified in the prospectus. Based on this code, the French regulators created the senior non-preferred debt as a TLAC capital supplement instrument. The German Banking Act (KWG) also stipulates the precondition for eligible TLAC debts: the issuing contract clearly establishes that the debts are subject to loss-absorbing legal provisions.

Among European G-SIBs, Deutsche Bank's 2019 TLAC adequacy ratio reached 34.7%, the highest among the peers, but its regulatory capital adequacy ratio was 17.4%, only higher than SANTANDER CENTRAL HISPANO S.A, among European G-SIBs. The issuance of eligible TLAC instruments was the main way in which Deutsche Bank enhanced its TLAC adequacy ratio. At the end of 2019, the proportion of Deutsche Bank's TLAC capital that was not included in Basel regulatory capital was 63.1%, and the eligible TLAC instruments it issued were senior non-preferred debts, with 1,045 stock debts and  a balance of EUR55.8 billion.

Similar to Deutsche Bank, HSBC's regulatory capital changes did not contribute greatly to TLAC capital, which mainly depended on capital saving (through the denominator strategy) and issuing eligible TLAC instruments to supplement TLAC capital. HSBC's TLAC adequacy ratio reached 30.1% in 2019. HSBC's denominator strategy included adjusting business structure, expanding the coverage of the internal ratings-based (IRB) approach, and communicating with regulators for positive policy support, to reduce risk-weighted assets. For example, after communicating with the regulator, BOCOM' proportionally consolidated risk-weighted assets were converted to be a capital deduction, reducing USD120.9 billion risk-weighted assets; moreover, as the regulator approved the expansion of the coverage of the consolidated statements, USD7.4 billion risk-weighted assets were reduced through diversification of the asset portfolio. At the end of 2019, HSBC's balance of eligible TLAC instruments reached USD77.5 billion, accounting for 49.2% of the TLAC capital.

Large banks in the United States all have a holding parent company, which allows them to circumvent the restrictions in stock trading and financing mode. Pursuant to  the “absolute priority rule” of the US Bankruptcy Code (Title 11 of the United States Code), shareholders can only be paid after the creditors have been paid in full. Therefore, bank entities have a natural TLAC repayment priority regarding the debt instruments issued by the holding parent company.

US G-SIBs mainly made capital supplements through financial innovation in redeemable debt instruments. In 2016, JPM issued the first five-year redeemable bonds of USD2.5 billion,  which was followed by other US G-SIBs with a total of more than USD20 billion redeemable preferred bonds issued within four months. This redeemable debt instrument model is highly flexible in practice. Taking JPM's five-year redeemable bonds for example, according to the TLAC capital requirements, debt instruments with a maturity of more than one year can be considered as eligible instruments, and the bank may redeem the debts in advance to reduce the interest-paying cost when the residual maturity is less than one year. The US regulators have tacitly consented to this practice, but such redemption will need to be formally approved by the US regulators first if it violates the TLAC regulations.

As all three Japanese G-SIBs have a holding company—the operation hierarchy, similar to the US G-SIBs, they adopted the structural lower-prioritized repayment approach—the holding company issues senior unsecured debts to meet the TLAC requirements. The Japan Financial Services Agency (FSA) has determined that the deposit insurance funds meet the "prior commitment" requirement and therefore allows Japanese G-SIBs to include the deposit insurance fund contributions in the scope of eligible TLAC capital instruments.

As of March 31, 2019 (time of TLAC compliance in Japan), the three Japanese G-SIBs had issued a total of 139 TLAC instruments with an aggregate amount equivalent to RMB672.9 billion, all of which were senior unsecured debt issued by the holding companies, mainly in US dollars. With zero interest rate, Japan's G-SIBS issued capital-supplementing instruments in the overseas financial markets, which not only avoided the problem of being incapable of raising more yen funds, but also satisfied the demand of the overseas branches for US dollars.

### Capital supplement status and outlook of the four major banks

The overall capital adequacy level of the four major banks has risen steadily in recent years. The introduction of perpetual bonds in 2019 has enriched the methods for banks to replenish other tier-1 capital. At present, eligible TLAC instruments in China include capital instruments and non-capital debt instruments: the existing capital instruments mainly include common stock, preferred stock, convertible bonds, perpetual bonds, and write-down Tier-2 capital bonds, while there is no non-capital debt instrument yet.

Perpetual debt has become the main method of capital supplement of banks. ICBC issued RMB70 billion preferred stocks and RMB80 billion perpetual bonds in 2019, and USD2.9 billion perpetual bonds in 2020 to supplement other Tier-1 capital; CCB issued RMB40 billion perpetual bonds in 2019; BOC issued RMB40 billion perpetual bonds in both 2019 and 2020; ABC issued RMB120 billion perpetual bonds in both 2019 and 2020.

The four major banks can adopt the numerator and denominator strategies to achieve TLAC compliance. International G-SIBs generally began to issue eligible TLAC instruments 3-4 years prior to stage-1 TLAC compliance. On the numerator side, the four major banks should begin to develop eligible TLAC instruments for early issuance, which does not mean creating an entirely new financial instrument—they only need to make the basic terms and the payment sequence comply with the TLAC regulatory requirements. In addition, the four major banks may issue long-term TLAC debt instruments with fixed interest rates in US dollar, euro and other foreign currencies in low-cost overseas markets. On the denominator side, the four major banks can optimize asset allocation through strengthening light capital operation and retail transformation, and reduce the risk-weighted assets through structural optimization, or they can remove assets from the balance sheet via asset-backed security to reduce risk-weighted assets; In the medium and long term, the four major banks may be more prudent in balance sheet expansion, or strengthen their light capital operation through integrated and diversified operations.

The regulators need to further improve the construction of the TLAC instrument market, including: 1) specify the issuance rules for various types of TLAC instruments and remove institutional obstacles for payment sequence, write-downs or share conversion of TLAC debt instruments; 2) promote the shelf offering of financial debts and other types of eligible TLAC debt instruments; 3) strengthening policy support for social insurance institutions, insurance companies, and securities and fund institutions to hold TLAC instruments, to effectively reduce the concentration risk of holders, enhance the liquidity of TLAC instruments and lower the issuance cost. Regulators should timely adjust some of the regulatory policies to facilitate the TLAC compliance of the four major banks. As state-owned banks, there is low probability of the four major banks entering the resolution stage, but they have to pay extra regulatory costs. Regulators can timely and properly optimize the relevant policies to help the four major banks approach the TLAC standards without increasing additional costs.

# Author

**Lynda Wu**
**Partner, Risk Advisory FSI**
**Deloitte China**
Tel: +86 10 8520 7479
Email: lyndawu@deloitte.com.cn

**Joyce Zhang**
**Director, Risk Advisory FSI**
**Deloitte China**
Tel: +86 10 8512 4642
Email: joycewzhang@deloitte.com.cn

**Wen, Eric Ruizhe**
**Senior Consultant, Risk Advisory FSI**
**Deloitte China**
Tel: +86 10 8524 6886
Email: erwen@deloitte.com.cn

**Kong, Nina Xiangyi**
**Analyst, Risk Advisory FSI**
**Deloitte China**
Tel: +86 10 8524 8713
Email: skong@deloitte.com.cn

# 4.7 Digital tools assist institutions with targeted and effective AML self-assessment

On January 15, 2021, the PBC issued the Guidelines for the Self-Assessment of Money Laundering and Terrorist Financing Risks of Corporate Financial Institutions (Yin Fan Xi Fa [2021] No. 1) (hereinafter referred to as the "Guidelines"), which clearly states that corporate financial institutions should implement the requirements for self-assessment of money laundering and terrorist financing risks (hereinafter referred to as the "Self-assessment") and accelerate the risk-based transformation of AML work to enhance the effectiveness of AML work in the financial system. The introduction of the Guidelines is a key step in further improving the assessment of money laundering and terrorist financing risks at the national level and an important milestone in the implementing the strategic planning of the Opinions of the General Office of the State Council on Improving the Regulatory Systems and Mechanisms for Fighting against Money Laundering, Terrorist Financing and Tax Evasion (Guo Ban Han [2017] No. 84). It reflects the determination and efforts of the regulation to continuously promote the risk-based practices of the industry.

**Risk-based: accurate assessment + effective application**

The Guidelines re-emphasize that self-assessment is the necessary foundation and basis for an institution's money laundering risk management, and put forward more detailed requirements for the application and management of self-assessment results, indicating that self-assessment is not just a "compulsory exercise" to meet regulatory compliance requirements, but also the starting point for money laundering risk management of Institutions. Corporate financial institutions should make best use of the self-assessment results to ensure that the allocation of AML resource as well as the money laundering risk management strategies, policies and procedures are in alignment with the risks identified through the self-assessment.

**Change with the times: consistency + flexibility**

The Guidelines provide requirements, processes and methods, as well as a clear self-assessment system framework and various factors to be considered. In particular, it points out that institutions can make adjustments based on full consideration of risk factors and their actual situation, and establish indicators and models matching the scale and complexity of their operations, to make the self-assessment more targeted and accurate. This requirement not only takes into account the unity for regulation and the consistency of the self-assessment framework, but also maintains and encourages the flexibility and innovation initiative of institutions' self-assessment.

**Improve risk self-assessment capabilities and stay ahead of the curve**

Based on the analysis of the key content of the Guidelines, as well as Deloitte's extensive experience in assisting with the self-assessment of a great number of domestic and overseas financial institutions, we have identified several priorities that financial institutions should focus on, and accordingly given professional advice and made response suggestions.

**The Guidelines require institutions to complete system establishment in 2021 and self-assessment in 2022. How can the establishment of system be effectively linked up with the actual implementation in the future?**

Financial institutions need sufficient preparation and a long-term vision for the planning and implementation of AML work. Financial institutions should actively conduct pilot assessment or pre-assessment in accordance with the requirements of the Guidelines in 2021 to get practical experience, then combine their own practices and external professional advice to re-clarify the assessment mechanism, assignment of responsibilities, assessment process, and application of assessment results; they should analyze and identify the risk status as well as the key and difficult points of self-assessment, and perfect the self-assessment system according to their actual situation, so as to easily complete self-assessment in 2022.

**Can the exiting data support the self-assessment to proper breadth and depth regarding the reference factors proposed in the Guidelines?**

The Guidelines set out a number of significant qualitative and quantitative factors for different inherent risk dimensions and various areas of control measures, aiming to guide and assist financial institutions in designing and establishing a scientific and reasonable indicator system. As mentioned above, it is imperative to conduct pilot assessment or pre-assessment based on the new indicator system. As the extraction and application of massive data need system and technology support and accumulation of experience, it is an indispensable step to comprehensively clarify the responsible departments, data standards, and data access specifications, inspect the actual data quality, and strengthen the weak links during the 2021 self-assessment, to ensure effective self-assessment in 2022. Otherwise, the validity of the self-assessment will be significantly undermined if institutions do not know data extraction problems or poor data quality until they are conducting first-time self-assessment in 2022.

**Regarding the indicator system and mapping requirements of the Guidelines, how to develop scientific and reasonable assessment and measurement methodologies that effectively reflect the institution's risk level?**

As mentioned above, the Guidelines fully consider the consistency and flexibility of the assessment system, and clearly propose that institutions should reasonably divide the inherent risk, control effectiveness and residual risk levels; meanwhile it provides a reference matrix of residual measurement methodology, and suggests using the mapping method to reflect the correspondence of the same control measure with different inherent risks, so as to achieve differentiated assessment on the effectiveness of various control measures and the residual risks. However, the Guidelines have not yet specified thresholds and weightings for the indicators or the mapping relationship of inherent risks and control measures. While allowing for necessary flexibility, institutions are required to develop a comprehensive modelling algorithm that is tailored to their own circumstances to realize scientific and reasonable assessment.

2021 is undoubtedly the best time for piloting the self-assessment process. Financial institutions should, according to their actual situation, formulate proper indicator systems, set indicator thresholds and weightings, construct matching and measurement methods for mapping relationship, and make adjustments and improvement during the implementation process. As recommended in the Guidelines, during this process, financial institutions may engage AML professional consultation organizations to employ their deep understanding of regulatory trends and industrial characteristics as well as their project experience to build assessment plans, indicator systems and measurement methods that can be directly embedded into their self-assessment systems, which will help to enhance the practicality and relevance of the systems.

**The Guidelines require the establishment of a money laundering risk self-assessment team to include the AML leading department, business departments and audit departments. How to enhance the awareness and participation the relevant departments?**

Changing thinking habits and breaking thinking patterns is a necessity for achieving the "risk-based transformation". Previously, the No. 19 Document had specified the responsibilities for money laundering risk management at all levels and departments, emphasizing that business departments should assume the direct responsibilities of money laundering risk management and requiring them to identify, assess and monitor money laundering risks in their respective businesses. We are pleased to see that the awareness of AML compliance among all institutions, from directors, supervisors and senior management to the business departments, AML leading departments and audit departments, has heightened over the past two years. However, there is still much to be done to enhance their identification and recognition of money laundering risks.

Institutions should conduct necessary publicity and training based on a thorough understanding and analysis of the Guidelines, as well as the purpose of the self-assessment, the implementation process and the specific requirements for all parties involved. As the saying goes, practice makes perfect. Conducting trial self-assessment—going through the processes of data extraction, questionnaire completion and result confirmation, testing the participation, completeness and accuracy, and forming corresponding assessment mechanism and requirements, will effectively enhance the actual participation of the relevant departments and lay a solid foundation for future self-assessment.

To sum up, the development of self-assessment systems, framework, methodologies, indicators, processes and measurement methods, and the actual implementation of self-assessment within the institution must not deviate from the "risk-based" principle. Institution can secure their future only if they seize the opportunities. To address and respond to the pain points, difficulties and practical demands of different institutions at different stages of development, Deloitte China AML Centre, based on years of experience in providing money laundering and terrorist financing risk assessment services to domestic and foreign financial institutions, has developed a solution meeting multi-level and multi-dimensional needs, i.e. using digital tools to conduct scientific, reasonable, flexible and effective self-assessment of money laundering and terrorist financing risks.

## Digital product brings great efficiency and effectiveness

Deloitte's digital product assists corporate financial institutions in conducting comprehensive money laundering risk management, covering the potential blind spots of money laundering and terrorist financing risk identification and recognition, to realize the digitalization, integration, flexibility and visualization of self-assessment of risks.

**Digitization:**
Powerful data processing functions can help to accurately record the calculation and derivation process of risks, realizing complete recording of the assessment trajectory. A special module is used to quickly verify the data provided by the institution, which can provide feedback on the problematic data to the institution before the data are formally used for calculation, and then conduct the second round of data extraction, quickly reducing deviation of the assessment results due to inaccurate data, thus effectively addressing the challenges the institution faces during data extraction.

**Integration:**
The product integrates the system requirements, division of responsibilities, indicator system, measurement methods, assessment results, and rectification, forming a traceable and trackable money laundering risk self-assessment system with clear requirements, responsibilities and methodologies, which incorporates the requirements for the participation, completeness and accuracy of all relevant departments to facilitate awareness enhancement and active participation.

**Flexibility:**
An indicator library targeting financial institutions of different industries can assist with rapid construction of indicator and model systems that match the operation scale and complexity of the institution; the risk indicators and questionnaires for assessing the effectiveness of control measures can be timely updated based on close tracking and comprehensive research of the domestic and overseas regulatory trends and expectations to ensure that the self-assessment indicator system is aligned with regulatory requirements and changes in international standards, achieving dynamic management of assessment indicators and flexible benchmarking with regulatory compliance requirements.

**Visualization:**
While accurately locating the key risk points and controlling weaknesses, data distribution is displayed in a box plot and risk assessment results is shown in a heat map; data and risks of different dimensions are displayed in different colors, sizes, shapes, maps and other visual forms, to help the institution, especially its senior management, to quickly locate and identify risks, building a "cockpit" of money laundering risk management for senior management while providing a fast track for subsequent allocation of resources and intensive solving of core problems.

In addition, for effective use of assessment results and enhancement of money laundering risk management awareness, Deloitte's Client Experience Center can also have brainstorming and professional discussions with the heads of the institution’s relevant departments through expert guidance, dynamic demonstration and linked data analysis, helping the institution to develop suitable short-, medium- and long-term management strategies and tactical plans through integrating internal and external experience as well as best practices of the industry, based on the risk views and assessment results.

### Case Study

### A state-owned commercial bank comprehensively upgraded the self-assessment system for money laundering risks

Based on regulatory requirements and its own risk management needs, the state-owned commercial bank engaged Deloitte China AML Centre team to help it comprehensively upgrade the money laundering risk self-assessment system, so as to promote the accurate and systematic management of money laundering risks.

### Practical and forward-looking assessment system

Fully considering the size and industry status of the bank and integrating international standards, regulatory expectations and best practices, Deloitte helped it build a scientific and reasonable indicator system and model:

- Building a comprehensive assessment system and methodology, including inherent risk indicators, data points, control measure effectiveness indicators, evaluation criteria, mapping relationship, residual risk matrix, thresholds, weightings, and scientific, reasonable computational logic;
- Achieving differentiated assessment of the effectiveness of control measures in different dimensions and the residual risks based on the mapping relationship between the inherent risk indicators and the control measure effectiveness indicators.

### Cross-check of assessment units

To accurately locate risks and control the weak links, and achieve fine management, the assessment units in this round of self-assessment were separated horizontally and vertically, achieving cross-check of the assessment results.

- Achieving the horizontal coverage of all business departments of the head office and the vertical coverage of all branches, with hundreds of separate assessment units in different dimensions; each assessment unit was provided with inherent risk, control measure effectiveness and residual risk assessment results that can realize cross check horizontally and vertically.
- Extraction and verification of data for hundreds of assessment units were modifiable and traceable. The multiple rounds of data extraction for the hundreds of assessment units were closely tracked through the indexing technique; all modification records were kept; data accuracy was gradually improved based on the multiple rounds of basic data as well as the horizontal and vertical cross-check of data.

### Effective application of assessment processes and results

The digital assessment process and results were visualized, and could be quickly located at different levels and tracked dynamically, realizing optimized resource allocation. In addition, the bank planned to develop a systemic platform for institutional money laundering risk assessment based on this self-assessment to conduct automatic regular and irregular self-assessments in the future.

The engagement team actively promoted the data rectification and labelling work of the money laundering risk self-assessment, and helped the bank to complete the core logic of the system requirements and form a flexible systematic self-assessment. This process also lays a solid foundation for satisfying the requirements of "actively strengthening the construction of self-assessment systems" and "gradually improving the efficiency of self-assessment by accurately extracting all kinds of necessary data and information for self-assessment through the system" as set out in the Guidelines.

### Conclusion

Although digital transformation has been the focus of global business management over the past decade, many institutions are still in the starting stage ("from 0 to 1"). The "risk-based" digital transformation still has a long way to go to effectively combat and prevent financial crimes. With new requirements, new challenges and new situations brought about by the complex international environment and the change of social principal contradiction, how to accurately identify, scientifically respond to, and proactively seek changes and more effectively prevent financial crimes? It is imperative and urgent to use digital means, and conduct innovative risk-based transformation. Only by accurately identifying risks and investing resources in higher-risk areas can financial institutions achieve agility, precision management, and excellence.

# Author

**Chris Cheung**
**FSI Partner**
**Deloitte China AML Centre, FSI**
**Deloitte China**
Tel: +86 10 8512 5353
Email: chrcheung@deloitte.com.cn

**Celeste Wang**
**Director**
**Deloitte China AML Centre, FSI**
**Deloitte China**
Tel: +86 10 8512 5706
Email: celwang@deloitte.com.cn

# 4.8 How can banks achieve low-carbon transition to align with China's carbon neutrality goals

In September 2020, President Xi announced at the United Nations General Assembly that China would strive to peak carbon dioxide emissions before 2030 and achieve carbon neutrality before 2060. According to relevant forecasts, the scale of green investment needed to achieve China's carbon neutrality goal is expected to exceed RMB100 trillion in the next 30 years or so. Such a huge capital demand cannot be met by government funds alone, which requires the full participation of the financial system and other market capital.

In recent years, China has actively practiced the concept of green development and vigorously developed green finance, achieving remarkable results. By the end of 2020, the China's green loan balance in renminbi and foreign currencies totalled about RMB12 trillion (about USD2 trillion), ranking first in the world, and the stock of green bonds was about RMB800 billion (about USD120 billion), ranking second in the world, which has played a positive role in supporting the green and low-carbon transition.

However, compared with the capital demand for carbon neutrality, there is still a large gap in China's green funds every year, which is expanding year by year. Green finance has great development potential and space in China. Green finance will play a leading role in achieving China's 2030 and 2060 goals. In this context, green finance business will be an important focus of policies in the future.

**Regulatory trends for green finance during the 14th Five-Year Plan period**

China is the world's largest carbon emitter, with a high carbon intensity per unit of GDP. We are facing a tight schedule and heavy tasks to achieve the 2030 and 2060 goals, which brings new challenges and opportunities for the rapid development of green finance, as well as new requirements for the design of financial policies and allocation of resources. Next, the regulators will focus on the important strategic deployment for carbon peak and neutrality, and promote the financial sector to fully support green development.

Yi Gang, president of the PBC, pointed out at the 2021 China Development Forum that PBC had confirmed green finance to be a key task of this year and the 14th Five-Year Plan period, and would focus on improving the green finance standard systems, strengthening information reporting and disclosure, fully incorporating climate change factors into the policy framework, and encouraging financial institutions to actively respond to climate challenges.

### 1 Improving green finance standard systems

- PBC is about to complete the revision of the Catalog of Programs Financed by Green Bonds, which will remove the fossil energy-related content.
- PBC is working to promote the international convergence of green classification standards and plans to introduce common classification standards in 2021.

### 2 Strengthening information reporting and disclosure

- On the basis of the existing pilot financial institutions, PBC will promote the establishment of mandatory information disclosure systems with unified disclosure standards, covering all types of financial institutions and financing entities.

### 3 Fully incorporating climate change factors into the policy framework

- For financial stability, PBC is considering integrating climate change factors into stress testing of financial institutions.
- For monetary policy, PBC is considering implementing preferential interest rates, targeted green re-lending and other instruments to motivate financial institutions to provide financial support for carbon emission reduction.

### 4 Encouraging financial institutions to actively respond to climate challenges

- Encouraging financial institutions to conduct risk assessment and stress testing.
- PBC has guided pilot financial institutions to measure the carbon emissions and assess the climate and environmental risks of projects; it has evaluated banks' green credits on a quarterly basis and is studying to evaluate financial institutions' performance in green credit and green bond businesses.

### How can banks achieve low-carbon transition to facilitate China's carbon neutrality goal

The carbon neutrality goal and the 14th Five-Year Plan have pointed out the direction and development path for China's economic and social low-carbon transition. The carbon neutrality goal also brings new opportunities and challenges for banks. **Vigorously developing green finance businesses to promote China's social and economic low-carbon transition and complete their own low-carbon transformation is an inevitable trend of banks' future development.**

### Strengthening climate investment and financing

"Climate investment and financing", also known as climate finance, was derived from the negotiations on the finance mechanism at the UN Climate Change Conference. Climate finance has become one of the key topics in the climate change area. The Climate Bond Standard (CBS), published by the Climate Bonds Initiative (CBI), is the most detailed standard system for climate finance in the market. The CBS uses climate change as the core measure of projects, and the CBI places emphasis on projects that are conducive to reducing fossil fuel consumption, reducing greenhouse gas emissions and increasing carbon sink.

### CBS——Support areas

- Energy*
- Transportation
- Construction
- Water resources
- Waste management and pollution control
- Land use and marine resources
- Industry
- Information and communications technology (ICT)

Note: Energy* does not include clean utilization and energy efficiency improvement of fossil fuels
Source: The Climate Bonds Initiative

In June 2020, the CBIRC issued the Circular on the Work Related to the Statistical System of Green Finance, **which added official statistics of climate financing for the first time.** The CBIRC adopted the UNEP's definition of climate financing and further broke it down to be climate mitigation financing and climate adaptation financing, specifying the scope of climate financing.

In October 2020, several departments jointly issued the "Guiding Opinions on Promoting Investment and Financing in Response to Climate Change", which specified the definition and support areas of climate investment and financing, and put forward the requirements of **making top-level design for climate investment and financing** and guiding various resources such as capital, talent and technology to be invested in addressing climate change.

Banks with climate investment and financing as their focus, i.e. climate banks, emerged abroad. For example, the European Investment Bank (EIB), the largest policy bank in Europe, issued the Climate Bank Roadmap 2021-2025, and set out clear objectives and implementation pathways based on the climate change response strategy, striving to be the first climate bank in Europe. We believe that as climate investment and financing scale expands, climate banks will gradually rise in China.

### Confirm the low-carbon transition direction of investment and financing

Achieving the carbon neutrality goal means green transformation of the energy system, economy system and technology system, which indicates that banks' credit supply should also tilt toward low-carbon industries. Banks can invest more resources in the industries involving in the low-carbon transition of industrial structure to reduce climate change risks and grab the opportunities for green finance development.

Energy is the main source of carbon dioxide emissions. Regarding **energy supply**, China's energy structure features a very large proportion of high-carbon fossil energy, which accounted for about 85% in 2019. The low-carbon development of the **energy industry** will inevitably involve the following areas.

**Low-carbon transition of energy industry**

- Renewable energy industries such as hydropower, photovoltaic power, wind power and biomass energy;
- Smart power grid and energy storage technologies;
- Secondary clean energy such as hydrogen energy;
- Carbon Capture, Utilization and Storage (CCUS).

For **energy consumption**, in China, **the industry, construction and transportation sectors** consume the most energy, which respectively involve the following areas in accelerating the low-carbon transition.

**low-carbon transition of the industry sector**

- Emerging industries such as high-end manufacturing and clean production;
- Energy-saving and water-saving technology upgrading service industries;
- Waste comprehensive utilization industries of the recycling economy;
- Energy-saving and environmental protection-related service industries, such as energy performance contracting, clean production audit, and green product certification.

**Low-carbon transition of the construction sector**

- New buildings that meet green standards;
- Energy-saving renovation of existing buildings.

**Low-carbon transition of the transportation sector**

- New energy vehicles, ships, aircraft, etc., and the related infrastructure industries;
- Innovation and digital applications related to improvement of overall transport efficiency.

## Innovating carbon finance products

On January 5, 2021, the Ministry of Ecology and Environment officially released the Administrative Measures for Carbon Emission Right Trading (for Trial Implementation) (hereinafter referred to as the "Measures"). The Measures came into effect on February 1, indicating the beginning of the first performance cycle for the power generation industry in the national carbon market. This marks the “open for business” of the national carbon market, which has been in incubation over the past 10 years. **The carbon market shows strong financial attribute; carbon neutrality needs financial support; and active market transactions depend on innovative businesses of carbon finance**.

| Expectation of carbon market size | Expectation of carbon price |
| --- | --- |
| With the implementation of the Measures, China's carbon market will gradually expand to eventually cover eight energy-intensive industries, including power generation, petrochemicals, chemicals, building materials, steel, non-ferrous metals, paper and domestic civil aviation, with total emissions exceeding 5 billion tons. | Professor Zhang Xiliang of Tsinghua University studied the marginal cost of emission reduction (carbon price) in his report Scenario Analysis of Low-Carbon Energy Transition to Achieve the Carbon Neutrality Goal in 2060, which forecasts that the carbon price in China will be USD13 in 2030 and USD115 in 2050. Driven by strict emission-reduction policies as well as international and domestic carbon neutrality goals, the cost of carbon emissions will continue to rise, and the value of carbon assets will gradually materialize. |

China's carbon market is still at the early stage of development, and is dominated by spot trading, with low degree of financialization. Seen from the expectations for the future carbon market size and price, China’s carbon market will go through a similar development process as that of the developed countries: more financial institutions will participate, exchanges will plan an increasingly important role, and derivatives of financial instruments will be more diversified.

Drawing on the experience of the carbon finance products in developed countries' carbon markets, China’s innovative financial products may include carbon forward contracts, **carbon futures, carbon funds, carbon bonds, carbon assets securitization, carbon insurance, carbon emission mortgage and pledge financing, carbon assets repurchase financing, carbon emission allowance custody, green structured deposits, etc.**

## Strengthening the management of climate-related risks

Climate change poses physical and transformation risks for the economy. Physical risks refer to the damages to the economy caused by natural factors due to climate changes. Transformation risks come when the economic entities change their economic behavior or preferences to deal with climate changes. In the short run, these risks may be latent and inconsiderable, but in the long run, they are realistic, significant and strategic. Banks may face significant and substantive risks if they cannot identify and prevent them at an earlier time. PBC is considering integrating climate change factors into the stress testing of financial institutions.

As regulators begin to shift focus to climate-related risk management and require financial institutions to firstly execute stress testing in their risk management, banks need to learn to use their existing macroeconomic and financial stress testing framework and experience, and incorporate climate-related risk factors to effectively integrate the climate risk stress testing with their current methodologies.

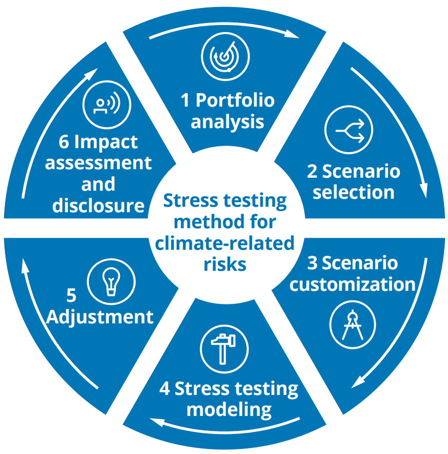
## Achieving banks’ own carbon neutrality goals

In addition to achieve low-carbon transition in investment and financing, banks should pursue low-carbon transition of their own operations. Globally, more than 800 companies have set their carbon neutrality goals and more than 50 have already achieved carbon neutrality.

Globally, some banks have already achieved carbon neutrality in their own operations. For example, HSBC achieved carbon neutrality in 2005; BAC achieved carbon neutrality in 2019, one year ahead of schedule. No Chinese bank has set a carbon neutrality goal or achieved carbon neutrality yet.

Setting carbon neutrality goals and achieving carbon neutrality, banks are fulfilling their social responsibilities and also setting an example in the investment and financing field to pursue greater emission reduction targets.

**Figure 92: Deloitte—Stress Testing Method for Climate-related Risks**



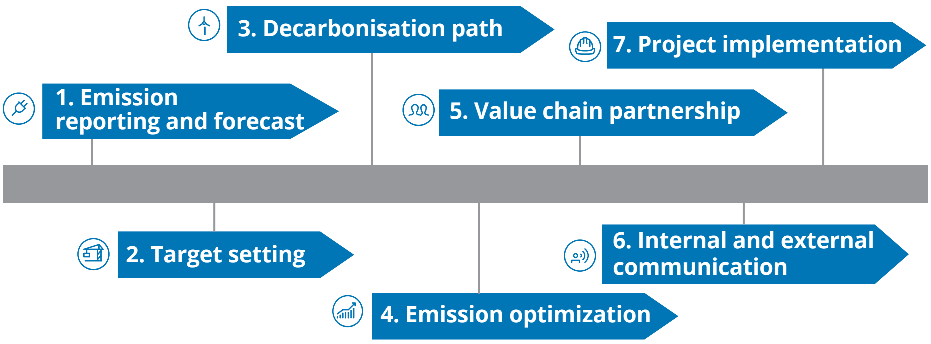

Source: Stress Testing for Climate-Related Risks, Deloitte

### Enhancing disclosure of climate change-related information

Strengthening information reporting and disclosure is one of the key tasks of PBC. The UN Principles for Responsible Banking (PRB), the Equator Principles, the Recommendations of the Task-Force on Climate-Related Financial Disclosures (TCFD) and the Green Investment Principles for the Belt and Road (GIP) all have requirements for environmental information disclosure. MSCI, Dow Jones and other rating agencies also conduct ESG rating of enterprises as the ESG information gains more attention in the capital market.

TCFD provided a framework for institutions to disclose climate change-related information. Many financial regulators (including China Securities Regulatory Commission) strongly support and encourage relevant financial institutions to adopt the TCFD recommendations.

**Figure 93: Deloitte—General Roadmap for Carbon Neutrality**




Source: Deloitte Decarbonisation Solutions™

**Figure 94: TCFD—Core Elements of Recommended Climate-Related Financial Disclosures**


**Governance**
The organization's governance around climate-related risks and opportunities

**Strategy**
The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning

**Risk management**
The processes used by the organization to identify, assess, and manage climate-related risks

**Metrics and targets**
The metrics and targets used to assess and manage relevant climate-related risks and opportunities

Source: Recommendations of the Task-Force on Climate-Related Financial Disclosure

TCFD structured its recommendations around four thematic areas that represent core elements of how organizations operate: governance, strategy, risk management, and metrics and targets. The four overarching recommendations are supported by recommended disclosures that build out the framework with information that will help investors and others understand how reporting organizations think about and assess climate-related risks and opportunities.

We need to forge ahead with heavy tasks. The 14th Five-Year Plan period is a critical time to achieve carbon peak and neutrality goals, Financial institutions will play an important role, and in the meantime face many opportunities and challenges in pursuing the goals. Under the guidance of regulation, financial institutions of the banking sector should vigorously develop green finance, actively promote green finance innovation, and properly conduct low-carbon transition of their own businesses and operations, to facilitate the 2030 and 2060 carbon goals.

# Author

**Allan Xie**
**Partner, Risk Advisory**
**Climate & Sustainability Services Leader**
**Deloitte China**
Tel: +86 10 8520 7313
Email: allxie@deloitte.com.cn

**Gu, Jolin Ling**
**Climate & Sustainability Services**
**Partner, Risk Advisory**
**Deloitte China**
Tel: +86 10 8512 5340
Email: ligu@deloitte.com.cn

**Wu, Fen Lin**
**Climate & Sustainability Services**
**Associate Director, Risk Advisory**
**Deloitte China**
Tel: +86 10 8512 4621
Email: fewu@deloitte.com.cn

# 5. 2021 economic and banking sector outlook

### China's recovery will continue in 2021

We are optimistic about the 2021 economic outlook, which is based on two assumptions: 1) the vaccine will be widely accessible in developed and most developing countries; and 2) businesses, consumers and policy makers will gradually adapt to the regular prevention and control of the pandemic. New locally transmitted cases may still emerge in 2021, but with targeted epidemic control measures, the economic growth momentum will not be massively affected. Taking into account the base effects, the annual economic growth rate will reach at least 7.5%.

### "Higher quality growth" as the goal of policy-making

Based on the recovery, Chinese policymakers are likely to focus on improving future growth quality. In response to the uneven growth of investment and consumption, policymakers will enhance support for SMEs and consumers in 2021. High quality development also means that policymakers will be more cautious about financial risks. For example, policymakers will continue to adhere to the principle of "houses are for living in, not for speculation". In addition, as the leverage ratio of the real sector climbed to 270% at the end of 2020 (245% at the end of 2019), the central government has proposed to properly lower the government leverage.

### Inflation risks arising from economic recovery and commodity prices rebounding

The global economy is expected to rebound strongly in 2021: a better-than-expected recovery in the US and a cyclical recovery of the European economies starting in 2022. As the global economy recovers and commodity prices soar, we should be vigilant about inflation risks. Chinese policymakers are also paying more attention to asset inflation (especially the real estate market) and are considering these factors when making policies. The PBC will continue to make forward-looking policies and try to stay ahead of market changes. Therefore, if the real estate markets in some cities (such as Shanghai or Shenzhen) continue to be hot, we expect that the PBC' governance will be more prudent, but the interest rates will not rise over the short term.

### RMB should depreciate slightly to create room for structural adjustment

In a global environment of low interest rates, the RMB yield is relatively high, and China is likely to continue to attract capital inflows as in 2020. Although China can stand RMB appreciation in the face of large capital inflows, the RMB should actually depreciate slightly if China's economic structure has to be adjusted due to environmental and protectionism constraints. Specific measures have been introduced. In February this year, the State Administration of Foreign Exchange (SAFE) proposed to relax the business restrictions of individual capital investment in an orderly way, and study to demonstrate the feasibility of allowing individuals to invest in overseas securities and insurance with the annual USD50,000 facilitation quota. This is an innovative policy, but it will take time to be actually implemented.

### Regulation of D-SIBs aligned with international standards

Since the financial crisis, "too big to fail" has become the focus for reform of international financial regulation. Since 2011, the FSB publishes an annual list of G-SIBs. In December 2020, the PBC and CBIRC jointly issued the Measures for the Evaluation of Systemically Important Banks, which established the evaluation indicator system for China's D-SIBs from the aspects of scale, relevance, substitutability and complexity.

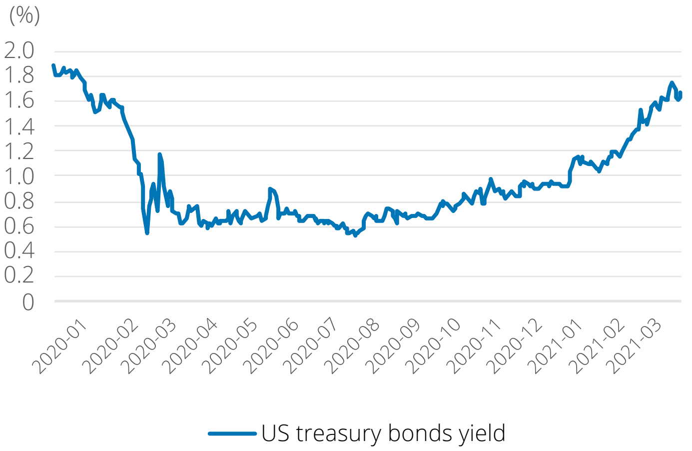
The introduction of China's D-SIBs regulatory measures is to firstly prevent systemic risks, and secondly support financial reform and opening up to be consistent with international regulatory framework and rules. Additional regulatory requirements and the list of Chinese D-SIBs will be released. It is expected that the six major state-owned banks and joint-stock banks will be selected onto the D-SIB list. However, the non-D-SIBs (such as city and rural commercial banks) will receive limited regulatory support; as these banks already have a relatively high non-performing asset ratio, they will face greater pressure from business operations.

### KPI scope of commercial banks expanded

The new version of Measures For Performance Evaluation Of Commercial Banks released by the Ministry of Finance came into effect on January 1, 2021. The new measures, with the evaluation orientation of commercial banks' overall operation focusing more on the support for the national macro-strategy, have made it clear that the results of performance evaluation are the main basis for determining the commercial banks' executive compensation and their gross payroll.

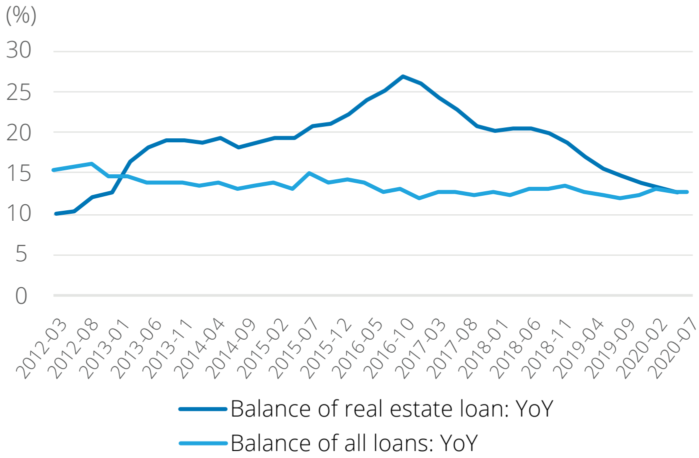
Compared with the 2016 version, the new Measures, firstly, focuses on the banks' support for the key areas and weak links in the economy, the economic benefit and the return to shareholders, while the old version focuses on banks' own operation; secondly, the new Measures offer a more complete system—for example, indicators such as economic

**Figure 95: Trend of Inflation Risks**



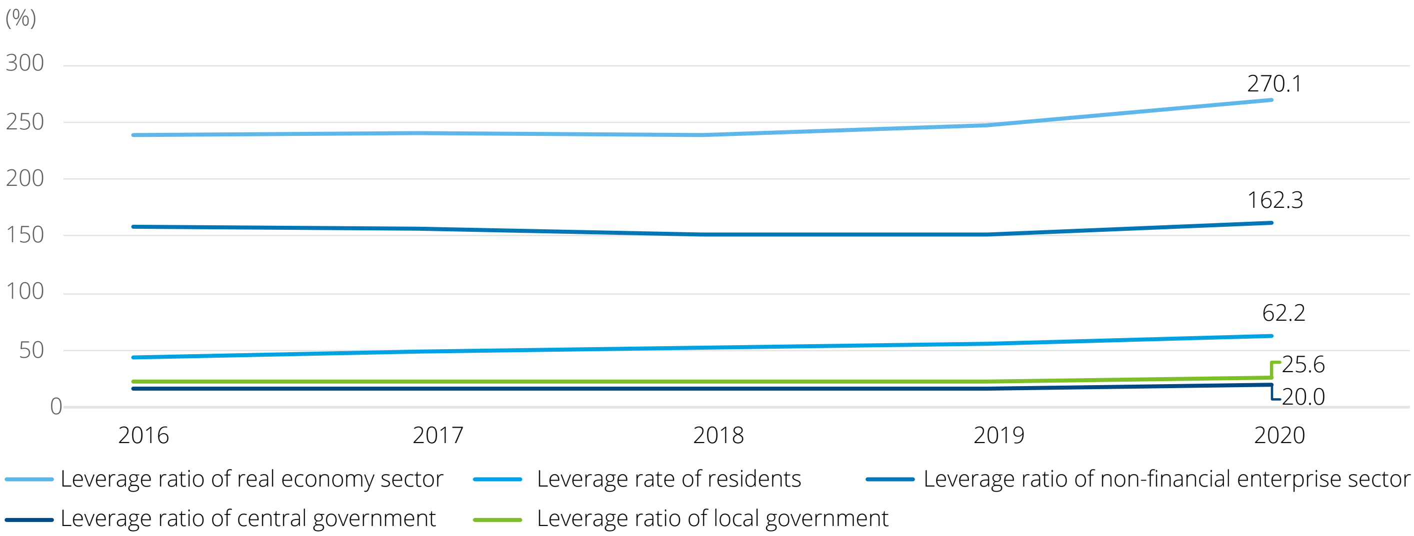

Source: Wind

**Figure 96: Growth Rate of Real Estate Loans Lower than the Average Growth Rate of All Loans for the First Time in 8 Years**




Source: PBC

**Figure97: Leverage Ratios of Chinese Macro Sectors**




Resource: Research Center for National Balance Sheet

value added, net profit per capita, and per capita profit and tax paid are introduced, which will guide banks to emphasize innovation, accelerate transformation, and improve value creation capabilities; thirdly, the new Measures have confirmed that the evaluation results are linked to the banks' executive compensation, gross payroll and assessment of the leadership, and stressed that commercial banks will receive point penalty or be degraded in case of violations. In the new development paradigm of "dual circulation", the new Measures will facilitate credit support for the strategic emerging industries and the real economy, and will also drive down the actual credit rates.

### Stricter real estate finance regulation

On November 3, 2020, the "proposal on formulating the 14th Five-Year Plan and long-range objectives through the year 2035" mentioned for the first time "promoting the balanced development of finance, real estate and the real economy", indicating that over the next five years, real estate finance will face intensive regulation and the government will focus on curbing real estate bubbles and debt. On December 31, 2020, regulators issued a document to confirm the concentration management of the real estate loans of Chinese-funded corporate banking financial institutions—setting different caps on the proportion of real estate loans and personal housing loans of different echelons for large, medium and small Chinese-funded commercial banks, with a transition period of 2-4 years. Real estate finance will be under substantial regulation, and the growth of real estate loans will continue to be slow in the future; commercial banks' credit funds will be more allocated to the non-real estate areas, such as national strategic emerging industries and small and micro enterprises; the real estate industry will undergo supply-side reform, meaning greater debt pressure and higher financing costs, and the small and medium-sized real estate enterprises may face a bigger liquidity crisis. The real estate industry will see substantial integration to have a higher industrial concentration.

### Default in the credit bond market

During the pandemic, the government executed the counter-cyclical leverage-adding operation, with the macro real economy leverage ratio reaching 270.1% at the end of 2020, an increase of 23.6% from 2019; the leverage ratio of non-financial enterprises was 162.3% and the government leverage ratio was 45.6%, both higher than that in 2019. On November 13, 2020, Baoshang Bank wrote down the RMB6.5 billion principal of Tier 2 capital bonds; local state-owned enterprises also had bond default, indicating that the government is more tolerant of bond default.

As the economy recovers, the government will gradually reduce leverage ratios for long-term economic stability. About RMB40 trillion implicit debts (such as illegal implicit guarantee) will be gradually reduced. On March 15, the executive meeting of the State Council made it clear that the government leverage ratio should be reduced. In addition, non-financial corporate bond defaults will increase. In the future, local governments may not support the financially distressed SOEs that do not belong to the strategic key industries unless they hit the bottom line of systemic risk. Investors will be more prudent

### Accelerated development of elderly-care finance

The Ministry of Civil Affairs expects the proportion of people aged 65 and above to exceed 14% during the 14th Five-Year Plan period and the elderly population to exceed 300 million. With an increasingly aging population, China may further introduce measures for the reform of elderly-care finance. Of the three pillars of China's pension system: the first pillar, basic old-age insurance, holds an absolutely dominant position, covering nearly one billion Chinese urban and rural residents; the second pillar, corporate and occupational pensions, only covers tens of millions of people; and the third pillar, personal pension system (including personal savings-based pension insurance and commercial pension insurance, etc.), is developing slowly and constitutes a very small part of old-age insurance. According to the estimate of the Report of the Research on the Third Pillar of the Pension System in China, there will be a USD8 trillion-USD10 trillion pension gap in China in the next 5-10 years. There is a huge market space of old-age insurance in China.

Next, regulators are expected to introduce systems and framework to promote the development of the third-pillar pension, and foreign-funded pension management institutions with good market reputation will be welcomed by the Chinese government. In elderly-care finance, insurance has a first-mover advantage and can be developed into “end-to-end integrated services” of commercial pension insurance; banks can position themselves as a one-stop “wealth + elderly-care” adviser.

### Gradual establishment and development of the green financial system

Green finance has been listed by the PBC as a priority for 2021 and the 14th Five-Year Plan period. PBC’s president Yi Gang said at the China Development Forum on March 20, that achieving carbon neutrality by 2030 and peaking carbon emissions by 2060 would respectively require hundreds of trillions of investment, which would need the financial system to provide market-oriented investment and financing support; in addition, climate change would affect financial stability and monetary policy, which would require timely assessment and response. Therefore, a green finance-related classification standard system will be introduced in 2021; information reporting and disclosure regarding the use of green credit funds and the green financial bonds will be intensified; climate change factors will be fully incorporated into the PBC's macro policy framework—in terms of financial stability, climate change factors will be included in the stress testing of financial institutions; in terms of monetary policy, preferential interest rates, green targeted re-lending, and other instruments will be executed to motivate financial institutions to provide financial support for carbon emission reduction. In addition, regulators encourage financial institutions to actively address climate challenges.

Banks should fulfill their social responsibilities, maintain active communication with the regulatory authorities and participate in the construction and development of green financial systems. For example, ICBC has incorporated environmental and social risk compliance requirements into the whole investment and financing process; BOC is studying to conduct environmental risk stress testing; and PBC has begun to guide pilot financial institutions to measure the carbon emissions and assess the climate and environmental risks of projects. Measures for the evaluation of financial institutions' support for green credit and green bonds are also expected to be introduced in the near future.

### Financial innovation integrated into the prudent regulatory framework

The operation of the financial system remained stable under the impact of the pandemic in 2020, with no marked ups and downs in the financial market, which was mainly because of the financial deleveraging and the efforts to suppress shadow banking. In November 2020, regulators called a halt to the IPO of Ant Group, and issued the administration measures for "online microcredits" to seek public comments—online P2P loans also fall within the scope of shadow banking in a broad sense.

Guo Shuqing, Chairman of the CBIRC, said more attention should be paid to the new "too big to fail" risks. Large technology companies operate in various financial and technology fields, and a few companies dominate the micro-payment market, which involves the interest of the general public and demonstrates the characteristics of important financial infrastructures. As of March this year, the shadow banking has been downsized by about RMB20 trillion from its historical peak. In the future, shadow banking activities will co-exist with the traditional financial system for a long time. All kinds of shadow banking activities will be brought under regulation; financial innovation will be conducted under prudent supervision; and the relevant risk classification and provision standards will be gradually established and improved.

**Capital markets will quickly flourish**
High-quality development of the capital market is a key task for the 14th Five-Year Plan period, including full implementation of the stock issuance registration system, establishment of a regular delisting mechanism and increase of the proportion of direct financing. The Chinese capital market has embarked on a fast lane. The Chinese government encourages excellent foreign securities and fund institutions to develop business in China, creating a catfish effect to promote healthy competition; for example, Goldman Sachs, JPM, and BlackRock have been approved to establish a holding subsidiary. In addition, with constant capital inflow from Chinese banking and insurance systems, as well as the foreign institutional investors, the investor structure will continue to improve to reach the level of international capital markets.

The most direct and positive effect of maturing Chinese capital markets is that the Chinese securities and asset management industries will enter a period of expansion and development. In addition, large commercial banks will support direct financing, and regulators may issue securities licenses to banks to support Chinese commercial banking groups to enhance their competitiveness and keep alignment with international comprehensive banks.

# Author

**Xu, Si Tao**
**Deloitte China Chief Economist**
**Partner, Deloitte Research**
Tel: +86 10 8512 5601
Email: sxu@deloitte.com.cn

**Annie Zhou**
**Senior Manager, Deloitte China Center for Financial Services**
Tel: +86 10 8512 5843
Email: annizhou@deloitte.com.cn

# Deloitte China Financial Services Industry (FSI) Key Contacts


**David Wu**
**Vice Chairman**
**China FSI Leader**
Tel: +86 10 8512 5999
Email: davidwjwu@deloitte.com.cn

**Jason Guo**
**China FSI**
**Banking & Capital Markets Leader (Chinese mainland)**
Tel: +86 10 8520 7289
Email: jasonguo@deloitte.com.cn

**William Yin**
**China FSI**
**Consulting Leader**
Tel: +852 2238 7898
Email: williamyin@deloitte.com.hk

**Mike Shi**
**Partner, Audit & Assurance**
Tel: +86 10 8520 7378
Email: mshi@deloitte.com.cn

**Juliet Li**
**Partner, Audit & Assurance**
Tel: +86 10 8512 5248
Email: juli@deloitte.com.cn

**Jerry Han**
**Partner, Audit & Assurance**
Tel: +86 10 8512 5576
Email: jerrhan@deloitte.com.cn

**Chris Cheung**
**Partner, Financial Advisory**
Tel: +86 10 8512 5353
Email: chrcheung@deloitte.com.cn

**Henry Cao**
**Partner, Risk Advisory**
Tel: +86 21 2312 7154
Email: hencao@deloitte.com.cn

**Eric Yang**
**China FSI Deputy Leader**
Tel: +86 10 8512 5058
Email: ericboyang@deloitte.com.cn

**Brian Chan**
**China FSI**
**Banking & Capital Markets Leader (Hong Kong)**
Tel: +852 2531 1828
Email: briantkchan@deloitte.com.hk

**Natalie Yu**
**China FSI**
**Tax & Legal Leader**
Tel: +86 10 8520 7567
Email: natyu@deloitte.com.cn

**Calvin Zeng**
**Partner, Audit & Assurance**
Tel: +86 21 6141 1821
Email: calzeng@deloitte.com.cn

**Christine Hu**
**Partner, Audit & Assurance**
Tel: +86 21 6141 2068
Email: chrihu@deloitte.com.cn

**Liu, Shaolun**
**Partner, Consulting**
Tel: +86 10 8512 5598
Email: shaolliu@deloitte.com.cn

**Allan Xie**
**Partner, Risk Advisory**
Tel: +86 10 8520 7313
Email: allxie@deloitte.com.cn

**Jacky Zhu**
**Partner, Risk Advisory**
Tel: +86 21 6141 1547
Email: jaczhu@deloitte.com.cn

**Man, Barry Kai Sze**
**China FSI**
**Audit & Assurance Leader**
Tel: +86 10 8520 7386
Email: bman@deloitte.com.cn

**Fang Ye**
**China FSI**
**Risk Advisory Leader (Chinese mainland)**
Tel: +86 21 6141 1569
Email: yefang@deloitte.com.cn

**Jimmy Chan**
**China FSI**
**Financial Advisory Leader**
Tel: +86 10 8512 5618
Email: jichan@deloitte.com.cn

**Charlotte Shen**
**Partner, Audit & Assurance**
Tel: +86 21 2312 7166
Email: charshen@deloitte.com.cn

**Scort Zhang**
**Partner, Audit & Assurance**
Tel: +86 21 6141 1859
Email: sczhang@deloitte.com.cn

**Luan, Jane Yu**
**Partner, Consulting**
Tel: +86 10 8512 5831
Email: yluan@deloitte.com.cn

**Lynda Wu**
**Partner, Risk Advisory**
Tel: +86 10 8520 7479
Email: lyndawu@deloitte.com.cn

**Jolin Gu**
**Partner, Risk Advisory**
Tel: +86 10 8512 5340
Email: ligu@deloitte.com.cn

# Deloitte China Center for Financial Services

Deloitte China Center for Financial Services, the think-tank platform of Deloitte China FSI, is committed to conducting research to give the banking sector and capital market, the insurance industry, and financial institutions including investment management companies, insights into the financial services industry. As a major force for Asia-Pacific financial research, we integrate the financial research findings of Deloitte global network to share Deloitte's views on the macro policies, industry trends and business management of the financial services industry.

### Field of Research

**Macro level**

Analysis of the domestic and overseas economic environment and situation, interpretation of national macro policies and the potential impact on the financial services industry; regular integration of the views of Deloitte's chief economists, such as Voice of Asia and Deloitte's monthly economic analysis.

**Regulation**

Changes in the PBC, CBIRC, CSRC and other financial regulators' policies, and industrial impact forecast; regular integration of the achievements of the communication and cooperation between Deloitte and Chinese regulators, and the research of Deloitte's Asia Pacific Centre for Regulatory Strategy.

**Industry**

Providing insights into the banking & capital markets, insurance, investment management, Fintech and other financial sub-industries, based on the industry classification of Deloitte FSI; regular integration of the knowledge contributions and the advanced ideas of the publications of Deloitte global and China FSI business lines.

**Customer**

Summarizing Deloitte's FSI service experience and project achievements to develop methodologies and insights, and providing relevant research support services according to customers' needs; regular integration of Deloitte's knowledge and experience from customer services to empower customers.

**Hot topics**

Keeping a close watch on the financial industry and market hotspots, such as the 14th Five-Year Plan formulation in 2021, green finance, elderly-care finance, digital inclusive finance and reform of small and medium-sized banks; Providing in-depth research and outlook based on Deloitte's experience and observation, and integrating the experts' insights of Deloitte's various business lines.

# Members of the Center:

**Charlotte Shen**
**Deloitte China Center for Financial Services Leader**
**China FSI Audit & Assurance Partner**
Tel: +86 21 2312 7166
Email: charshen@deloitte.com.cn

**Lawrence Chen**
**Director, Deloitte China Center for Financial Services**
Tel: +86 10 8512 4058
Email: lawrchen@deloitte.com.cn

**Annie Zhou**
**Senior Manager, Deloitte China Center for Financial Services**
Tel: +86 10 8512 5843
Email: annizhou@deloitte.com.cn

# Office locations

**Beijing**
12/F China Life Financial Center
No. 23 Zhenzhi Road
Chaoyang District
Beijing 100026, PRC
Tel: +86 10 8520 7788
Fax: +86 10 6508 8781

**Changsha**
20/F Tower 3, HC International Plaza
No. 109 Furong Road North
Kaifu District
Changsha 410008, PRC
Tel: +86 731 8522 8790
Fax: +86 731 8522 8230

**Chengdu**
17/F China Overseas
International Center Block F
No.365 Jiaozi Avenue
Chengdu 610041, PRC
Tel: +86 28 6789 8188
Fax: +86 28 6317 3500

**Chongqing**
43/F World Financial Center
188 Minzu Road
Yuzhong District
Chongqing 400010, PRC
Tel: +86 23 8823 1888
Fax: +86 23 8857 0978

**Dalian**
15/F Shenmao Building
147 Zhongshan Road
Dalian 116011, PRC
Tel: +86 411 8371 2888
Fax: +86 411 8360 3297

**Guangzhou**
26/F Yuexiu Financial Tower
28 Pearl River East Road
Guangzhou 510623, PRC
Tel: +86 20 8396 9228
Fax: +86 20 3888 0121

**Hangzhou**
Room 1206
East Building, Central Plaza
No.9 Feiyunjiang Road
Shangcheng District
Hangzhou 310008, PRC
Tel: +86 571 8972 7688
Fax: +86 571 8779 7915

**Harbin**
Room 1618
Development Zone Mansion
368 Changjiang Road
Nangang District
Harbin 150090, PRC
Tel: +86 451 8586 0060
Fax: +86 451 8586 0056

**Hefei**
Room 1201 Tower A Hua Bang ICC Building
No.190 Qian Shan Road
Government and Cultural
New Development District
Hefei 230601, PRC
Tel: +86 551 6585 5927
Fax: +86 551 6585 5687

**Hong Kong**
35/F One Pacific Place
88 Queensway
Hong Kong
Tel: +852 2852 1600
Fax: +852 2541 1911

**Jinan**
Units 2802-2804, 28/F
China Overseas Plaza Office
No. 6636, 2nd Ring South Road
Shizhong District
Jinan 250000, PRC
Tel: +86 531 8973 5800
Fax: +86 531 8973 5811

**Macau**
19/F The Macau Square Apartment H-L
43-53A Av. do Infante D. Henrique
Macau
Tel: +853 2871 2998
Fax: +853 2871 3033

**Mongolia**
15/F, ICC Tower, Jamiyan-Gun Street
1st Khoroo, Sukhbaatar District
14240-0025 Ulaanbaatar, Mongolia
Tel: +976 7010 0450
Fax: +976 7013 0450

**Nanjing**
40/F Nanjing One IFC
347 Jiangdong Middle Road
Jianye District
Nanjing 210019, PRC
Tel: +86 25 5790 8880
Fax: +86 25 8691 8776

**Ningbo**
Room 1702 Marriott Center
No.168 Heyi Road
Haishu District
Ningbo 315000, PRC
Tel: +86 574 8768 3928
Fax: +86 574 8707 4131

**Sanya**
Floor 16, Lanhaihuating Plaza
(Sanya Huaxia Insurance Center)
No. 279, Xinfeng street
Jiyang District
Sanya 572099, PRC
Tel: +86 898 8861 5558
Fax: +86 898 8861 0723

**Shanghai**
30/F Bund Center
222 Yan An Road East
Shanghai 200002, PRC
Tel: +86 21 6141 8888
Fax: +86 21 6335 0003

**Shenyang**
Unit 3605-3606,
Forum 66 Office Tower 1
No. 1-1 Qingnian Avenue
Shenhe District
Shenyang 110063, PRC
Tel: +86 24 6785 4068
Fax: +86 24 6785 4067

**Shenzhen**
9/F China Resources Building
5001 Shennan Road East
Shenzhen 518010, PRC
Tel: +86 755 8246 3255
Fax: +86 755 8246 3186

**Suzhou**
24/F Office Tower A, Building 58
Suzhou Center
58 Su Xiu Road, Industrial Park
Suzhou 215021, PRC
Tel: +86 512 6289 1238
Fax: +86 512 6762 3338 / 3318

**Tianjin**
45/F Metropolitan Tower
183 Nanjing Road
Heping District
Tianjin 300051, PRC
Tel: +86 22 2320 6688
Fax: +86 22 8312 6099

**Wuhan**
Unit 1, 49/F
New World International Trade Tower
568 Jianshe Avenue
Wuhan 430000, PRC
Tel: +86 27 8538 2222
Fax: +86 27 8526 7032

**Xiamen**
Unit E, 26/F International Plaza
8 Lujiang Road, Siming District
Xiamen 361001, PRC
Tel: +86 592 2107 298
Fax: +86 592 2107 259

**Xi'an**
Room 5104A, 51F Block A
Greenland Center
9 Jinye Road, High-tech Zone
Xi'an 710065, PRC
Tel: +86 29 8114 0201
Fax: +86 29 8114 0205

**Zhengzhou**
Unit 5A10, Block 8, Kailin Center
No.51 Jinshui East Road
Zhengdong New District
Zhengzhou 450000, PRC
Tel: +86 371 8897 3700
Fax: +86 371 8897 3710

MAKING AN IMPACT THAT MATTERS since 1845

About Deloitte
Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited ("DTTL"), its global network of member firms, and their related entities (collectively, the "Deloitte organization"). DTTL (also referred to as "Deloitte Global") and each of its member firms and related entities are legally separate and independent entities, which cannot obligate or bind each other in respect of third parties. DTTL and each DTTL member firm and related entity is liable only for its own acts and omissions, and not those of each other. DTTL does not provide services to clients. Please see www.deloitte.com/about to learn more.

Deloitte is a leading global provider of audit and assurance, consulting, financial advisory, risk advisory, tax and related services. Our global network of member firms and related entities in more than 150 countries and territories (collectively, the "Deloitte organization") serves four out of five Fortune Global 500® companies. Learn how Deloitte's approximately 330,000 people make an impact that matters at www.deloitte.com.

Deloitte Asia Pacific Limited is a company limited by guarantee and a member firm of DTTL. Members of Deloitte Asia Pacific Limited and their related entities, each of which are separate and independent legal entities, provide services from more than 100 cities across the region, including Auckland, Bangkok, Beijing, Hanoi, Hong Kong, Jakarta, Kuala Lumpur, Manila, Melbourne, Osaka, Seoul, Shanghai, Singapore, Sydney, Taipei and Tokyo.

The Deloitte brand entered the China market in 1917 with the opening of an office in Shanghai. Today, Deloitte China delivers a comprehensive range of audit & assurance, consulting, financial advisory, risk advisory and tax services to local, multinational and growth enterprise clients in China. Deloitte China has also made—and continues to make—substantial contributions to the development of China's accounting standards, taxation system and professional expertise. Deloitte China is a locally incorporated professional services organization, owned by its partners in China. To learn more about how Deloitte makes an Impact that Matters in China, please connect with our social media platforms at www2.deloitte.com/cn/en/social-media.


CQ-021SC-21

This is printed on environmentally friendly paper