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Consolidate Achievements, Innovate, and Navigate Wisely

Chinese Banking Sector 2024 Review and 2025 Outlook

Contents

Art: CoRe Creative Services; Cover and Illustration: Hu Olivia Yang

This report is written in the Chinese language 《固本拓新 惟智驭势：中国银行业2024年发展回顾及2025年展望》 and translated into English. In the event of any inconsistency, the Chinese version shall prevail.

Foreword

In 2024, despite increasing external pressures and internal challenges, China's economy made steady progress. China achieved the main goals and tasks of economic and social development for the entire year, and took solid steps to promote Chinese modernization. As the ballast stone to secure economic development and financial stability, China's banking sector continuously served the real economy, controlled financial risks, and deepened financial reform. It focused on "the five major tasks" to pursue high-quality development and continuously drove business transformation and efficiency improvement, contributing significantly to consolidating the momentum of economic recovery and improvement, delivering an exceptionally expressive performance.

2024 was challenging for China's banking sector. The People's Bank of China lowered the RRR and policy rate on two occasions, narrowing interest margins. The real estate market was still undergoing in-depth adjustments and relevant credit risks were not fully released. Mitigation of local government debt risks was still critical, and related credit asset and financial investment impairment risks remained to be addressed. Unstable foundation for economic recovery, insufficient effective demand, and weak consumption impacted banks' retail loan businesses and profitability.

China's banking sector maintained stability and made steady progress despite an unfavorable external environment. Although loan growth slowed, it still outpaced GDP growth. Loans were primarily directed to the key areas and weak links of the real economy and financial support for high-tech industries, green industries, and small and micro enterprises increased, providing solid support for the high-quality development of the real economy and the cultivation of new quality productive forces. The overall credit asset quality was stable; deposits were scaled up; nonperforming loan ratio stayed low; provisions for loan impairment losses remained high; capital adequacy ratios rose; liquidity was kept ample. The banking sector demonstrated sufficient capacity to withstand risks. Fintech investment remained high, digital transformation progressed, the integration of business and technology improved banks' management efficiency and service capabilities, and the extensive application of AI technology increased competitiveness.

The banking sector should remain vigilant about potential risks, given the significant challenges and pressures it faces. The continued declines in benchmark interest rates led to narrowed net interest margins and negative growth of net interest income and total revenue. The slow recovery in the consumer market led to sluggish growth of traditional intermediate business income. With capital market fluctuations and intensified banking supervision, residents' saving inclination strengthened and wealth management income declined. Banks' profitability moderated, and the sector's net profit growth turned negative, with city and rural commercial banks seeing rapid net profit declines. The growth rate and proportion of overdue loans increased, the special-mention loan balance and migration ratio stayed high, the nonperforming ratio of real estate loans fell slightly but remained high, and the pressure of potential nonperforming loan increases intensified. Fixed-term deposits increased steadily, the active ratio awaits further enhancement, and banks faced enormous debt cost pressure. Capital adequacy ratios remained strong but mainly relied on external capital supplements. Banks should enhance their internal capital supplement capacity. Chinese bank leaders and decision-makers must consolidate achievements, seek innovation, and leverage wisdom, courage, and strategies to address challenges and pressures, comprehensively enhancing international competitiveness and sustainable growth capabilities.

2025 marks the final year of China's 14th Five-year Plan and the beginning of compilation of the 15th Five-year Plan. China's banking sector faces opportunities and challenges both domestically and internationally. China implements more proactive macro policies to expand domestic demand, promote the integration of technological and industrial innovation, stabilize the real estate and stock markets, prevent and defuse risks in key areas, and resist external shocks, strengthening the economic recovery momentum and creating a more favorable policy and market environment for the banking sector. On the other hand, geopolitical tensions and escalated global trade protectionism are casting a shadow over global economic recovery and China's economic growth. Domestic economic and financial reforms have entered uncharted waters, so China should adopt more vigorous measures to address weak domestic demand, low expectations, and insufficient economic vitality. Only by driving demand- and supply-side reforms can the Chinese banking sector fundamentally relieve market expansion, asset quality, and profitability pressures.

After decades of reform and development, China's banking sector has reached the global forefront in overall strength, but competitive capabilities of different banks show significant differences. Facing the opportunities and challenges in 2025, financial entrepreneurs in China's banking sector must leverage their entrepreneurial spirit, lead bank development with strategic thinking, maintain strategic focus, stimulate innovation, and comprehensively design and implement major reforms and innovations. Management must continuously improve corporate governance, enhance operational, compliance, and risk management, and exploit emerging technologies' dividends, particularly the new generation of AI technology, to comprehensively enhance banks' value creation and risk control capabilities.

In this report, the Deloitte China FSI research team reviews economic and financial developments, analyzes the performance and business operations of Chinese listed banks in 2024, discusses a host of hot topics, and provides an outlook of the macro economy and banking sector in 2025. Taking 11 representative commercial banks in China as samples, the report also provides an overview of the Chinese banking sector's achievements in 2024 and identifies key development trends based on a systematic analysis of the profitability, assets, liabilities, and capital positions of listed banks. It also gives an overview of business development, operating models, and regulatory changes in the sector. To help China's financial institutions position themselves properly on the international stage and draw on the best practical experience of their international peers, the report also analyzes six foreign Global Systemically Important Banks (all ranking among The Banker's top 20 in 2024).

The report provides an in-depth analysis of practical progress in key areas such as inclusive finance, retail banking, real estate credit, net-value based wealth management transformation, and digital financial service ecosystems based on business and technology integration in 2024. In addition, the report takes a deep dive into a host of industry hot topics, including the application of AI technology in the banking sector, AI risk management and governance, banking cost reduction and efficiency improvement, digital supervision and data security management, rural revitalization practices, and tax compliance and institutional optimization. We believe this report will provide valuable reference for domestic commercial banks to contribute to in-depth institutional reforms, control and resolve risks, and enhance value creation and sustainable development capabilities, highlighting the new-era financial blueprint with Chinese characteristics drawn by the Central Financial Work Conference.

17 domestic and foreign banks:

Table 1: 11 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)
China CITIC Bank (CITIC Bank)
Ping An Bank (PAB)
Shanghai Pudong Development Bank (SPD Bank)

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

J.P. Morgan Chase & Co (JPM)
Bank of America (BAC)
Wells Fargo (WFC)
Citigroup (Citi)
HSBC
BNP Paribas (BNP)

The data in this report, unless otherwise indicated, are from the annual reports published by the above banks. The balance sheet data of the 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. Unless otherwise specified, the average indexes listed in this report are all arithmetic average indexes of the examples.

2024

Economic and Financial Sector Review

Global economic growth varied by country, and rate-cutting cycles started

In 2024, global economic growth was weak, with increasing disparities among nations. Inflationary pressures eased in major economies, but inflation rebounded after easing cycles began. This makes it more challenging to strike a balance between promoting economic growth and containing inflation.

The pace of economic recovery varied across major economies. The U.S. economy proved resilient, with a growth rate of 2.9% in 2024 and GDP increasing at an annualized rate of 2.3% in the fourth quarter; in December, the Manufacturing Purchasing Manager's Index (PMI) came in at 49.3, which has been on the rise since Q4. Growth in the eurozone and the U.K. was tepid, with the eurozone's GDP growing by 0.9% year-on-year and showing no growth quarter-on-quarter in Q4; weak demand and sluggish industrial production were the main constraints. The economic recovery in Japan is not entrenched, with growth slowing to 0.1% in 2024 and GDP growth reaching 2.8% on an annualized basis in the fourth quarter.

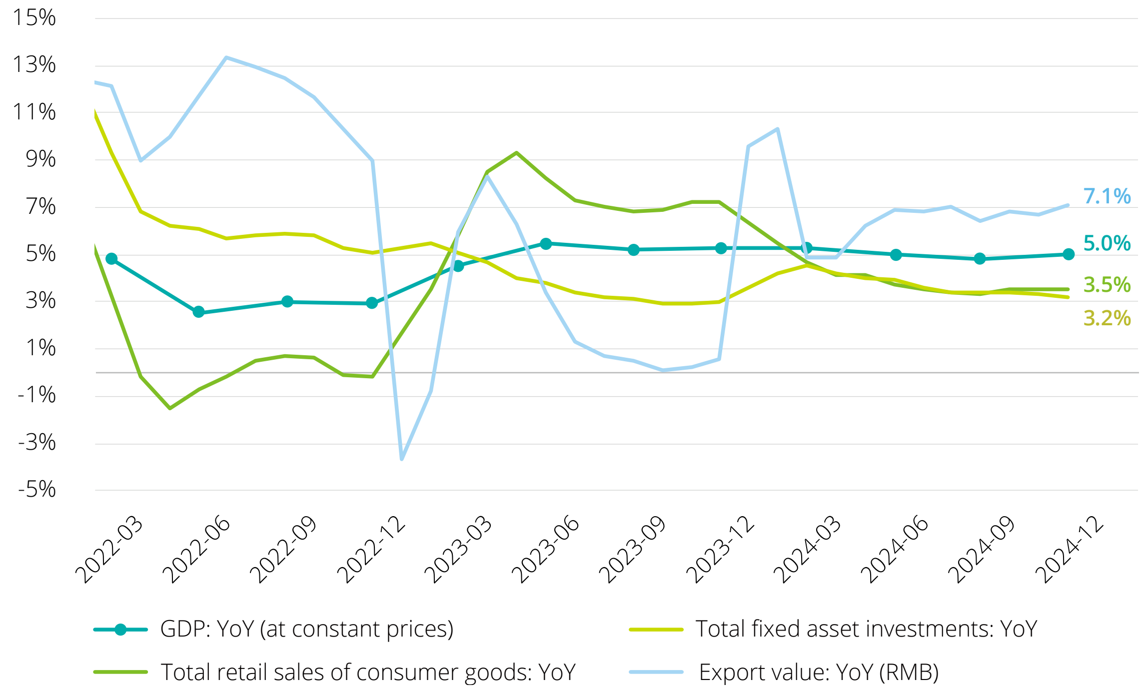
Inflation in major developed economies fell from the peak of around 10% in 2022 to about 2-3% in 2024. Most developed economies entered a rate-cutting cycle, except for Japan. In the first half of 2024, Switzerland, Sweden, Canada, and the eurozone began cutting interest rates, marking a shift in monetary policy among developed countries. The U.S. Federal Reserve (Fed) started to cut rates in September. It lowered the target range for the federal funds rate by 100 basis points on three consecutive occasions, from 5.25-5.5% to 4.25-4.5%. The European Central Bank (ECB) began to cut rates ahead of the Fed, and it reduced interest rates on four occasions by a total of 100 basis points in 2024; the deposit facility rate was cut to 3.0%. The Bank of Japan (BOJ) tightened its monetary policy, exiting its negative interest rate policy and ending the Yield Curve Control (YCC) framework; it increased the short-term interest rate target to about 0.25%.

China intensified macroeconomic controls to promote high-quality development

2024 marks a crucial year for achieving the objectives and tasks laid down in the 14th Five-Year Plan. In the face of a complex and severe environment of increasing external pressures and internal difficulties, China intensified macroeconomic controls and launched a range of policy packages. In 2024, China's GDP grew 5 percent year-on-year to RMB134.9 trillion, breaking the 130-trillion-yuan mark for the first time. Economic growth exhibited a U-shaped trend for the year: GDP in Q1, Q2, Q3, and Q4 grew by 5.3%, 4.7%, 4.6%, and 5.4% year-on-year, respectively. The second and third quarters saw enormous economic downward pressure. However, the incremental policy package rolled out in late September drove economic operations, accelerating GDP growth by 0.8 percentage points in Q4 compared to Q3. From October to December, the manufacturing PMI maintained expansion for three consecutive months, indicating continued improvement in economic prosperity.

In 2024, weak demand and deflationary pressures persisted. Consumer demand began to recover since the fourth quarter, driven by policies such as consumer goods trade-in program. Total retail sales of customer goods grew by 3.5% year-on-year, and the service consumption market expanded rapidly. Fixed asset investment grew by 3.2% year-on-year. Fueled by major national strategies and security capacity building in key areas, and a new round of large-scale equipment upgrades, manufacturing, infrastructure, and high-tech investments increased by 9.2%, 4.4%, and 8.0%, respectively, while investment in real estate development fell by 10.6% year-on-year. Exports grew by 7.1% year-on-year (in RMB), exceeding expectations and reflecting foreign trade resilience and international competitiveness.

Figure 1: Economic Growth in 2024



Source: National Bureau of Statistics, Wind

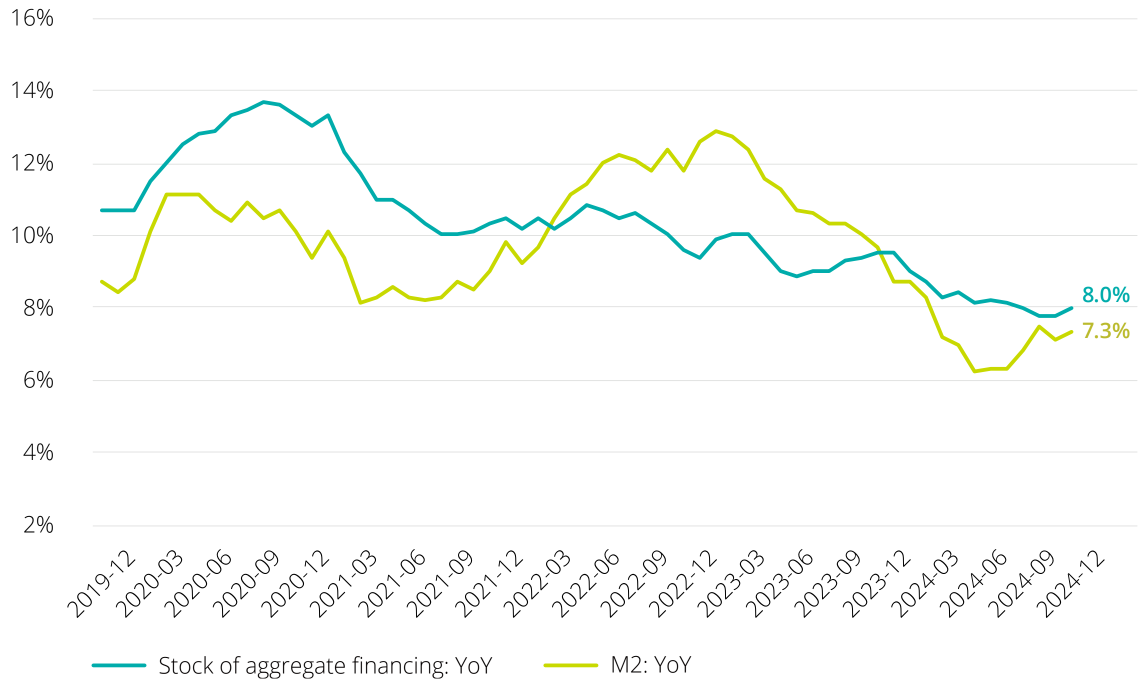
In general, China's economy demonstrated strong resilience, with new driving forces and advantages growing steadily and social confidence effectively improved. The large-scale equipment renewal and consumer goods trade-ins significantly stimulated consumer spending and drove investment. Efforts to stabilize the real estate market also yielded results, bolstering market expectations.

Demand continued to recover; M2 and aggregate financing saw a positive "scissors difference"

Since March 2022, the YoY growth rate of broad money supply (M2) has exceeded that of aggregate financing, and the "scissors difference" between M2 and aggregate financing has turned from positive to negative, with the largest growth gap exceeding 3%. The post-pandemic economic recovery, domestic demand rebound, and accelerated growth in aggregate financing continued to narrow the negative "scissors difference". Starting from January 2024, the "scissors difference" turned from negative to positive. However, the growth rates of M2 and aggregate financing slowed continuously, reflecting weak demand in consumer spending and corporate investment and financing.

In the third quarter of 2024, economic downward pressure increased, with GDP growth dropping to 4.6%. In the fourth quarter, fiscal incremental policies were implemented extensively. In December, government bond issuance increased by RMB1.76 trillion, the highest monthly level in history, expanding the aggregate financing. At the end of 2024, aggregate financing grew by 8.0% year-on-year, exceeding market expectations, and M2 increased slightly by 7.3% year-on-year.

Figure 2: Demand Continued to Recover; M2 and Aggregate Financing Saw a Positive "Scissors Difference"



Source: The People's Bank of China

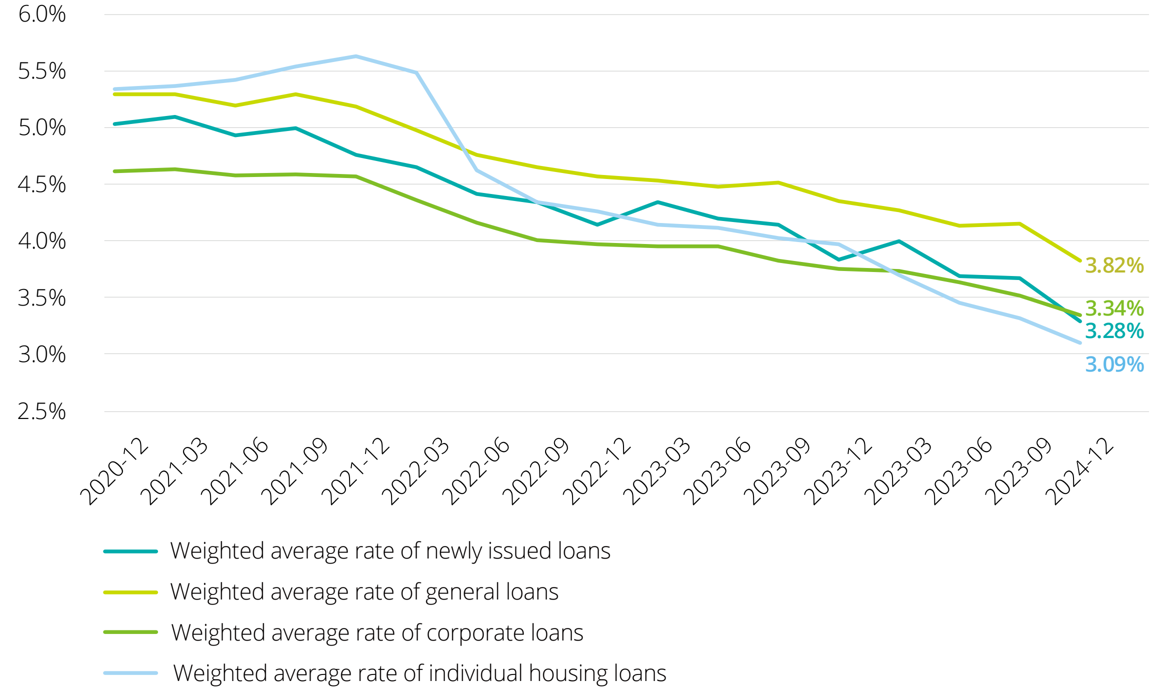
Loan rates remained at historic lows; treasury bond yields trended down

In 2024, the People's Bank of China adhered to an accommodative monetary policy stance. It cut the reserve requirement ratio (RRR) by a total of 1 percentage point in February and September, cumulatively providing over RMB2 trillion in long-term liquidity. It also cut the 7-day open market reverse repo rate by a total of 0.3 percentage points in July and September, guiding the 1-year and over 5-year Loan Prime Rates (LPR) to decline cumulatively by 0.35 and 0.6 percentage points, thereby driving down deposit and lending interest rates.

In 2024, the yields on treasury bonds marked a downward trend, with narrowed term spreads. In December, the 10-year treasury yield dropped below 2.0%. At end-2024, the yields on 1-year, 3-year, 5-year, 7-year, and 10-year treasury bonds decreased by 100, 110, 98, 94, and 88 basis points from end-2023 to 1.08%, 1.19%, 1.42%, 1.59%, and 1.675%, respectively; The term spread on 1-year and 10-year treasury bonds was 59 basis points, narrowing 11 basis points from end-2023.

Treasury bond yields are crucial for the stable development of the financial market. Long-term treasury bond yields reflect the market expectations for long-term economic growth, which are influenced by supply and demand changes, making them a key market focus. Since August 2024, the People's Bank of China has gradually increased treasury bond purchasing and selling in open market operations, positioning them as tools for base money supply and liquidity management. This directly affected supply and demand dynamics, thereby regulating bond yields, and particularly preventing potential systemic risks that may arise from the one-way downward movement of long-term treasury bond yields.

Figure 3: Loan Rates Remained at Historical Lows



Source: The People's Bank of China

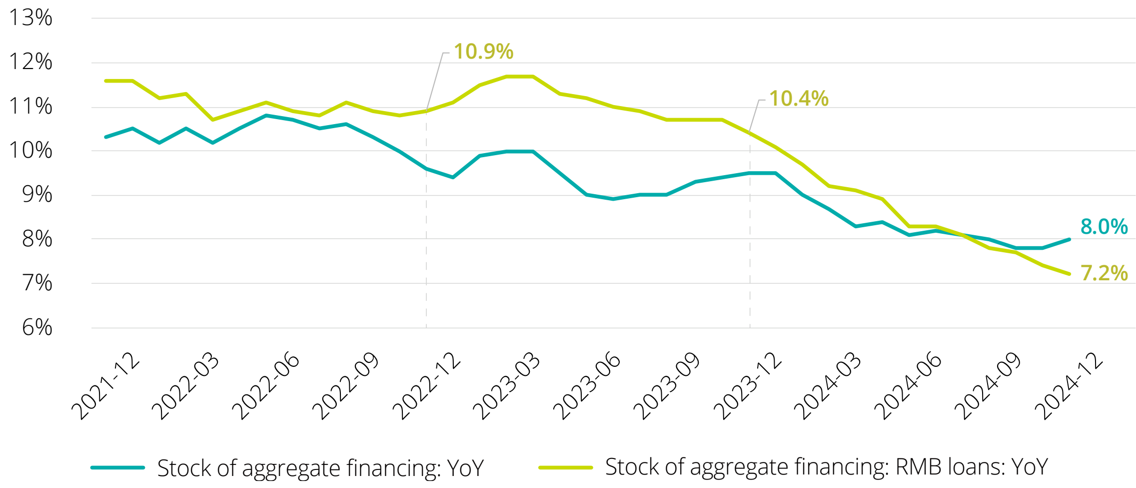
Adjusted and optimized financial data; demand-constrained credit growth model

In the first quarter of 2024, the People's Bank of China and the National Bureau of Statistics (NBS) adjusted and optimized the calculating method for the quarterly value-added of the financial sector. Previously, it was based on the value-added of the monetary and financial service sector (i.e. the year-on-year growth rates of deposit and loan balances). Now, it uses bank profit indicators, such as the growth rates of net interest income and commission income, to prevent the circulation of funds solely within the financial system.

As the real estate sector undergoes significant adjustments, the economic model driven by expansion of debts in the real estate sector or via the LGFVs (Local Government Financing Vehicles) has changed. In 2024, weak credit appetite and ongoing debt resolution impacted credit growth. In December 2024, the growth rate of RMB loans in aggregate social financing dropped to 7.2% (10.4% in December 2023).

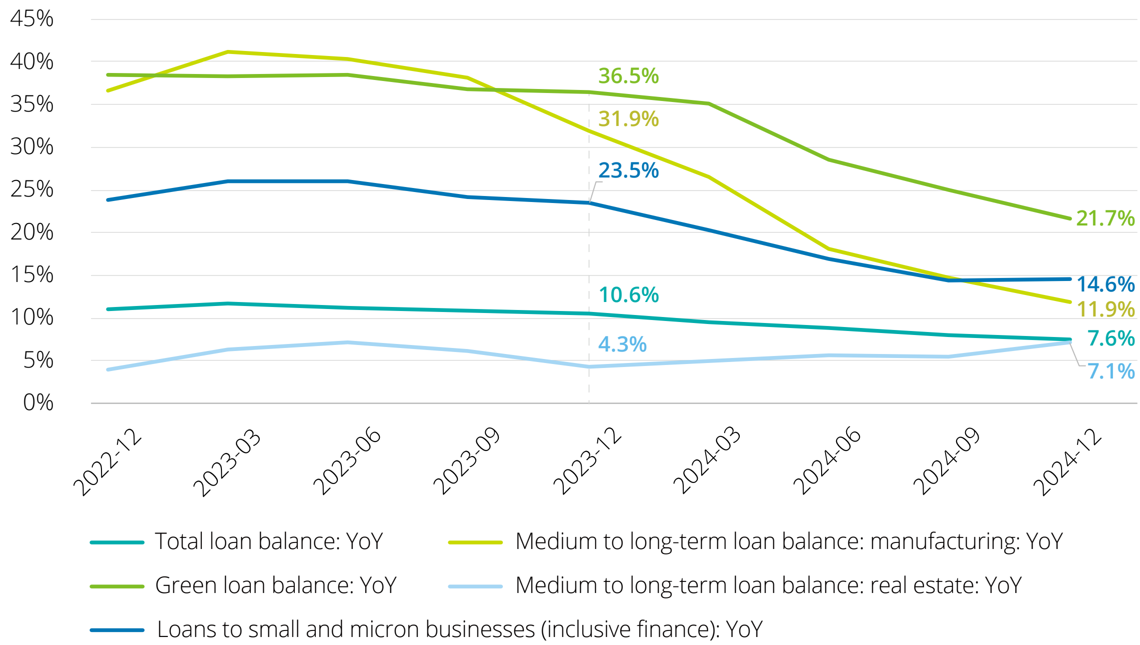
China's banking sector persistently allocated credit resources to support major national strategies, key sectors, and vulnerable areas, including the green, sci-tech innovation, and manufacturing industries. The Q1 2024 China Monetary Policy Report issued by the People's Bank of China proposed adapting to "credit growth model shifting from supply-constrained to demand-constrained", signaling a focus on efficiency over scale. In the long run, this will enhance the quality and efficiency of credit growth.

Figure 4: Financial Data Optimized; Credit Growth Slowed



Source: The People's Bank of China

Figure 5: Loans Persistently Supporting Green Development, Manufacturing, and Small and Micro Businesses



Source: The People's Bank of China

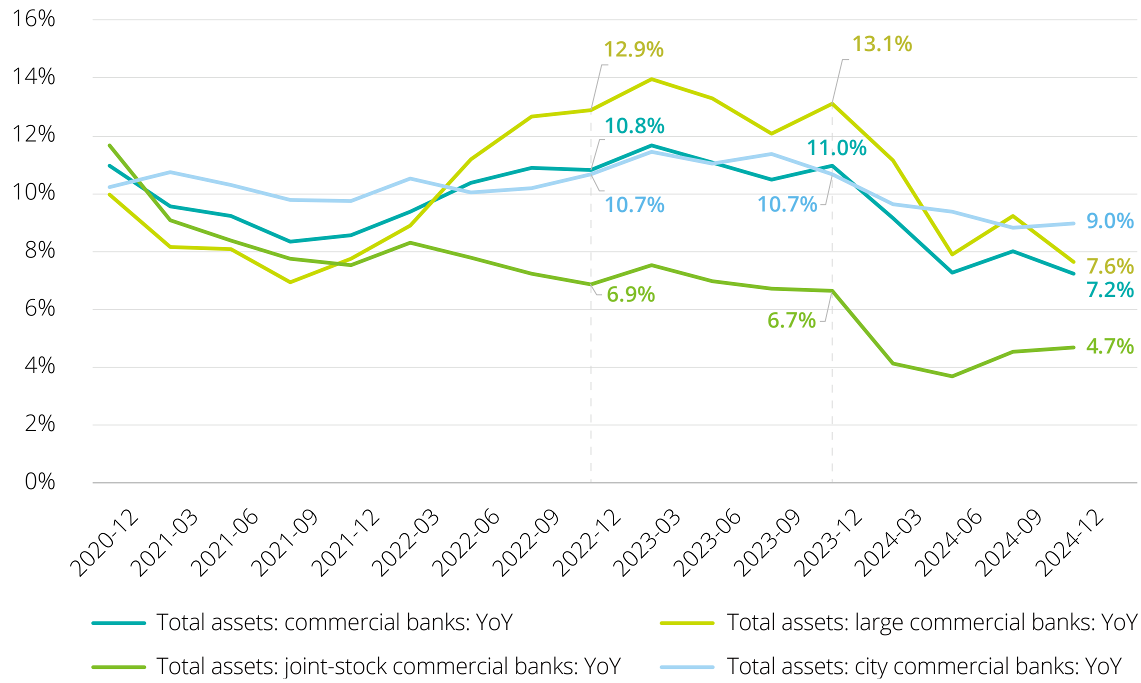
The growth of large banks has slowed down resulting in commercial banks' total assets growth slow

In 2024, the rectification measures for illegal manual interest compensation improved the accuracy of financial data, consumption and investment demands recovered slowly, and credit growth slowed. Consequently, banks' asset growth rates fell significantly, particularly for large banks. At the end of 2024, the RMB and foreign currency assets of China's banking institutions totaled RMB444.6 trillion, up 6.5% year-on-year, 3.4 percentage points lower than 2023.

Specifically, the total assets of commercial banks amounted to RMB380.52 trillion, up 7.2% year-on-year, 3.7 percentage points lower than 2023.

In 2024, large banks experienced a sharp decline in asset growth from a high base in 2023, resulting in slower growth in total banking assets. Large banks', joint-stock banks' and city commercial banks' total assets grew by 7.6%, 4.7%, and 9.0%, dropping 5.5, 2.0, and 1.7 percentage points from 2023, respectively.

Figure 6: Growth in Commercial Banks' Total Assets Slowed



Source: National Financial Regulatory Administration

Banking sector recorded negative net profit growth and a slow decline in interest spread

In 2024, commercial banks' net profits totaled RMB2.3 trillion, down 2.3% year-on-year, marking another negative growth since 2021. Only joint-stock banks registered a 2.4% increase to RMB499.34 billion, while state-owned, city commercial and rural commercial banks recorded negative growth rates of -0.5%, -13.1%, and -9.8% to RMB1.3 trillion, RMB254.59 billion, and RMB215.54 billion, respectively.

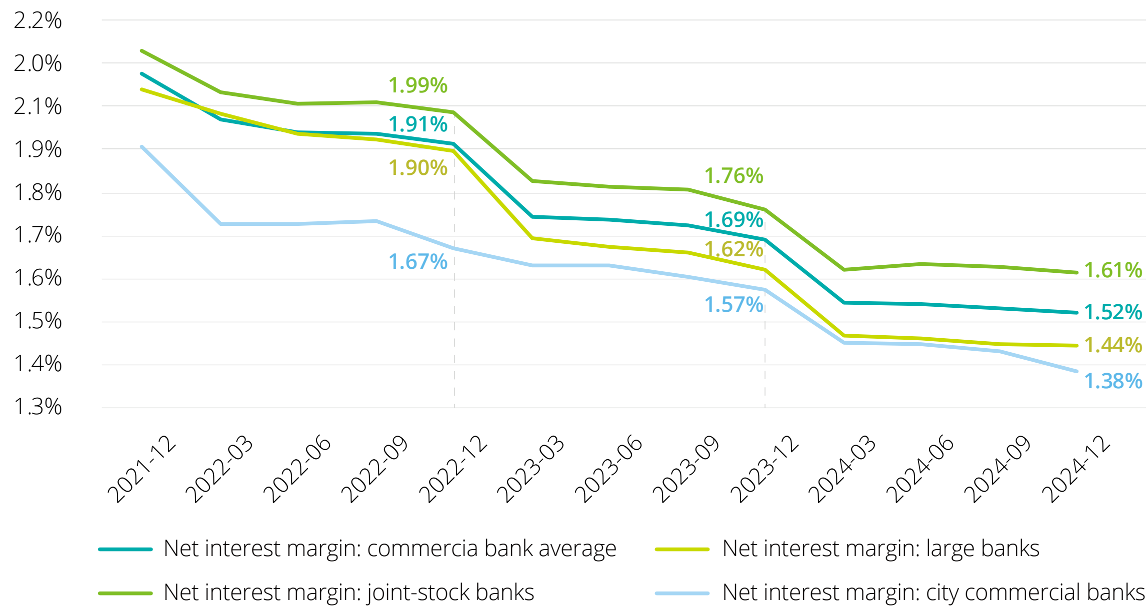
As loan interest rates declined, commercial banks' interest spread fell to 1.52% at the end of 2024, down 17 basis points from 2023. This marks a mild downward trend compared to the previous two years, mainly due to deposit interest rate cuts, as well as monetary policy instruments (such as reserve ratio cuts and relending) that helped lower banks' liability costs. Commercial banks' non-interest income ratio rose to 22.4%, up 2.5 percentage points year-on-year, surpassing 2019's 21.9%. With significant interest rate declines in the monetary and bond markets, commercial banks' non-interest income contributed more to their profit growth.

Amid interest rate cuts, large commercial banks continued to increase credit supply, facing significant pressure on interest spread, which was lower than the industry average. In 2025, the Ministry of Finance will issue RMB500 billion of special treasury bonds to support the four major state-owned banks in replenishing their core tier 1 capital. Specifically, the CCB and the BOC plan to raise up to RMB105 billion and RMB165 billion with the Ministry of Finance; the BOCOM plans to raise no more than RMB120 billion with the Ministry of Finance, China National Tobacco Corporation, and Shuangwei Investment Co, with the Ministry of Finance contributing RMB112.42 billion; the PSBC plans to raise RMB130 billion with the Ministry of Finance, China Mobile Group, and China State Shipbuilding Corporation, with the Ministry of Finance subscribing RMB117.58 billion. After deducting relevant issuance expenses, the funds will be used to strengthen the banks' core tier 1 capital.

Figure 7: Banking Net Profit Decreased; Non-interest Income Ratio Rose

Source: National Financial Regulatory Administration

Figure 8: Decline in Banking Interest Spread Slowed



Source: National Financial Regulatory Administration

Authors

Sitao Xu
Deloitte China Chief Economist
Tel: +86 10 8512 5601
Email: sxu@deloittecn.com.cn

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

Annual Performance Analysis of Listed Banks in 2024

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Profitability

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Assets

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Capital position

2.1 Profitability

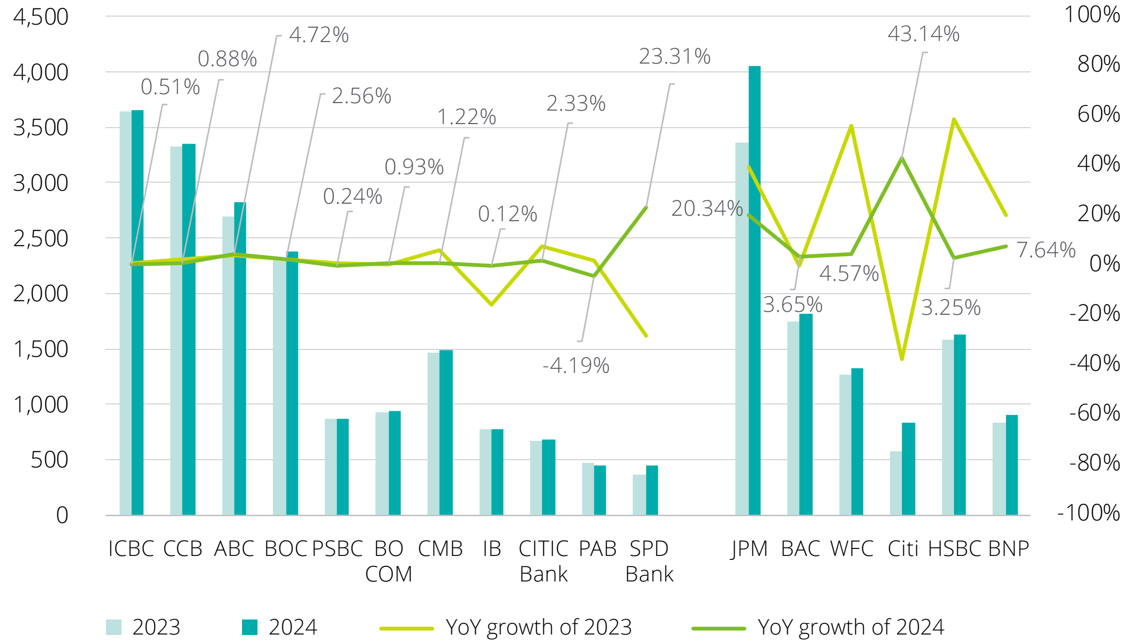
Domestic banks' profit growth slowed, while foreign banks' profitability enhanced

In 2024, domestic banks' net profits attributable to shareholders of the parent companies totaled RMB1.79 trillion, an increase of RMB34.6 billion or 1.97% year-on-year. The growth rate was 1.19 percentage points higher than that of 2023, mainly due to the narrowed net interest margins and weakened intermediate business income. None of the domestic banks registered double-digit net profit growth, with only SPD Bank's reaching 23.31%. ABC's exceeded 4%, and PAB's fell by 4.19%.

As global interest rate hikes drove the growth of net interest income, foreign banks' net profits attributable to the shareholders of the parent companies continued 2024's significant increase, totaling RMB1,055.4 billion, an increase of RMB117.1 billion, or 12.48% year-on-year. Foreign banks recorded net profit growth (in the original currency), with JPM's and Citi's each exceeding 20%.

Figure 1: Net Profit Attributable to the Shareholders of the Parent Company

Unit: RMB100 million

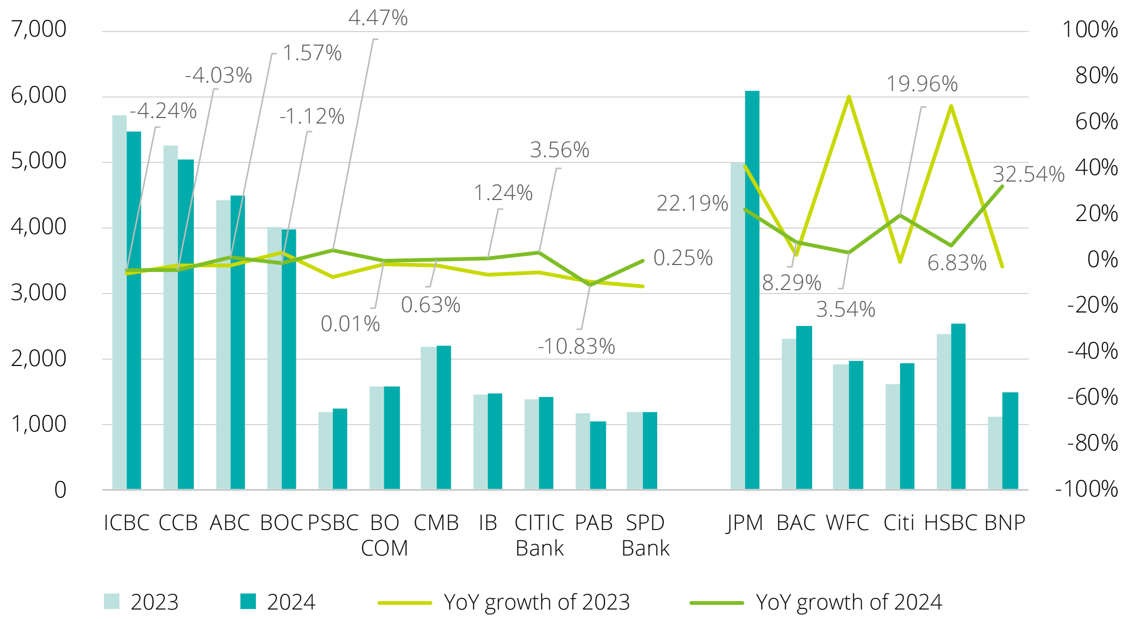


In 2024, domestic banks' pre-provision operating profit (PPOP) dropped generally, totaling RMB2.91 trillion, down RMB42.1 billion or 1.42% year-on-year. PSBC's and CITIC Bank's PPOP increased by 4.47% and 3.56%, respectively, as their non-interest incomes grew. PAB's declined by 10.83%. BOC's 2023 growth was overturned. With relatively stable asset quality, domestic banks' provision increases shrank, thus their net profits maintained minor growth.

Foreign banks' PPOP totaled RMB1.65 trillion, a year-on-year increase of RMB221.6 billion or 15.47%. JPM and BNP recorded a PPOP increase of more than 20% (in the original currency). Foreign banks' PPOP and net profits attributable to shareholders of the parent companies are in the same change trend, except for WFC and Citi.

Figure 2: PPOP

Unit: RMB100 million



Note: PPOP = pretax profits + asset impairment loss + credit impairment loss

Domestic banks' profitability moderated; foreign banks performed well on yield indicators

Domestic banks' profitability remained stable generally, with their yield indicators trending down

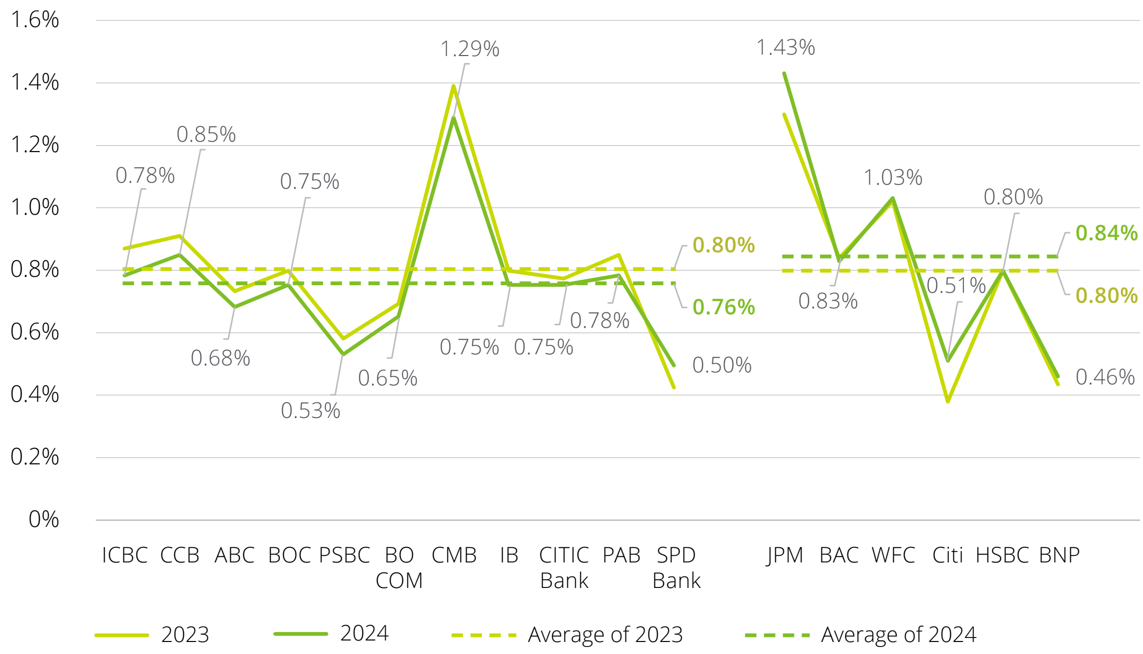
In 2024, domestic banks' main profitability indicators trended down generally, while foreign banks' indicators diverged. BAC's continued to fall, while other foreign banks' rebounded.

Domestic banks' return on total assets ("ROA") decreased, averaging 0.76%, down 0.04 percentage points year-on-year. In 2024, the average ROAs of state-owned and joint-stock banks were 0.71% and 0.81%, respectively, down 0.06 and 0.03 percentage points year-on-year. The average ROA of foreign banks was 0.84%, up 0.04 percentage points year-on-year.

Domestic banks' return on equity ("ROE") dropped, averaging 10.00%, down 0.73 percentage points year-on-year. In 2024, the average ROEs of state-owned and joint-stock banks were 9.91% and 10.11%, respectively, down 0.72 and 0.74 percentage points year-on-year. The average ROE of foreign banks was 11.32%, up 0.52 percentage points year-on-year.

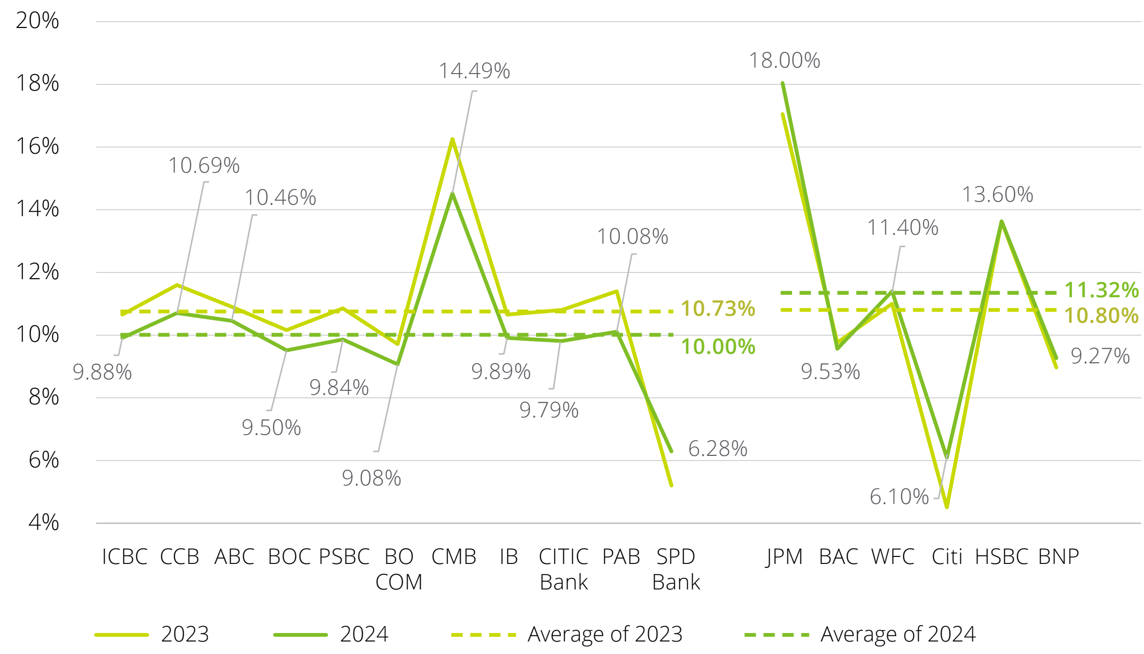
Overall, domestic banks registered further ROA and ROE declines due to the narrowed interest margins and lowered non-interest incomes. Foreign banks' ROAs and ROEs rose significantly due to increased operating income and were higher than those of domestic banks.

Figure 3: ROA



Note: BNP did not disclose its ROA, and the data was the result of net profit/average total assets.

Figure 4: ROE

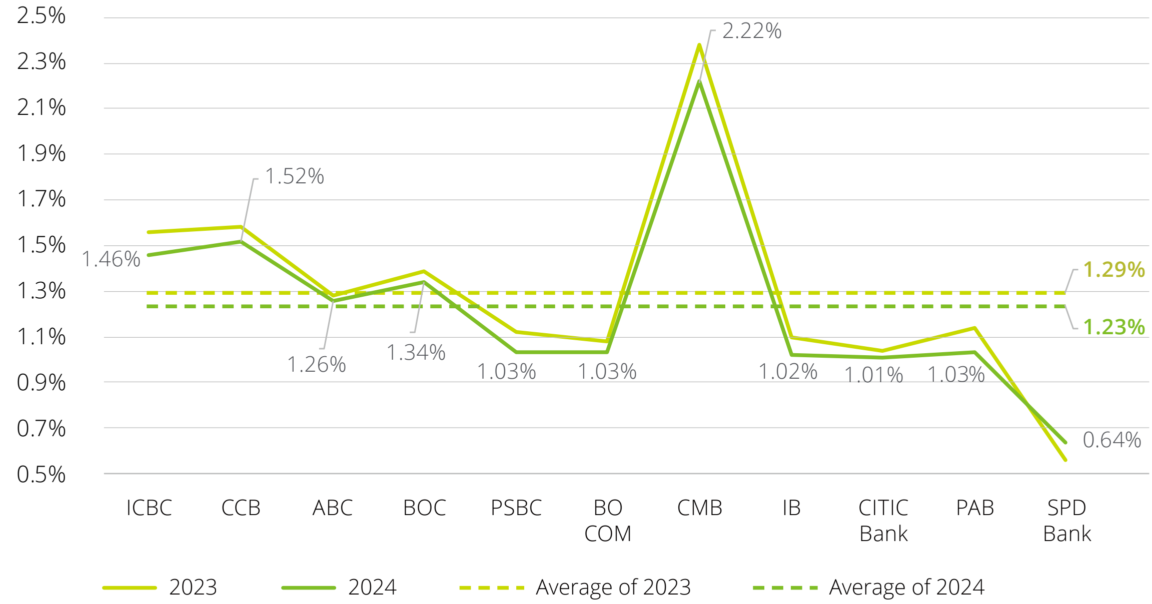


Note: BNP did not disclose its ROE, and the data was the result of net profit/average net assets.

In 2024, affected by the moderate net profit growth, domestic banks' average return on risk-weighted assets ("RORWA") was 1.23%, down 0.06 percentage points year-on-year. SPD Bank recorded a RORWA increase of 0.08 percentage points, while the rest domestic banks' RORWAs dropped. CMB's and PAB's RORWA fell by 0.16 and 0.11 percentage points, respectively.

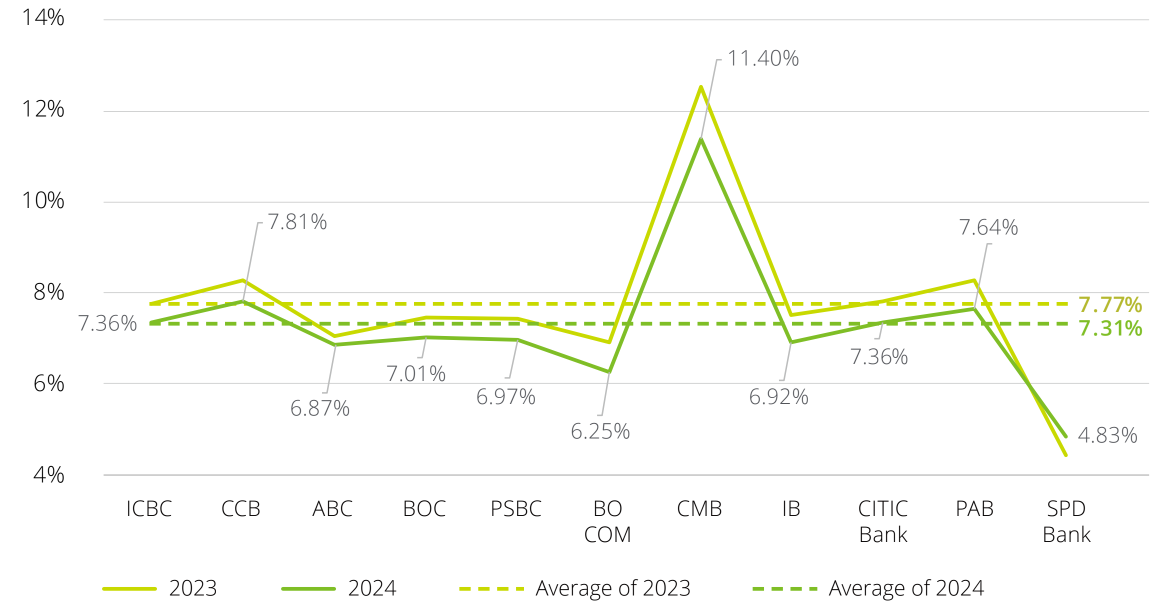
In 2024, domestic banks' average risk-adjusted return on capital ("RAROC") was 7.31%, down 0.46 percentage points year-on-year. SPD Bank's RAROC increased by 0.40 percentage points, while other domestic banks' RAROCs decreased. CMB's RAROC dropped by 1.13 percentage points due to its advantage in capital-light businesses, but it was still significantly higher than that of the rest of domestic banks.

Figure 5: RORWA



Note: RORWA = net profit/ average risk-weighted assets

Figure 6: RAROC



Note 1: RAROC = net profit/net capital

Note 2: For ICBC, CCB, ABC, BOC, BOCOM and CMB, it was the RAROC under the Advanced Measurement Approach.

Cost reduction and efficiency improvement pressure still existed; per capita net profit stabilized

In 2024, domestic banks' average per capita net profit was RMB900,600, up 2.11%. Overall, domestic banks were still pressed to reduce costs and improve efficiency. Joint-stock banks' average per capita net profit was RMB1,055,600, much higher than large state-owned banks' RMB771,500. Among the joint-stock banks, CMB's per capita net profit reached RMB1,276,100, an increase of RMB6,000 or 0.47% over the previous year.

SPD Bank achieved the highest growth rate, with a notable 23.62% increase. Among the state-owned banks, PSBC's and ABC's per capita net profits were RMB438,800 and RMB621,600, respectively, lower than their peers due to their expansive outlets in towns and villages, a large number of employees, and business structures. ABC's, ICBC's, and CCB's per capita net profits increased by 3.91%, 1.49%, and 1.16%, respectively, indicating the effect of their measures to reduce costs and improve efficiency.

Figure 7: Per Capita Net Profit

Unit: RMB10,000

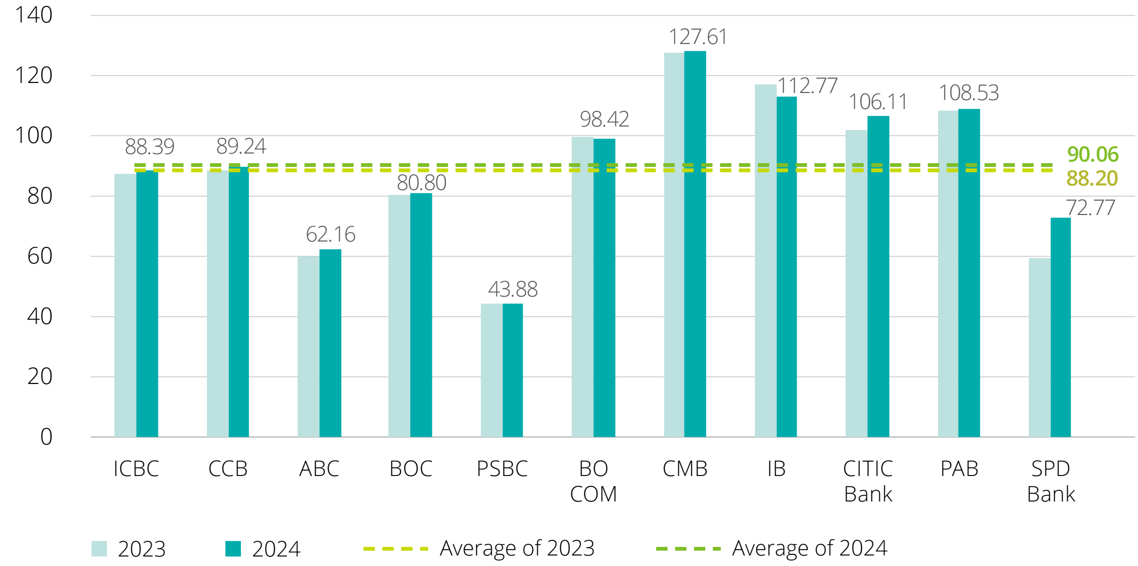


Table 1: Net Profit and Total Employees

Unit: RMB100 million/10,000 people

Item	ICBC	CCB	ABC	BOC	PSBC	BOCOM	CMB	IB	CITIC Bank	PAB	SPD Bank
Net profit in 2024	3,669	3,363	2,827	2,527	867	942	1,496	775	695	445	458
Net profit in 2023	3,651	3,325	2,698	2,464	864	933	1,480	777	681	465	374
YoY increase	18	38	129	63	3	9	16	(2)	14	(20)	84
Employees at the end of 2024	41.52	37.68	45.47	31.28	19.76	9.57	11.72	6.87	6.55	4.10	6.30
Employees at the end of 2023	41.93	37.69	45.10	30.69	19.71	9.43	11.65	6.66	6.69	4.31	6.36
YoY increase	(0.41)	(0.01)	0.37	0.59	0.05	0.14	0.07	0.21	(0.14)	(0.21)	(0.06)

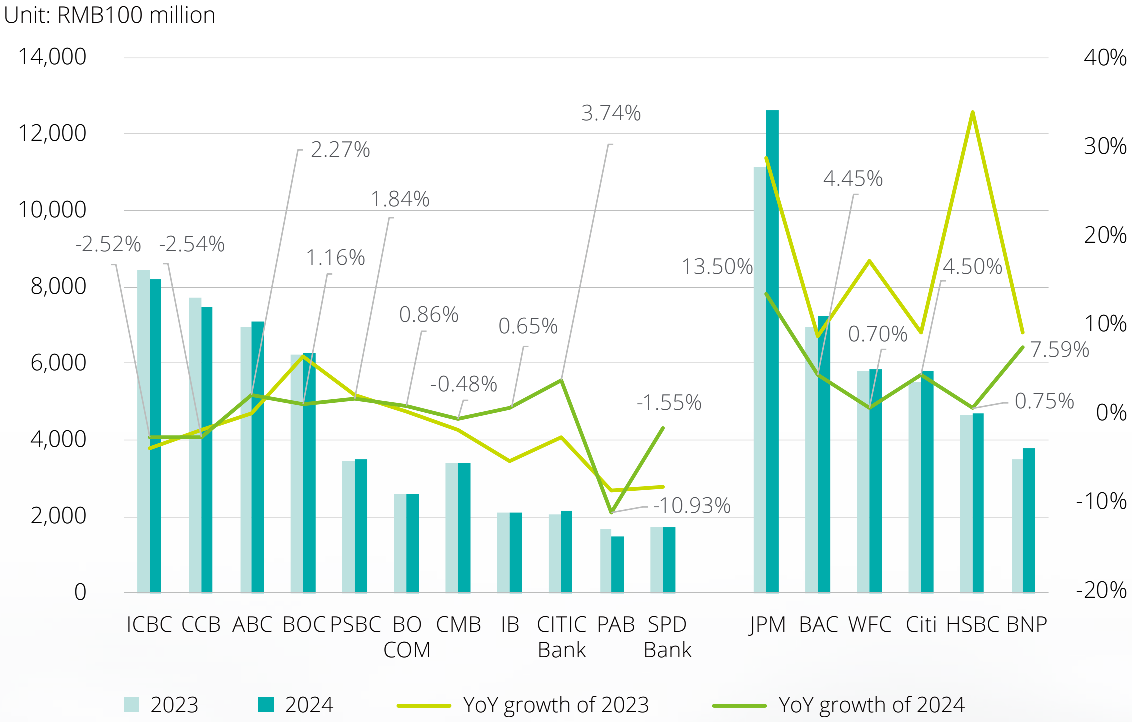
Domestic banks' total operating income registered negative growth for two consecutive years; income structure remained stable

In 2024, domestic banks' total operating income was RMB4.60 trillion, a year-on-year decrease of RMB22.6 billion or 0.49%. This marks the second straight year of negative income growth. State-owned banks' operating income totaled RMB3.52 trillion, representing an overall decline of 0.26%. Specifically, ICBC and CCB recorded a year-on-year operating income decline due to decreased interest income caused by a narrowing of interest margins. Other state-owned banks maintained positive growth. Joint-stock banks' operating income totaled RMB1.08 trillion, representing an overall decline of 1.21%. Among them, PAB recorded an operating income decrease of more than 10%.

Foreign banks' operating income totaled RMB4.00 trillion, a year-on-year increase of RMB240.4 billion or 6.39%. JPM's operating income increased remarkably by 12.30% (in the original currency), mainly due to its strategic investments and efficient cost management.

In conclusion, in 2024, the loan prime rates (LPR) trended down. The net interest margin decline dragged down banks' net interest income. Banks continued to make fee cuts and interest concessions to support the real economy. In the meantime, the capital market volatility intensified. These factors impacted banks' intermediate business income and other net non-interest incomes. Consequently, domestic banks' operating income recorded negative growth for two consecutive years. Foreign banks' operating income increased despite the decline in net interest income caused by operating environment fluctuations.

Figure 8: Operating Income

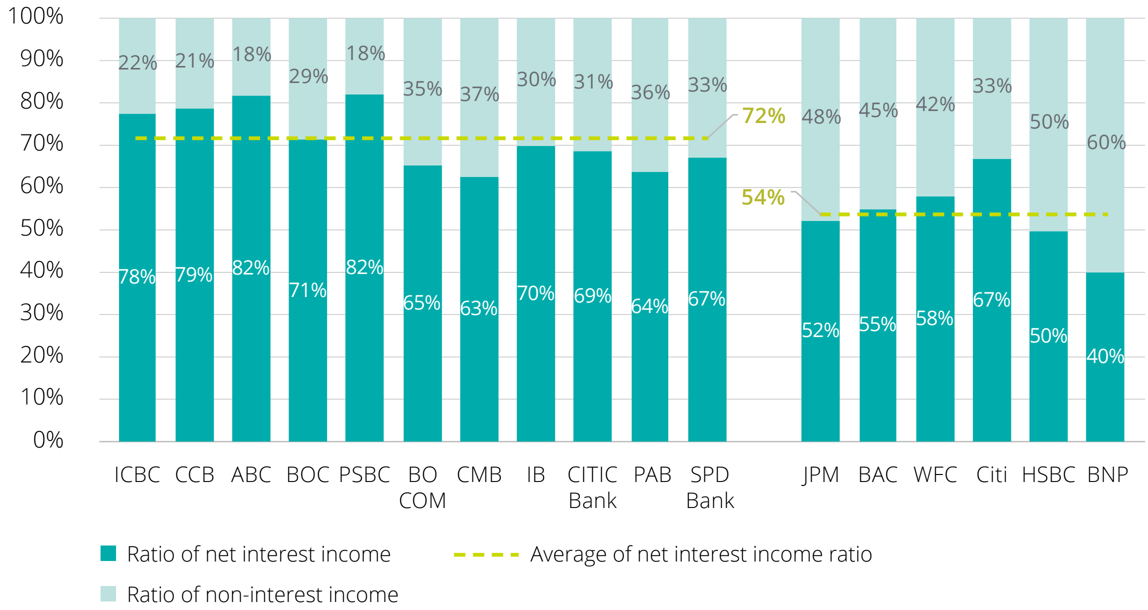


Note: the operating income of BAC, WFC, Citi, and HSBC contained credit impairment loss.

Regarding the income structure, the average ratio of domestic banks' net interest income in their overall operating income ("net interest income ratio") was 72%, almost the same as the previous year. State-owned banks' average net interest income ratio was 76%, down one percentage point. Among them, ABC's and PSBC's ratios reached 82%; BOCOM's ratio was the lowest (65%), mainly because the bank leveraged its advantage of full licenses to significantly increase the income from the diversified intermediate businesses. Joint-stock banks' average net interest income ratio was 66%, down three percentage points from the previous year, overall lower than that of state owned banks.

Foreign banks' average net interest income ratio was 54%, significantly lower than domestic banks. Foreign banks' advantage was in non-interest businesses. BNP's net interest income ratio was only 40%, while its financial investment and insurance business incomes accounted for a relatively high ratio.

Figure 9: Operating Income Structure in 2024



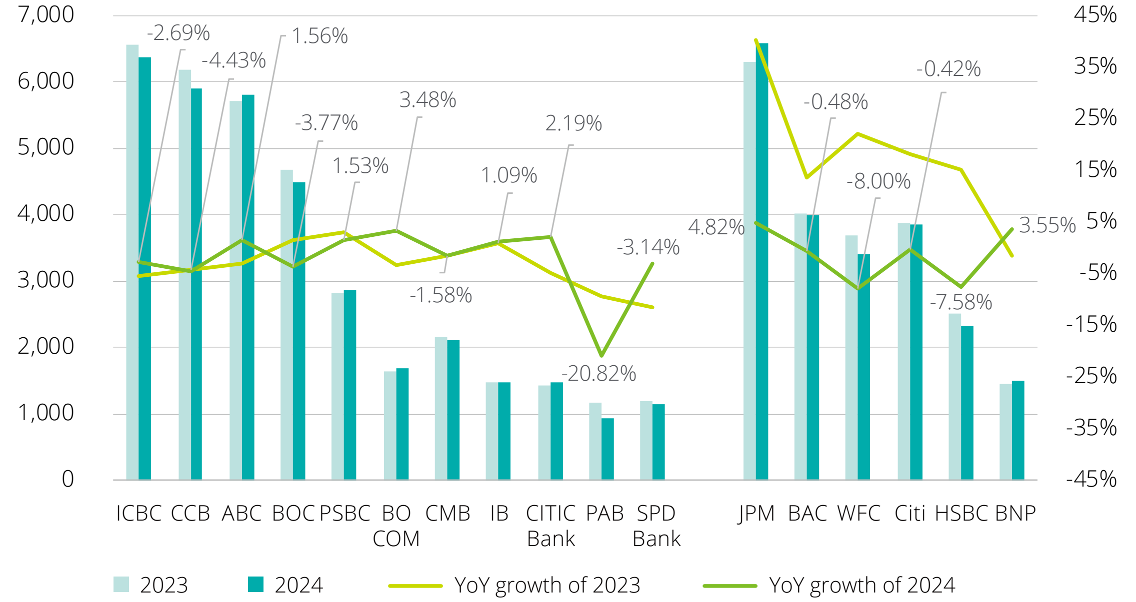
Loan interest rates remained at low levels; banks' net interest income pressure furthered

In 2024, domestic banks' net interest income totaled RMB3.43 trillion, a year-on-year decrease of RMB70.5 billion or 2.01%. Specifically, PAB's net interest income decreased by 20.82%, while the rest banks recorded slight changes. Domestic banks play a crucial role in the domestic financial system and supporting the recovery of the real economy. 2023 and 2024 saw several LPR cuts and continuous loan interest rate declines, with main loan rates falling below 4.0%. Domestic banks' business strategy of increasing sales to compensate the losses from falling prices was less effective.

Foreign banks' net interest income totaled RMB2.17 trillion, a decline of RMB16.7 billion or 0.76% year-on-year. JPM's and BNP's increased by 3.71% and 2.45% (in the original currency), respectively, while the rest foreign banks recorded negative growth.

Figure 10: Net Interest Income

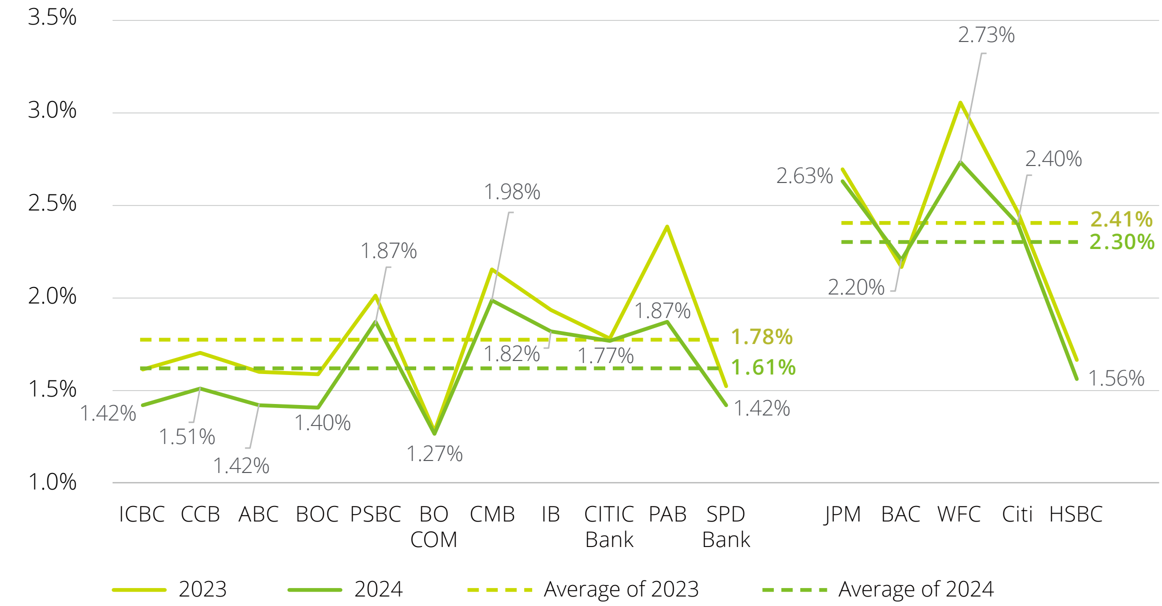
Unit: RMB100 million



In 2024, domestic banks' net interest margins shrank. Their average net interest margin was 1.61%, down 17 basis points year-on-year. State-owned banks' average net interest margin was 1.48%, down 15 basis points year-on-year. Among them, PSBC still recorded the highest net interest margin (1.87%), despite a year-on-year decline of 14 basis points. ICBC's, CCB's, and BOC's net interest margins fell by 19 basis points. Joint-stock banks' average net interest margin stood at 1.77%, down 18 basis points year-on-year. PAB's net interest margin fell by 51 basis points, second only to CMB's.

Foreign banks' average net interest margin was 2.30%, down 11 basis points from 2023. BAC's net interest margin rose by three basis points, while the rest foreign banks' decreased. Generally, foreign banks' average net interest margin was 69 basis points higher than domestic banks.

Figure 11: Net Interest Margin



Note: BNP did not disclose its net interest margin.

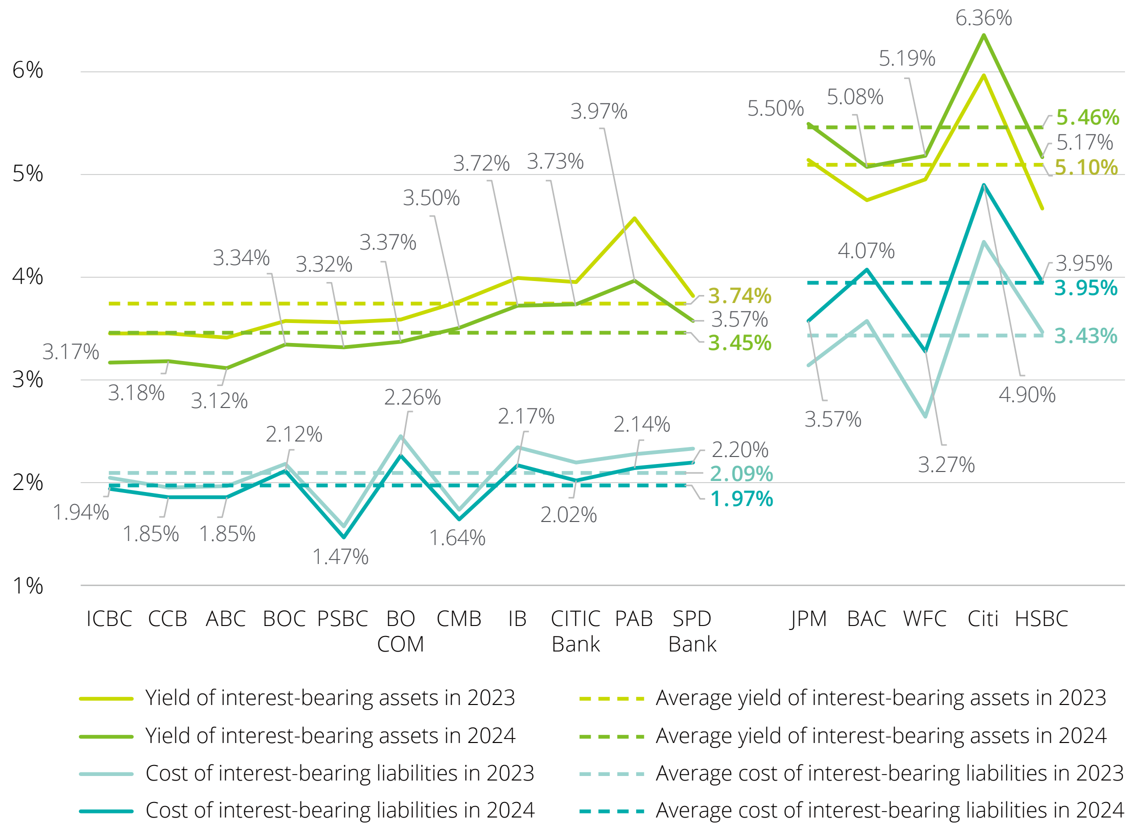
In 2024, domestic banks' average yield of interest-bearing assets was 3.45%, down 29 basis points year-on-year. All domestic banks' yields of interest-bearing assets dropped, mainly due to the cumulative effect of multiple LPR cuts and the impact of outstanding mortgage interest rate reduction in the fourth quarter. Domestic banks strengthened active management, optimized interest-bearing asset allocation, and adjusted their asset structures. All other banks' decreases of yields on interest-bearing assets were lower than the total one-year LPR declines since 2023, except for PAB.

In 2024, domestic banks' average cost of interest-bearing liabilities was 1.97%, down 12 basis points year-on-year. All domestic banks' costs of interest-bearing liabilities declined, mainly due to the slower-than-expected economic recovery and capital market volatility. As residents' precautionary saving willingness persisted, banks recorded a higher proportion of individual deposits and saw increasing fixed-term deposits. Although domestic banks have cut deposit rates twice since June 2024 to ease the interest margin pressure, their deposit costs continued to rise.

In 2025, as the mainstay of the financial sector, banks will unceasingly shoulder the responsibility of serving the real economy. Domestic banks' net interest margin may shrink in the low interest rate market environment. Therefore, banks must optimize their asset and liability structures and expand capital-light non-interest businesses while implementing the Central Financial Work Conference requirements and increasing credit supply to balance the national mission and their profits.

In 2024, foreign banks' average yield of interest-bearing assets and cost of interest-bearing liabilities increased significantly by 36 and 52 basis points year-on-year, respectively. This is mainly caused by the Federal Reserve's interest rate hikes, the developed economies' monetary tightening, and the increases in overseas market interest rates.

Figure 12: Yield of Interest-bearing Assets and Cost of Interest-bearing Liabilities



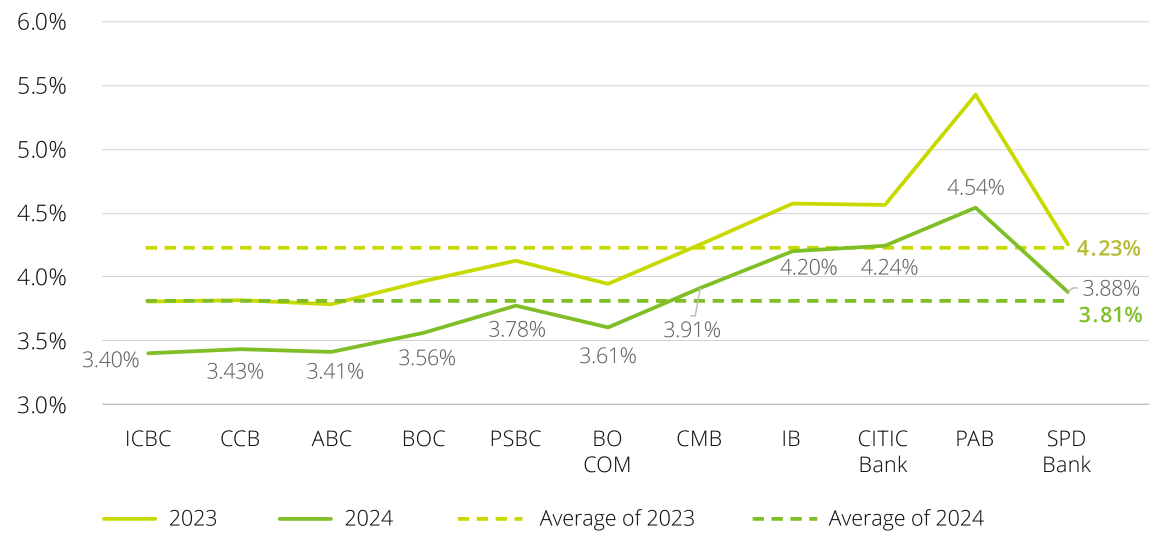
Note: BNP did not disclose its yield of interest-bearing assets and cost of interest-bearing liabilities

Table 2: Comparison Between Domestic Banks' Quarterly Yields of Interest-bearing Assets and LPR Adjustments

Item	31/12/2024	30/9/2024	30/6/2024	31/3/2024	31/12/2023
One-year LPR	3.10%	3.35%	3.45%	3.45%	3.45%
Base points declined	25	10	-	-	-
Five-year LPR	3.60%	3.85%	3.95%	3.95%	4.20%
Base points declined	25	10	-	25	-
Yield of interest-bearing assets	**Jan-Dec 2024**	**Jan-Sept 2024**	**Jan-Jun 2024**	**Jan-Mar 2024**	**Jan-Dec 2023**
ICBC	3.17%	Undisclosed	3.28%	Undisclosed	3.45%
CCB	3.18%	Undisclosed	3.27%	Undisclosed	3.45%
ABC	3.12%	Undisclosed	3.22%	Undisclosed	3.41%
BOC	3.34%	Undisclosed	3.44%	Undisclosed	3.58%
PSBC	3.32%	Undisclosed	3.40%	Undisclosed	3.56%
BOCOM	3.37%	Undisclosed	3.48%	Undisclosed	3.59%
CMB	3.50%	3.56%	3.60%	3.65%	3.76%
IB	3.72%	Undisclosed	3.84%	Undisclosed	4.00%
CITIC Bank	3.73%	Undisclosed	3.83%	Undisclosed	3.95%
PAB	3.97%	4.07%	4.16%	4.25%	4.58%
SPD Bank	3.57%	Undisclosed	3.71%	Undisclosed	3.82%

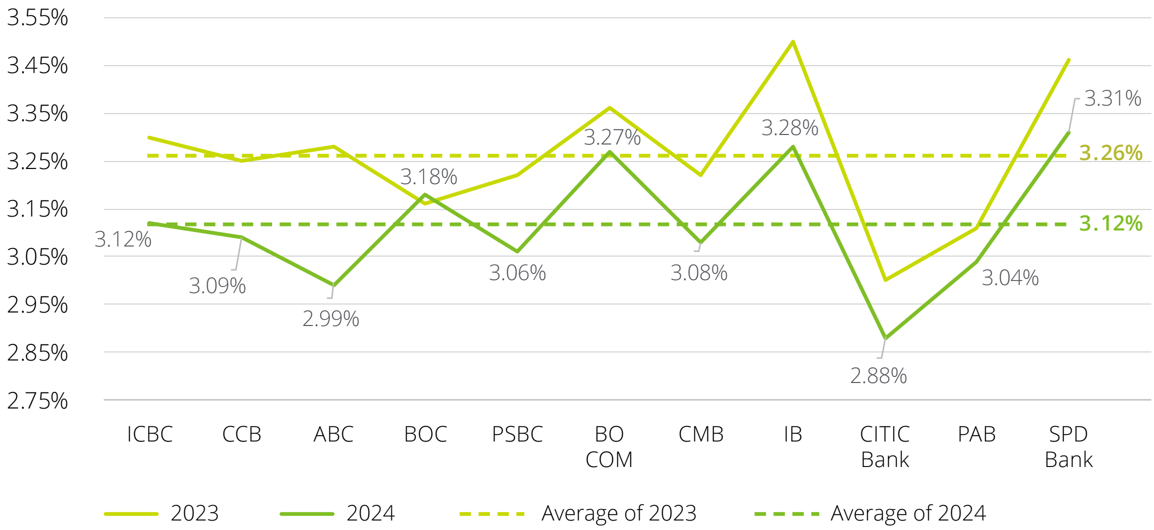
In 2024, domestic banks' average customer loan & advance yield was 3.81%, down 42 basis points year-on-year. State-owned banks' average customer loan & advance yield was 3.53%, down 38 basis points year-on-year. In addition to the impact of the LPR cuts, differentiated supporting policies in building strong agriculture, rural revitalization, and making fee cuts and interest concessions further drove PSBC's and ABC's customer loan & advance yields down by 35 and 38 basis points, respectively. Joint-stock banks' average customer loan & advance yield was 4.15%, down 46 basis points year-on-year. Among them, PAB's yield fell by 89 basis points due to the adjustment of loan structure and increase in collateral loans, but it is still the highest among its peers. Since long-term loan rates are generally repriced on January 1, the 2024's LPR reductions have not yet fully delivered their impacts. Domestic banks' loan yields are likely to drop further in 2025.

Figure 13: Customer Loan & Advance Yield



In 2024, domestic banks' average financial investment yield was 3.12%, down 14 basis points year-on-year, mainly due to the declines in market interest rates and bond yields. SPD Bank recorded a financial investment yield of 3.31%, which is still higher than that of its peers, though down 15 basis points.

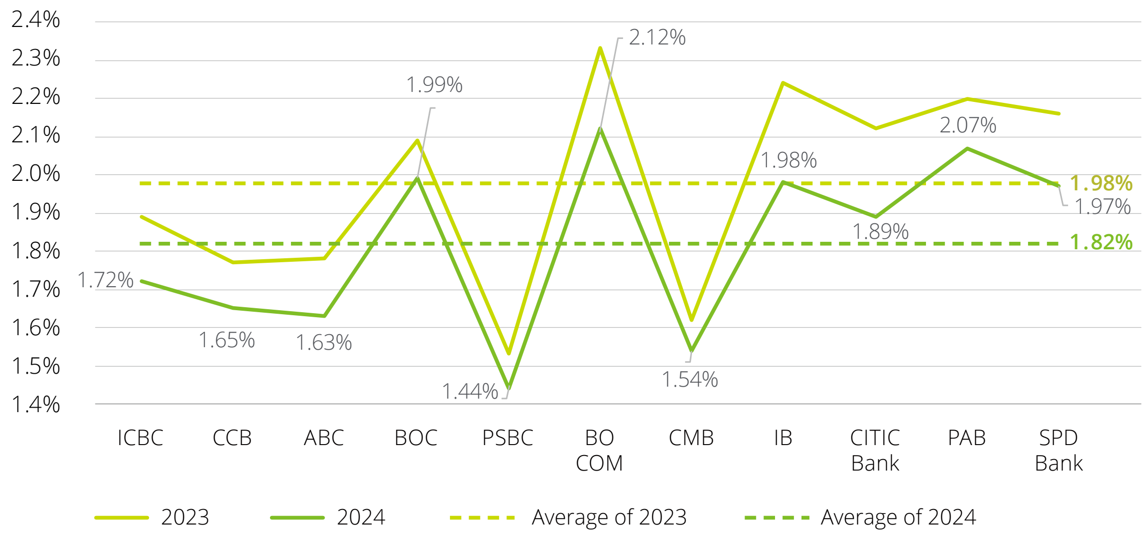
Figure 14: Financial Investment Yield



In 2024, domestic banks' average deposit cost ratio was 1.82%, a decrease of 16 basis points year-on-year. State-owned banks' average ratio was 1.76%, down 14 basis points year-on-year. BOCOM's ratio fell by 21 basis points, but it remained the highest among its peers. Joint-stock banks' average deposit cost ratio was 1.89%, down 18 basis points year-on-year. Domestic banks' deposit cost ratios fell to varying degrees.

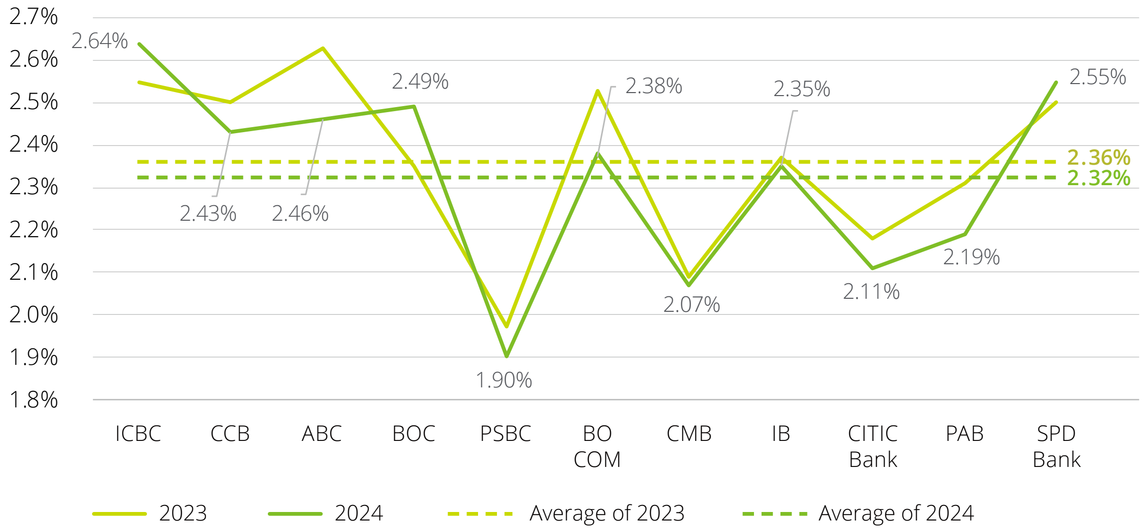
In 2024, domestic banks lowered deposit interest rates twice, respectively in July and October, to retard the narrowing of interest margins and reduce the overall costs of liabilities, building on three previous reductions made in 2023. The interest rates of long-term deposits were remarkably reduced. These rate cuts have delivered effect in 2024.

Figure 15: Deposit Cost Ratio



In 2024, domestic banks' average cost ratio of interbank businesses was 2.32%, a decrease of four basis points year-on-year. ICBC, BOC, and SPD Bank saw slight increases, while other domestic banks' ratios trended down due to the pressure on their net interest margins.

Figure 16: Cost Ratio of Interbank Businesses



Note: Interbank businesses include interbank deposits and inter-financial institution deposits, loans from other banks and financial institutions, and financial assets sold for repurchase (for BOC, it also includes the liabilities to the People's Bank of China and other interest-bearing liabilities; for PAB, it also includes other interest-bearing liabilities.)

Income from intermediate businesses continued to be pressed; domestic banks' net income from commission charges trended down

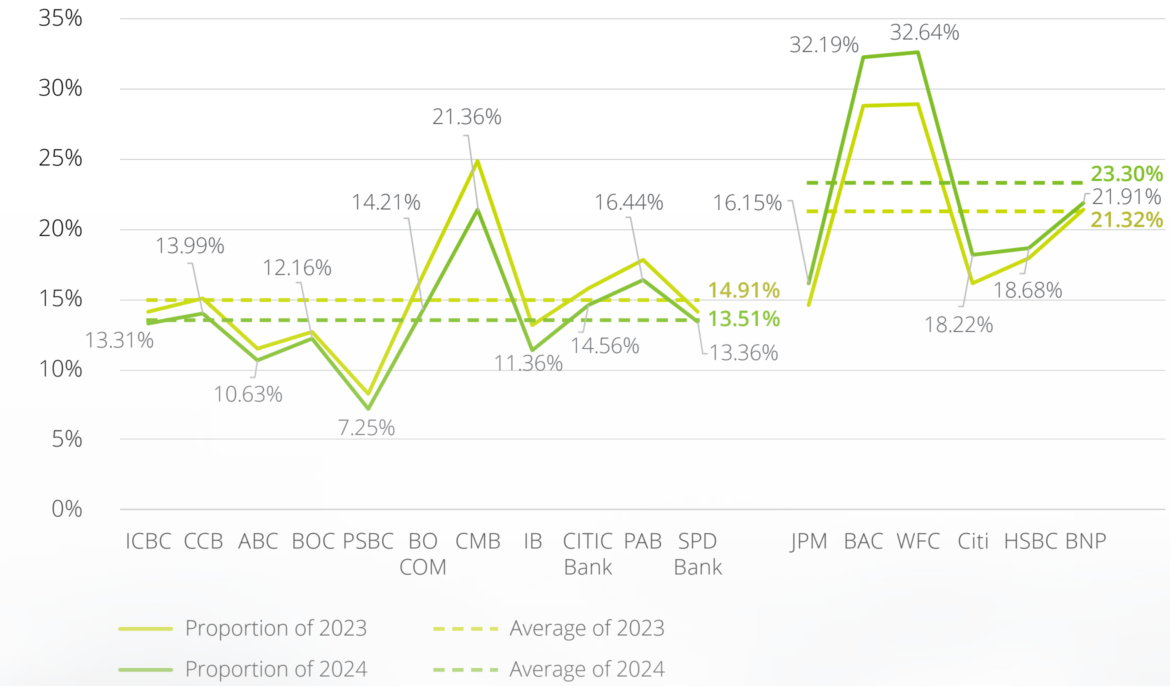
In 2024, domestic banks' net income from commission charges totaled RMB602.9 billion, a year-on-year decrease of RMB60.5 billion or 9.12%, showing a continuous downward trend. This is primarily due to banks' continuous fee reductions and interest concessions to support the real economy. Reduced resident consumption led to a decrease in income from bank card settlement (directly related to consumption) and new payment businesses from 2023. Moreover, sluggish capital market activity dampened residents' appetite for wealth management products, funds, and other financial investments, cutting banks' income from agency and custody businesses. In addition, investment banking commission income generally dipped due to capital market volatility, as decreased corporate financing activities lowered the needs for investment banking. In August 2023, the NFRA issued the *Notice on Regulating the Insurance Products from the Bank Agency Channel*, emphasizing that the commission charges of the bank insurance channel must ensure "reporting and practice consistency." It caused domestic banks' income from the agency insurance business to decline in 2024. Foreign banks' net income from commission charges totaled RMB904.7 billion, a year-on-year increase of RMB125.1 billion or 16.05%. This is primarily due to increased activity in the U.S. capital market in 2024, a significant recovery in investment banking operations, and an uptick in corporate mergers and acquisitions, financing, and other activities driven by factors such as the U.S. presidential election.

Regarding the proportion of net income from commission charges in the total operating income, the average ratios of domestic banks and foreign banks show different trends, the average proportion of domestic banks was 13.51%, down 1.40 percentage points from the previous year, and that of foreign banks was 23.30%, up 1.98 percentage points. In 2024, the average proportions of state-owned and joint-stock banks were 11.93% and 15.42%, respectively. The proportions decreased among state-owned and joint-stock banks, while those of foreign banks increased compared with 2023.

Figure 17: Net Income from Commission Charges

Unit: RMB100 million

Figure 18: Proportion of Income from Commission Charges



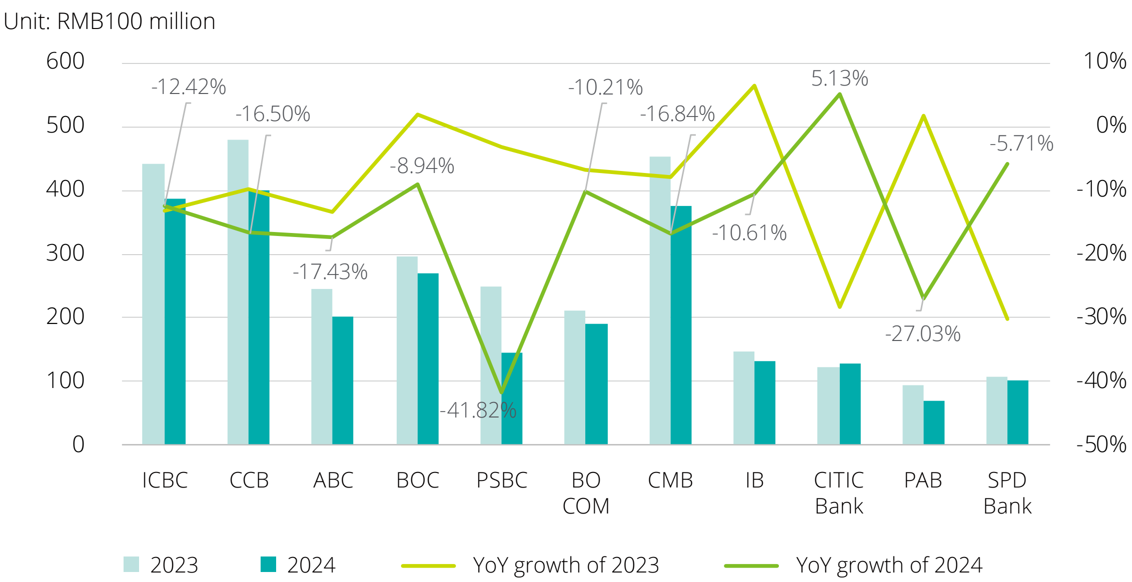
With capital market fluctuations and enhanced banking supervision, residents' saving willingness strengthened and income from wealth management trended down

In 2024, China's per-capita disposable income stood at RMB41,314, a nominal increase of 5.3% over the previous year. After deducting price factors, per capita disposable income rose by 5.1%. The growth trend sustained the economic recovery momentum, though at a reduced rate compared to the 6.3% nominal growth in 2023. The wealth management market still faced numerous challenges in the complex domestic and international landscape. Residents' tendency toward precautionary savings continually influenced capital allocation in wealth management, funds and other products. Further attention should be paid to the impact of domestic and international economic changes, policy adjustments, and other factors on the wealth management market and residents' income consumption behavior.

In 2024, domestic banks' income from commission charges of wealth management, agency, and custody businesses totaled RMB240.0 billion, a year-on-year decrease of RMB44.6 billion or 15.67%. Specifically, PSBC's, PAB's, ABC's, and CMB's commission charge income from wealth management, agency and custody businesses decreased significantly from 2023, respectively by 41.82%, 27.03%, 17.43%, and 16.84%. Only CITIC Bank saw an increase in commission charge income (5.13%), mainly due to higher wealth management income.

ABC, ICBC and CCB recorded a remarkable decrease in commission charge income from the agency business. In 2024, capital market remained volatile, as bond yields kept fluctuating downward. Wealth management products' net value dropped with unstable yields. Consequently, investors' risk appetite altered. Their interest in wealth management products diminished. Banks' income from agency businesses decreased. In addition, in August 2023, the NFRA issued the *Notice on Regulating the Insurance Products from the Bank Agency Channel*, requiring insurance companies to report their fee structures and commission ceilings of the already-registered bank insurance products. The Notice also requires that insurance companies maintain consistency in the fees they pay and the fees in their filing materials. This policy promoted healthy competition in the insurance sector but affected banks' income from the insurance agency business.

Figure 19: Commission Charge Income from Wealth Management, Agency and Custody Businesses

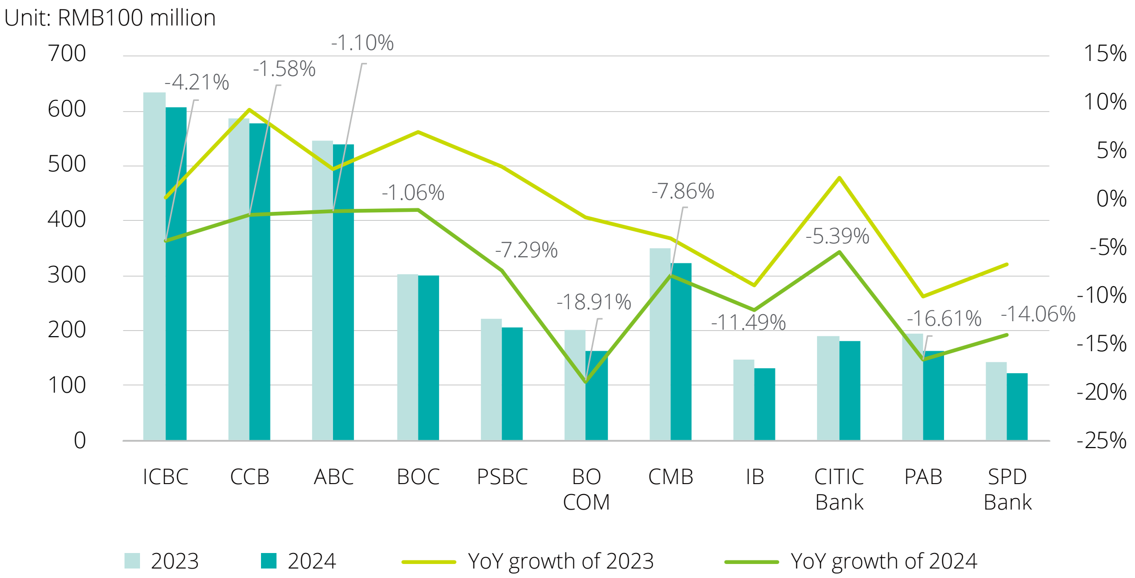


Slow recovery in the consumer market led to sluggish income growth from traditional intermediate businesses

In 2024, domestic banks generated RMB331.1 billion from traditional intermediate businesses, such as bank card and settlement & clearing businesses, a year-on-year decline of 5.87%. BOCOM, PAB, and SPD Bank recorded a relatively sharper growth rate decline, respectively by 18.91%, 16.61%, and 14.06%. Other banks saw mild declines.

In 2024, the economic recovery was slower than expected. With the consumer market contracting, competition in the payment and clearing market has intensified. Third-party payment institutions seized a considerable market share by leveraging convenient payment methods and lower transaction fees, thereby reducing banks' market share in the retail payment market. In recent years, banks' continuous fee reductions, interest concessions, and increasing free services (such as cutting or exempting fees for settlement of the corporate business) have directly decreased their income from settlement & clearing businesses.

Figure 20: Income from Commission Charges of Bank Card and Settlement & Clearing Businesses

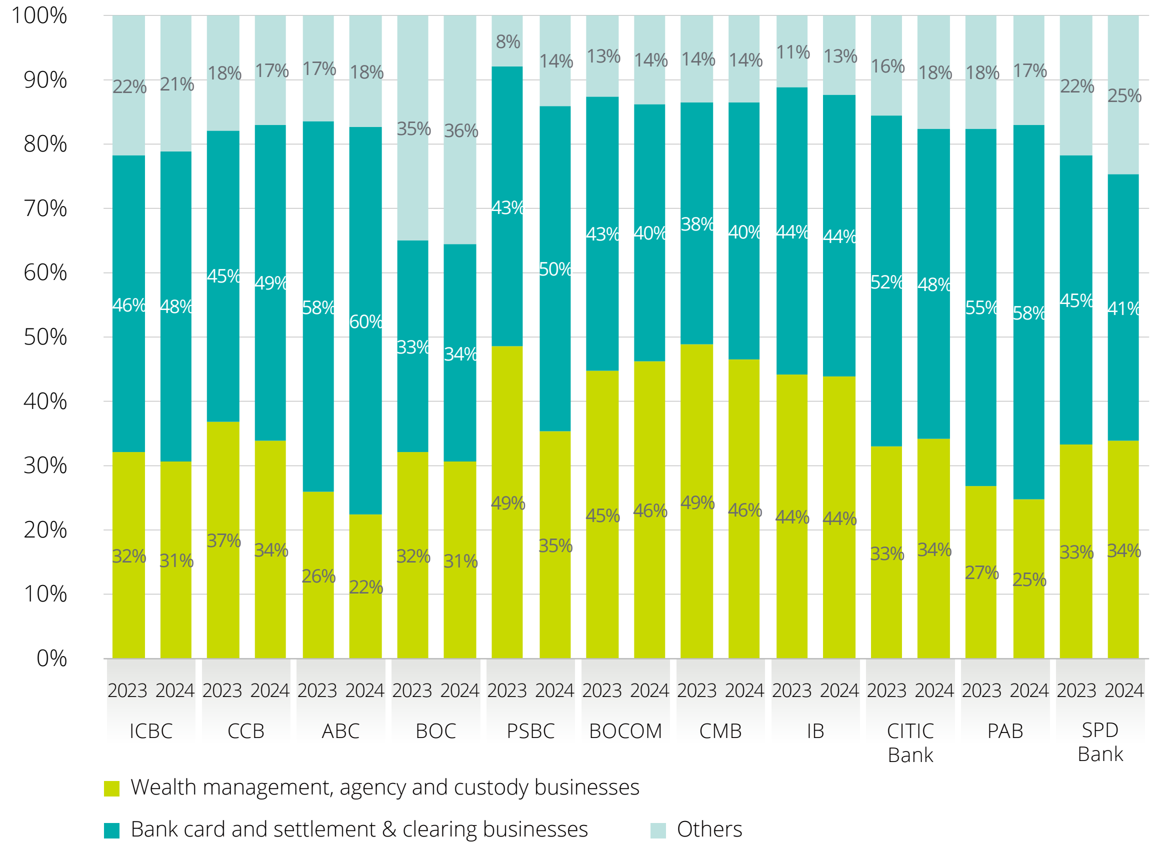


Income structure of intermediate businesses remained stable, with income mainly from traditional intermediate and agency businesses

Domestic banks' intermediate business income structure remained stable, mainly from bank cards, settlement & clearing, wealth management, agency, and custody businesses. In 2023 and 2024, domestic banks' wealth management, agency, and custody businesses, on average, accounted for 36.95% and 34.77% of their total commission charge income, down 2.18 percentage points. Their bank card and settlement & clearing businesses averagely accounted for 45.59% in 2023 and 46.58% in 2024, an increase of 0.99 percentage points. The proportions of other businesses were 17.46% and 18.65% for the two years, respectively.

In 2024, PSBC's income proportion of other businesses in the total commission charge income increased by six percentage points. Additionally, as the agency business income declined, PSBC's income proportion of wealth management, agency and custody businesses dropped by more than six percentage points. This proportion of other domestic banks fell or rose slightly.

Figure 21: Commission Income Structure

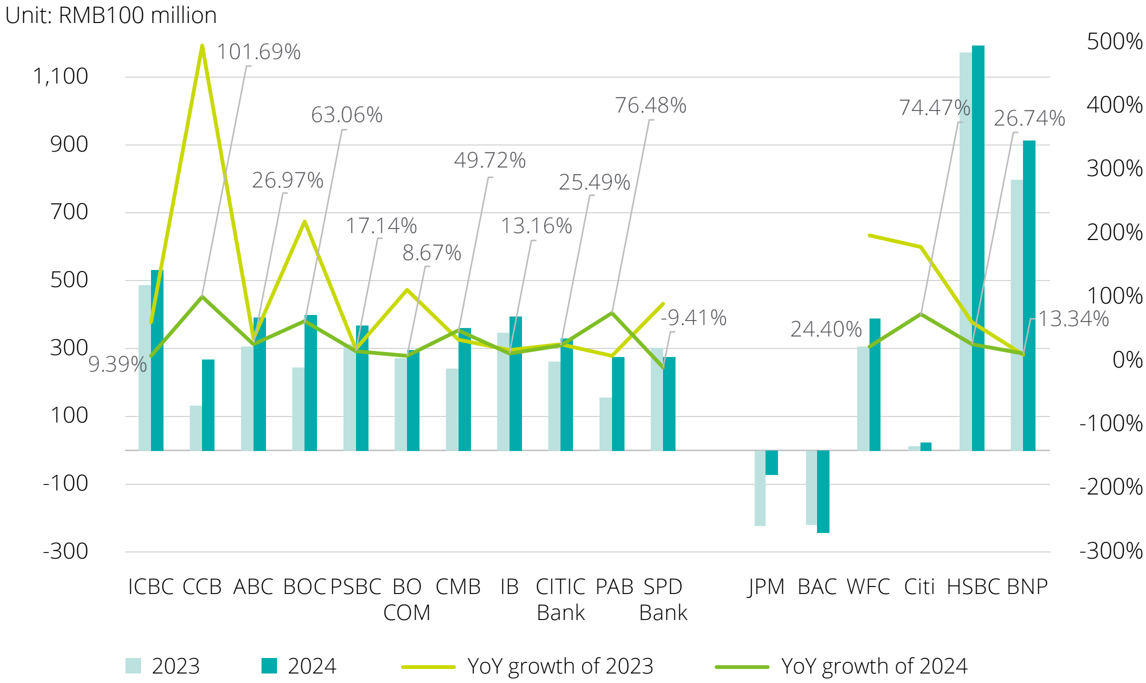


Domestic banks' investment capacity was highlighted; foreign banks' liquidity risks continued

In 2024, domestic and foreign interest rate policies diverged, with the yield curve reversed continuously. Domestic and foreign banks' financial investment incomes generally increased except for JPM and BAC. Domestic banks' financial investment income totaled RMB389.1 billion, up RMB81.9 billion year-on-year, representing an increase of 26.67%. Specifically, state-owned banks' total financial investment income reached RMB225.3 billion, an increase of 28.16%. State-owned banks had a higher proportion of standardized investments, such as rate bonds. The declining interest rates in the domestic market affected bond investment yields. For instance, the 10-year treasury bond yield dropped to the year-end's 1.68% from 2.56% at the beginning of 2024, down 88 basis points. In the meantime, some financial asset investments' yields climbed. Joint-stock banks' financial investment income totaled RMB163.8 billion, an increase of 24.69%, mainly due to the bond market's robust performance in 2024.

Foreign banks' financial investment income totaled RMB251.1 billion, an increase of 35.66%. JPM and BAC continued to incur investment losses. However, in 2024, JPM's losses on investment securities decreased as its U.S. treasury securities department and Chief Investment Office (CIO) reallocated investment securities portfolios. The other four banks readjusted their asset portfolios and strengthened the disposal of trading assets to adapt to market changes. Their investment income rose from RMB229.3 billion in 2023 to RMB282.8 billion in 2024. Despite the Federal Reserve's rate-cutting cycle starting from September 2024, the delay in interest rate adjustments hindered financial institutions from promptly addressing their asset and liability mismatches. Consequently, foreign financial institutions remained under pressure from liquidity risk due to these mismatched assets and liabilities.

Figure 22: Income from Financial Asset Investment



Note 1: JPM and BAC recorded financial asset investment losses in 2023 and 2024. Thus, their data were not shown in the figure above.

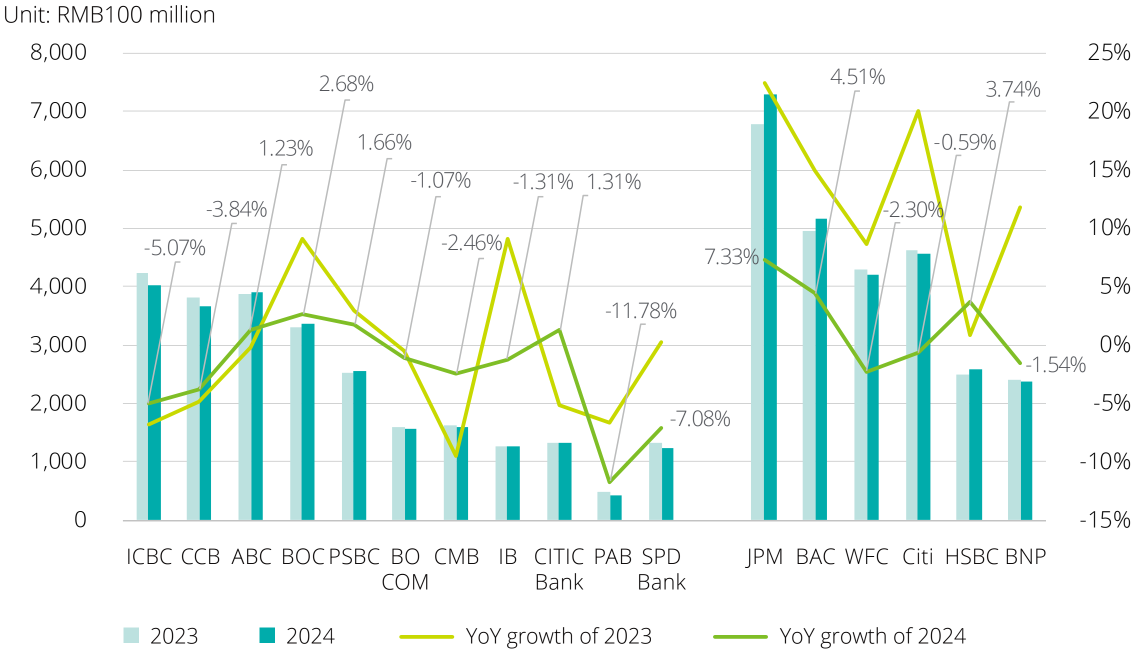
Note 2: Foreign banks' investment income was calculated in the original currency.

Domestic banks' operating expenses decreased, while foreign banks' continued to rise

In 2024, domestic banks' operating expenses totaled RMB2,488.4 billion, decreasing by RMB39.0 billion or 1.54%. Specifically, impairment losses amounted to RMB845.2 billion, down RMB70.3 billion or 7.68% year-on-year; business and administration expenses amounted to RMB1,501.8 billion, up RMB13.9 billion or 0.93%. Most of the domestic banks' operating expenses decreased. PAB and SPD Bank recorded a remarkable drop, respectively by 11.78% and 7.08%, mainly due to PAB's reduced business and administration expenses and SPD Bank's declined impairment losses.

In 2024, foreign banks' total operating expenses reached RMB2,620.8 billion, an increase of RMB62.5 billion or 2.44%. Specifically, impairment losses amounted to RMB267.9 billion, an increase of RMB22.0 billion or 8.95%; business and administration expenses amounted to RMB2,352.9 billion, an increase of RMB40.5 billion or 1.75%. WFC, BNP, and Citi recorded a year-on-year decrease in operating expenses and the expense growth of other foreign banks (except HSBC) in 2024 was significantly lower than 2023 (in the original currency).

Figure 23: Operating Expenses



Note: Impairment losses include credit impairment losses and other asset impairment losses.

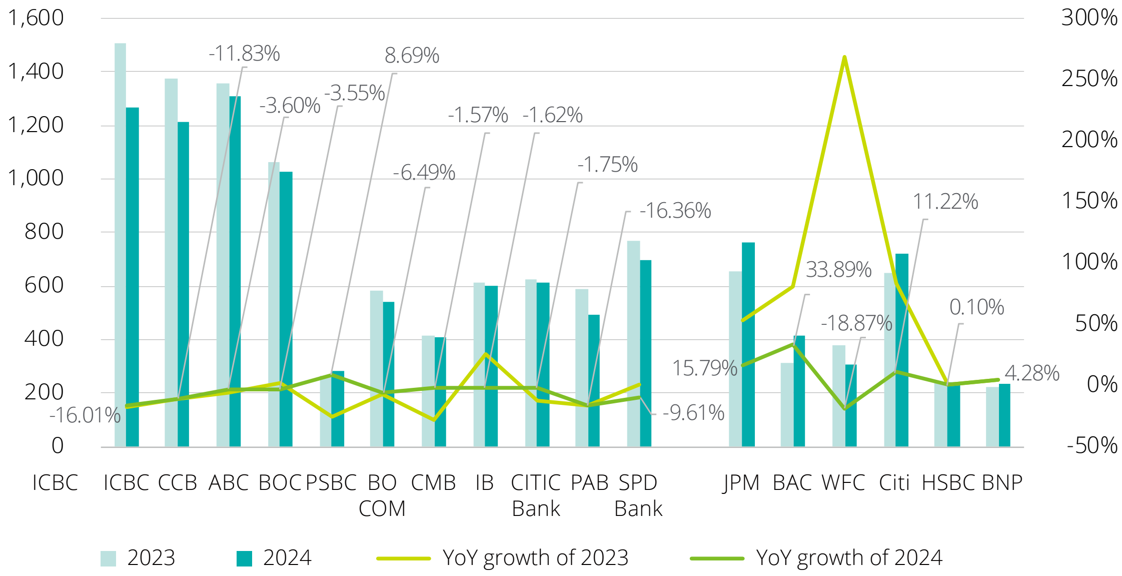
Domestic and foreign banks' impairment provision trends varied

In 2024, domestic banks' provisions for impairment losses totaled RMB845.2 billion, a year-on-year decrease of RMB70.3 billion or 7.68%, marking the fourth year of decline (3.90%, 10.34%, and 10.16% in 2021, 2022, and 2023, respectively). Despite some domestic banks' sharp provision decreases in 2023, ten domestic banks' provisions decreased in 2024—PAB's, ICBC's, and CCB's decreases exceeded 10%; ABC's, BOC's, CITIC Bank's, IB's, and CMB's decreases were below 5%. Only PSBC saw an increase of 8.69%, mainly due to rising nonperforming loans from the prior year-end. In 2024, China's economy made steady progress. Domestic banks comprehensively sustained reasonable growth in monetary credit and continued to improve credit structures, maintaining stable asset quality and sufficient risk compensation capacity.

Foreign banks' impairment losses totaled RMB267.9 billion in 2024, a year-on-year increase of RMB22.0 billion or 8.95%, marking a third-year provision increase. In 2024, as the U.S. economy slowed continuously, regional bank crises broke out frequently, and asset quality deteriorated. Thus, banks increased provisions for credit risks to withstand the economic downward pressure. The nonperforming ratio of European banks has risen slightly since 2023, putting pressure on asset quality. The provision growth of JPM, BAC, and Citi slowed from 2023, while that of WFC, HSBC, and BNP were -19.73%, -0.96%, and 3.16% (marking a second-year provision increase), respectively (in the original currency).

Figure 24: Impairment Losses

Unit: RMB100 million

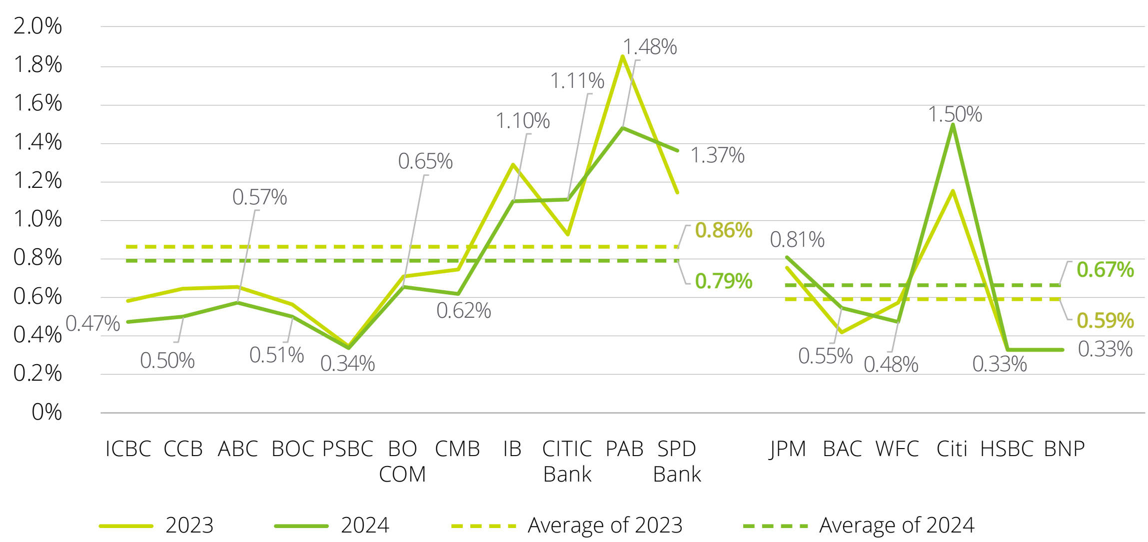


In 2024, with higher loan balances and lower impairment provisions, domestic banks' average credit cost ratio stood at 0.79%, down 0.07 percentage points year-on-year. Among them, ICBC's, CCB's, CMB's, IB's, CITIC Bank's, and PAB's credit cost ratios fell significantly, with an average decrease of 0.12 percentage points. PAB's ratio (which fell by 0.37 percentage points to 1.48%) was still the highest among domestic banks, due to its risk appetite.

Foreign banks' average credit cost ratio was 0.67% in 2024, an increase of 0.08 percentage points year-on-year. Citi's credit cost ratio was the highest, 0.83 percentage points higher than the average of other foreign banks. The increase of foreign banks' credit costs was mainly caused by the significant rise in banks' provisions for loan impairment losses—BAC had the most remarkable provision increase.

Overall, in 2024, domestic banks' average credit cost trended down, while that of foreign banks trended up.

Figure 25: Credit Cost Ratio



Note: Credit cost ratio=credit impairment losses on loans/average balance of loans at the beginning and end of the period

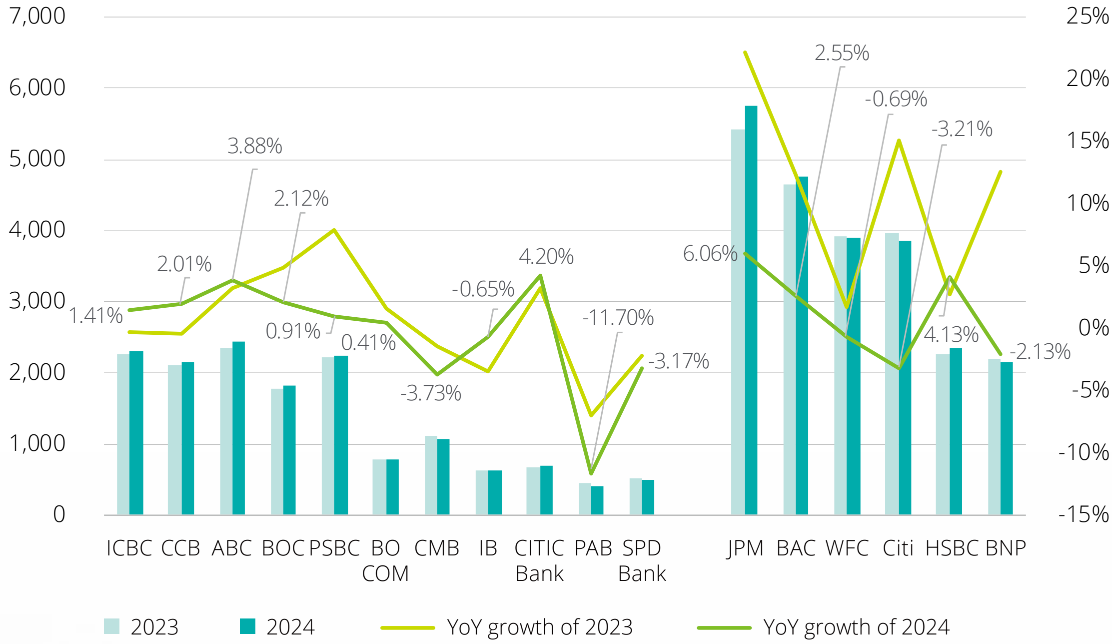
Business and administration expense growth slowed; cost control improved

In 2024, domestic banks' business and administration expenses totaled RMB1,501.8 billion, a year-on-year increase of RMB13.9 billion or 0.93%, slightly lower than 2023's growth rate (1.86%). The growth rates of CITIC Bank, ABC, BOC, CCB, and ICBC were higher than the overall growth rate, with CITIC Bank recording the highest rate of 4.20%. The business and administration expenses of PAB, CMB, SPD Bank, and IB decreased compared with 2023, with PAB recording the sharpest decline of 11.70%.

Foreign banks' business and administration expenses totaled RMB2,274.2 billion, an increase of RMB33.9 billion or 1.51%. Foreign banks' growth rates were generally higher than that of domestic banks. JPM had a relatively higher growth rate, exceeding six percentage points. The business and administration expenses of Citi, WFC, and BNP decreased compared with 2023, with Citi recording the sharpest decline of 3.21%.

Figure 26: Business and Administration Expenses

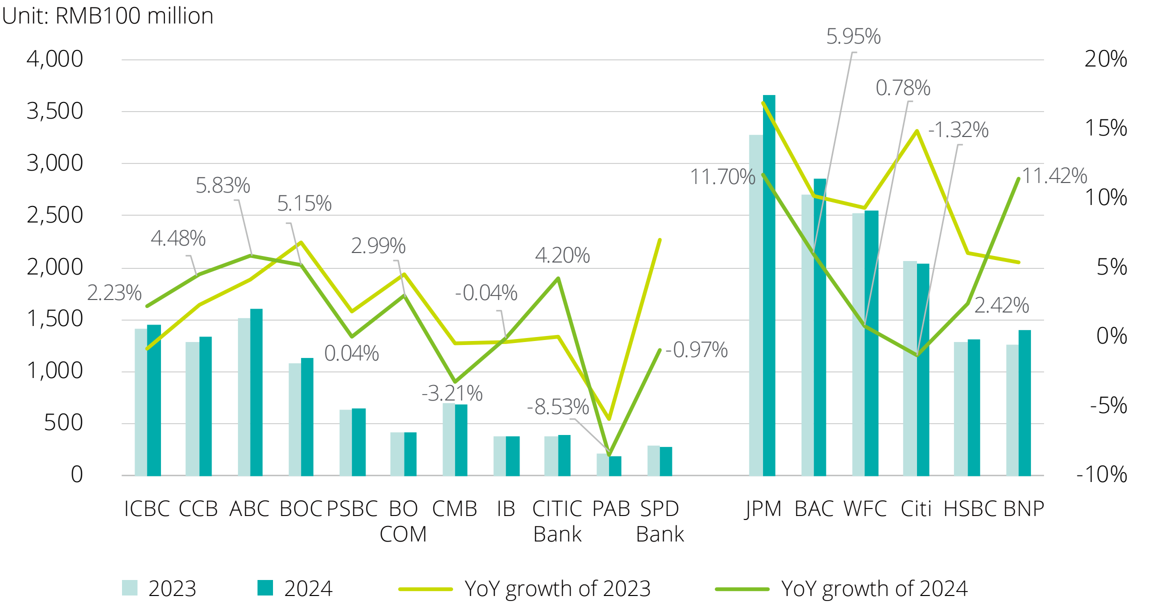
Unit: RMB100 million



In 2024, domestic banks' employee costs totaled RMB851.7 billion, a year-on-year increase of RMB21.8 billion or 2.63%. Specifically, ABC recorded the highest growth rate of 5.83%, followed by BOC's 5.15%. The rest of the banks' growth rates were lower than 5%. In contrast, PAB's, CMB's, and IB's employee costs fell for two consecutive years, with PAB recording the sharpest declines of 8.53% in 2024 and 5.89% in 2023.

Foreign banks' employee costs totaled RMB1,381.3 billion, an increase of RMB71.1 billion or 5.43%. JPM's employee cost and growth rate were the highest.

Figure 27: Employee Cost

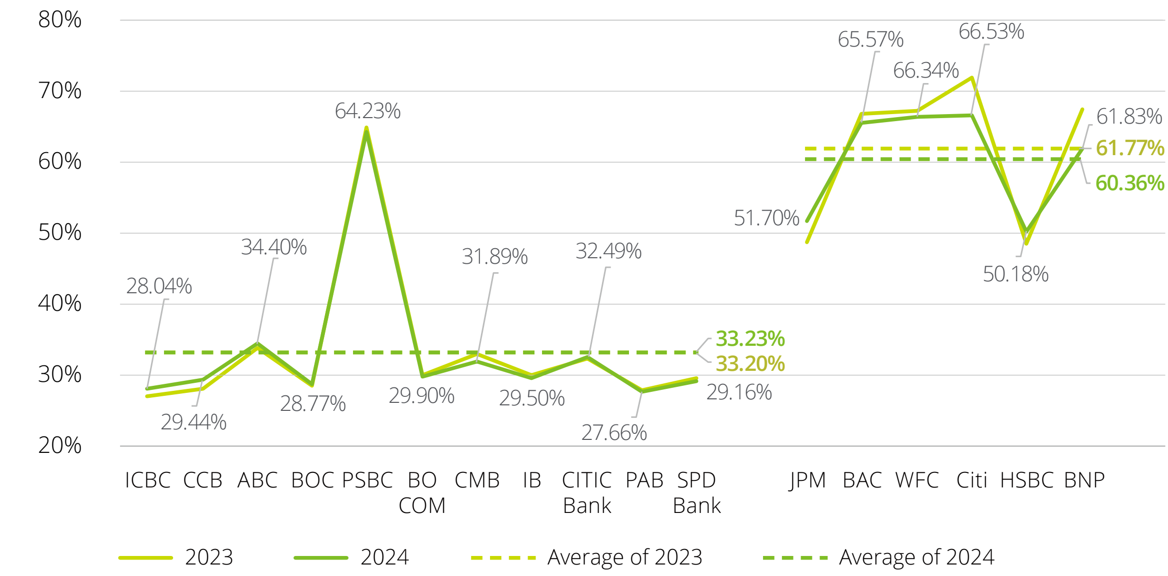


Cost-to-income ratio rose, requiring further efforts to reduce costs and improve efficiency

In 2024, domestic banks' average cost-to-income ratio was 33.23%, an increase of 0.03 percentage points year-on-year. PSBC had the highest cost-to-income ratio (64.23%) due to its special business model, followed by ABC (34.40%), CITIC Bank (32.49%), CMB (31.89%), and BOCOM (29.90%). Among the eleven domestic banks, CMB's, PSBC's, SPD Bank's, PAB's, and BOCOM's increase was lower than 2023, with CMB recording the sharpest decline of 1.07 percentage points; CCB, ICBC, ABC, BOC, and CITIC Bank recorded a cost-to-income ratio increase of 1.24%, 1.08%, 0.54%, 0.27%, and 0.14%, respectively.

Foreign banks' cost-to-income ratios were generally higher than domestic banks, with an average ratio of 60.36%, a year-on-year decrease of 1.41%. Citi has the highest cost-to-income ratio (66.53%), followed by WFC (66.34%), BAC (65.57%), and BNP (61.83%).

Figure 28: Cost-to-Income Ratio



2.2 Assets

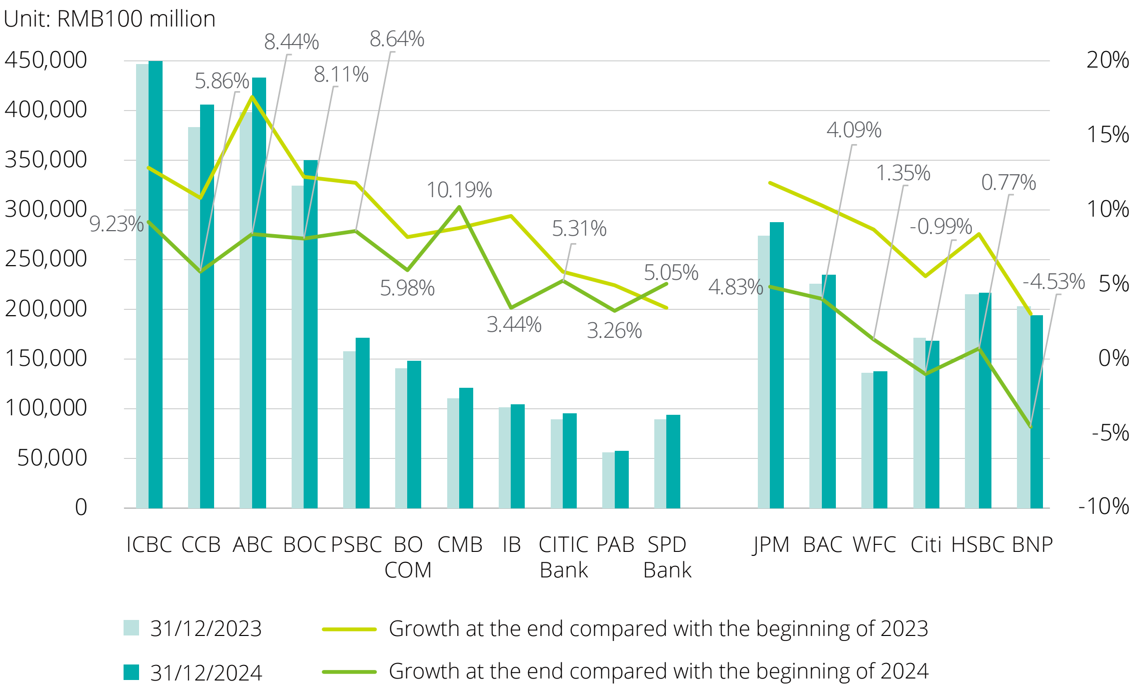
Asset structure remained stable amid slowed asset expansion

At the end of 2024, the six state-owned banks' assets totaled RMB199.68 trillion, up RMB14.57 trillion or 7.87% from the beginning of the year (down 4.94 percentage points from the 12.81% growth at year-beginning). ICBC's asset growth reached 9.23%, the highest among the state-owned banks. The 2024 growth rates of state-owned banks slowed compared with the beginning of the year. The total assets of the five joint-stock banks amounted to RMB47.42 trillion, up RMB2.59 trillion or 5.78% (down 1.91 percentage points from the 7.69% growth at year-beginning). Among the joint-stock banks, CMB's and SPD Bank's growth rates were higher than 2023.

At the end of 2024, foreign banks' total assets reached RMB124.14 trillion. Generally, foreign banks' asset scale remained stable with slight increase. JPM, BAC, WFC, HSBC, BNP, and Citi recorded an asset growth rate of 4.83%, 4.09%, 1.35%, 0.77%, -0.99%, and -4.53%, respectively (in the original currency).

Overall, state-owned banks were still in a leading position in asset scale, and their asset growth was significantly higher than that of joint-stock and foreign banks.

Figure 1: Total Assets



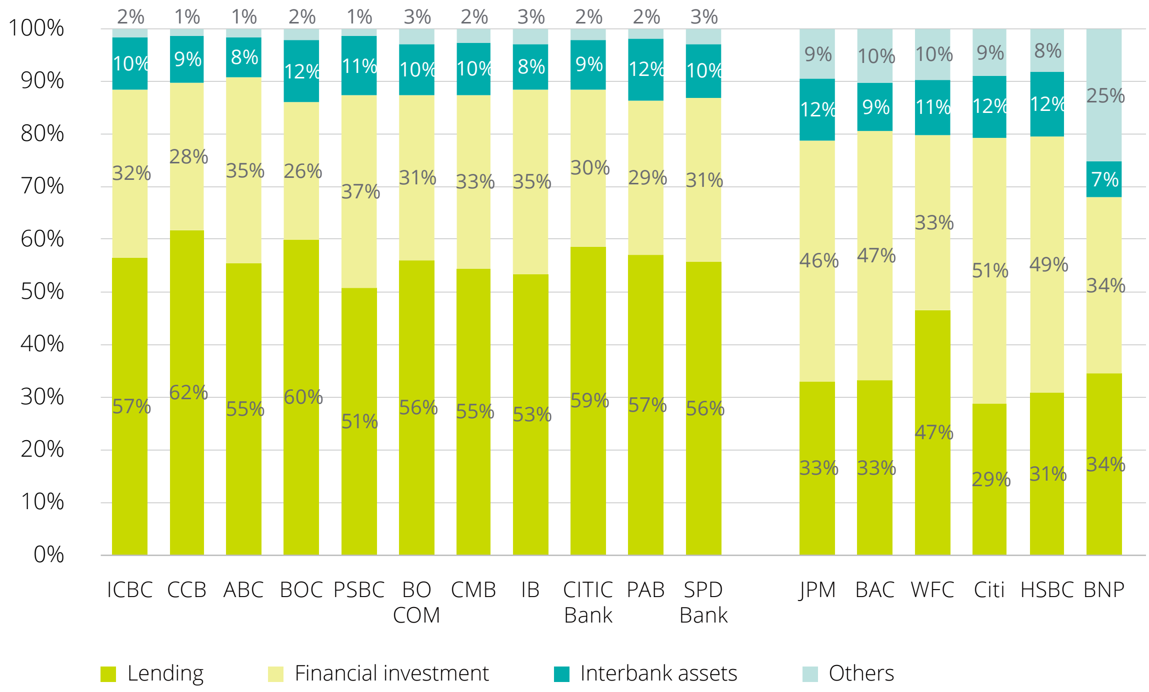
Note: Foreign banks' asset growth was calculated in the original currency.

There was no significant difference in the asset composition of state-owned and joint-stock banks. The average proportions of domestic banks' lending, financial investment, and interbank assets were 57.11%, 31.43%, and 9.62%, up 0.58, 3.37, and 3.59 percentage points, respectively, from the beginning of the year.

As of the end of 2024, lending was still a significant component of domestic banks' assets. State-owned banks actively implemented counter-cyclical adjustment policies, vigorously supported the real economy, and increased loan supply. Their lending proportion rose by 0.51 percentage points. Joint-stock banks faced relatively higher credit pressure, with their lending proportion falling by 0.59 percentage points.

Foreign banks' average proportions of lending, financial investment, and interbank assets were 33.83%, 44.01%, and 10.41%, down 1.36, up 9.51, and up 1.06 percentage points, respectively, from the beginning of the year. The lending proportion of foreign banks was generally lower than domestic banks. Their asset allocation priorities were different.

Figure 2: Asset Composition at the End of 2024



Loan growth slowed but loan scale expanded steadily

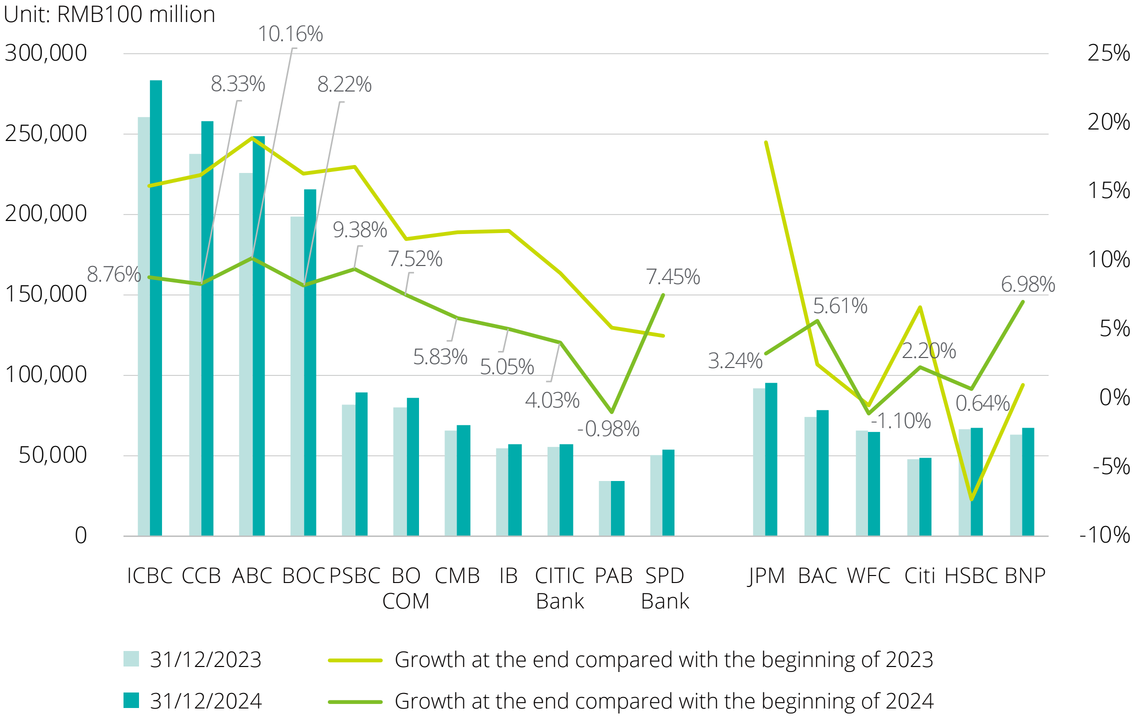
In 2024, in the face of structural challenges, domestic credit demand varied during economic recovery. Enterprises' confidence in investments gradually rebounded, alongside a mild increase in resident credit. The People's Bank of China continually implemented robust and flexible monetary policies, lowered the reserve ratio and interest rate twice, adopted structural instruments to keep liquidity adequate at a reasonable level, and guided financial institutions to refine credit structures, thus supporting the key areas and weak links of the real economy. 2024 saw reasonable growth in monetary credit and social financing. Banks' credit structures continued to improve, and their total credit maintained a reasonable growth.

Specifically, the book value of domestic banks' loans and advances at the end of 2024 was RMB141.13 trillion, an increase of RMB6.76 trillion or 5.03% from the beginning of the year. The growth rate of loan supply decreased by 0.25 percentage points year-on-year. SPD Bank's loan supply growth rate rose compared with 2023, while the rest of the domestic banks' growth rates dropped. SPD Bank's loan supply growth rate rose by 2.88 percentage points with the highest rate, while ABC's growth rate dropped 8.72 percentage points with the lowest rate.

At the end of 2024, foreign banks' book value of loans and advances was RMB42.00 trillion, up RMB1.22 trillion from the beginning of the year, an average increase of 3.00%, and their loan supply growth rate dropped 3.27 percentage points year-on-year. JPM's and Citi's loan book value growth rate decelerated; WFC's fell to -1.10%; HSBC's turned positive; BNP's growth rate of 6.98% was the highest among foreign banks (in the original currency).

In 2024, domestic banks continued to follow policies that emphasized structural easing and real-economy support. While sustaining reasonable credit growth, they emphasized supply balance and structural optimization to direct financial resources to key sectors. This enabled them to strike a dynamic balance between monetary policy independence and support for the real economy. Ongoing geopolitical conflicts, high interest rates in major economies, and other factors weakened global economic growth momentum. Against this background, foreign banks' credit assets were scaled up slightly, but their growth rates slowed.

Figure 3: Book Value of Loans and Advances

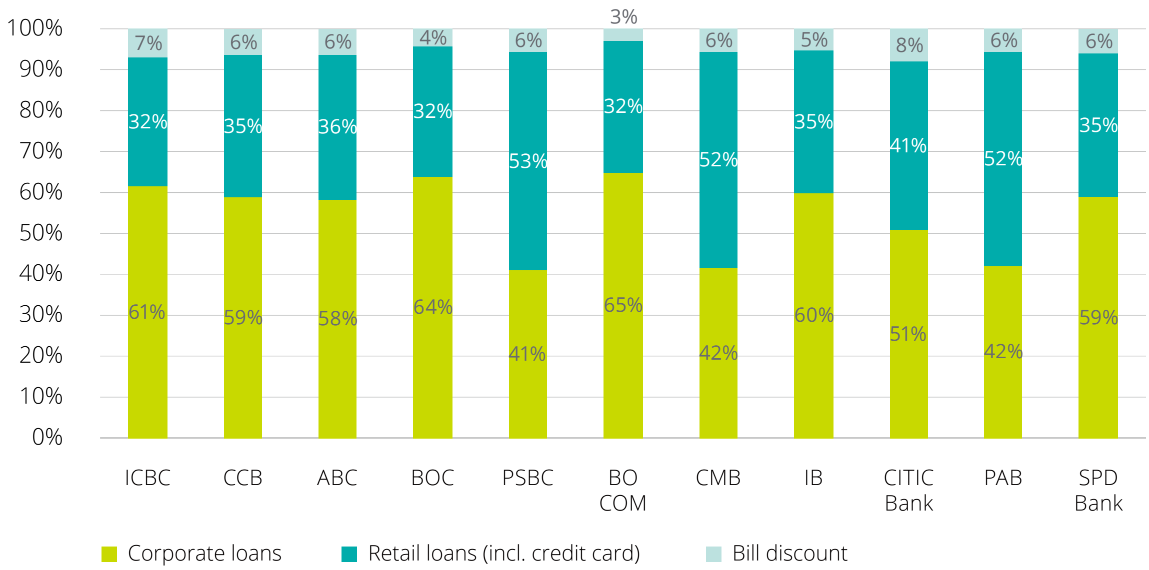


Note: Foreign banks' book value of loans and advances was calculated in the original currency.

Banks persistently served the real economy and enhanced credit assets' structural optimization

Regarding credit structure, the People's Bank of China cut reserve requirement ratios and interest rates and adopted structural instruments to guide targeted credit supply. Domestic banks persistently served the real economy, ensured steady credit expansion, and optimized credit structure. At the end of 2024, domestic banks' corporate loan, retail loan, and bill discount balances, on average, accounted for 57.89%, 36.36%, and 5.75%, up 4.97, down 4.99, and up 0.02 percentage points, respectively, from the beginning of the year. BOCOM recorded the highest proportion of corporate loans (65.07%); PSBC had the highest proportion of retail loans (53.53%), followed by CMB's 52.91%; CITIC Bank recorded the highest proportion of bill discount business (7.87%).

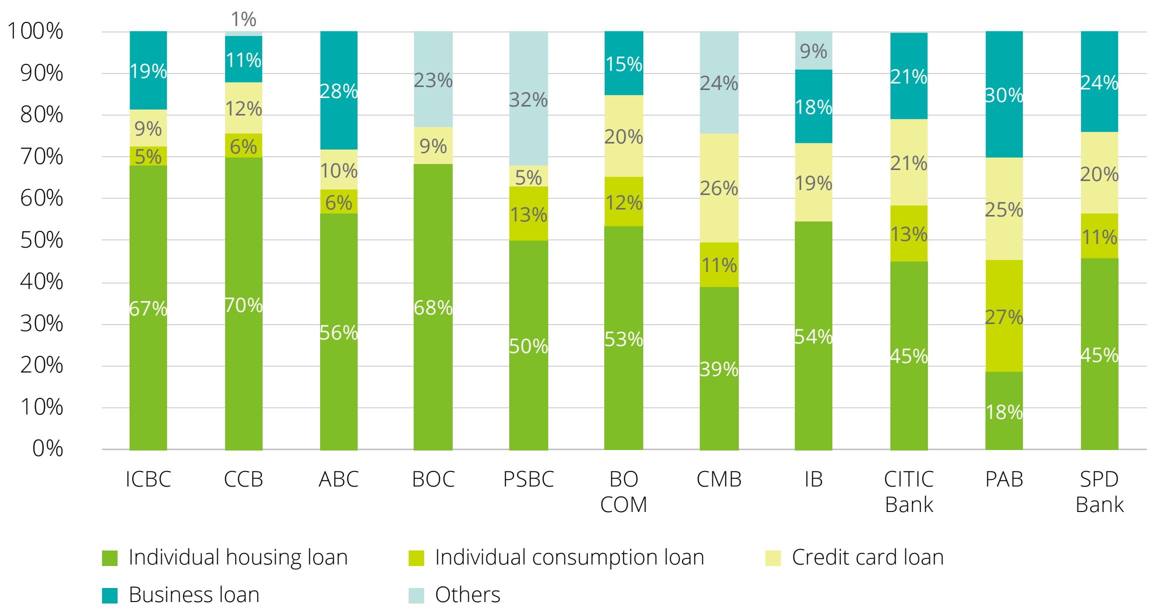
Figure 4: Credit Asset Composition at the End of 2024



Regarding the composition of retail loans, the average proportion of domestic banks' individual housing loans at the end of 2024 was 57.98%, up 3.28 percentage points from the beginning of the year; the average proportion of individual consumption loans was 7.17%, down 9.63 percentage points; the average proportion of credit card loans was 12.70%, down 3.10 percentage points. In 2024, affected by economic recession and weak consumer sentiment, the average proportions of individual consumption and credit card loans dropped, but individual housing loans accounted for a higher proportion. That was due to loosened real estate policies, and banks' gradual adoption of innovative financial products such as "trade-in" loan model, to attract residents to reallocate their assets.

In 2023, the real estate market adjustment slowed the growth of individual housing loans. However, in 2024, favorable policies and improved market expectations led to a steady recovery in individual housing loans. Individual housing loans were still the six state-owned banks' most significant retail loan business, accounting for 62.83%, on average, down 2.84 percentage points from the beginning of the year. The average proportion of joint-stock banks' individual housing loans was 40.86%, up 2.61 percentage points.

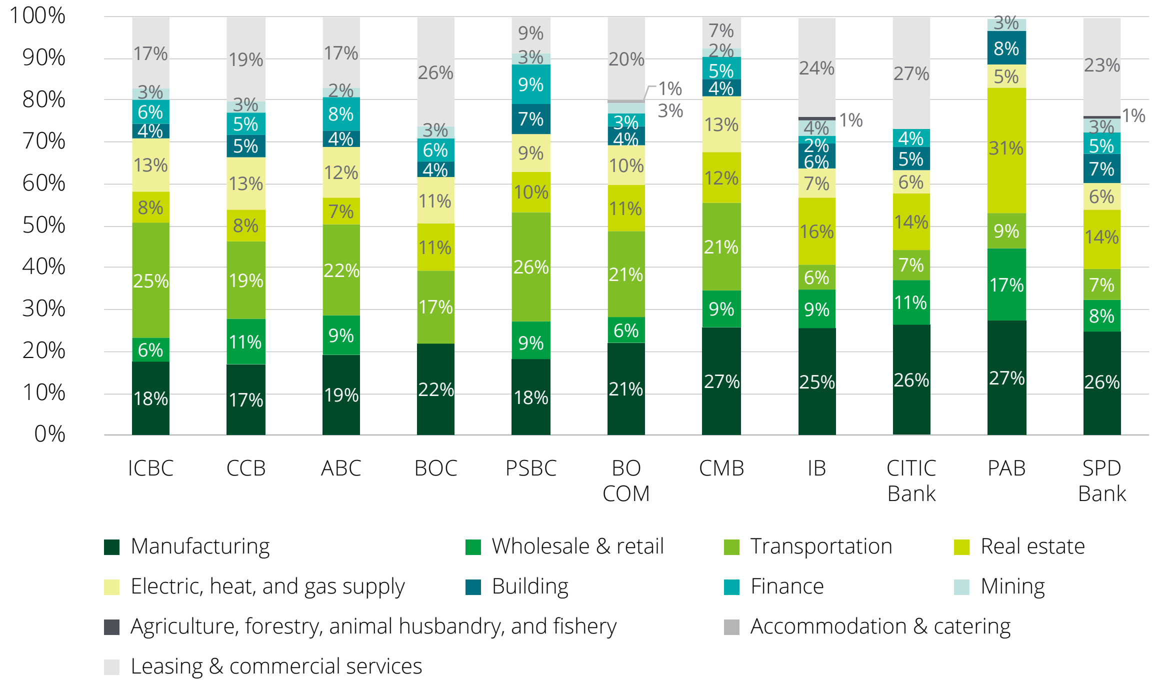
Figure 5: Retail Loan Composition at the End of 2024



In 2024, domestic banks implemented major national strategies, continued to optimize the corporate loan structure, stepped up efforts to support the real economy, and invested more funds in manufacturing (especially high-tech and green finance), leasing & commercial services, and transportation to adapt to the country's industrial structure adjustment. Credit supply for manufacturing, leasing & commercial services, and transportation increased significantly. Manufacturing and leasing & commercial service loans increased by RMB1.29 trillion compared with the beginning of the year; loans for transportation increased by RMB1.12 trillion.

In 2024, the real estate market transitioned to a new model. China introduced tailored credit incentives for major urban clusters to support the stable and healthy development of the real estate market. The central authorities' easing of policies and continuous regulation relaxation boosted residents' purchasing demand, leading to an increase in domestic banks' real estate loan scale. Domestic banks' real estate loans increased by RMB398.8 billion compared with the beginning of the year. The growth rate was 5.92%, up 1.80 percentage points year-on-year, and was much lower than the average loan growth rate of 12.31%. At the end of 2024, the proportion of real estate loans was 9.50%, down 0.38 percentage points from the beginning of the year. Domestic banks' real estate loan proportions trended up slightly, fueled by favorable policies.

Figure 6: Corporate Loan Composition at the End of 2024



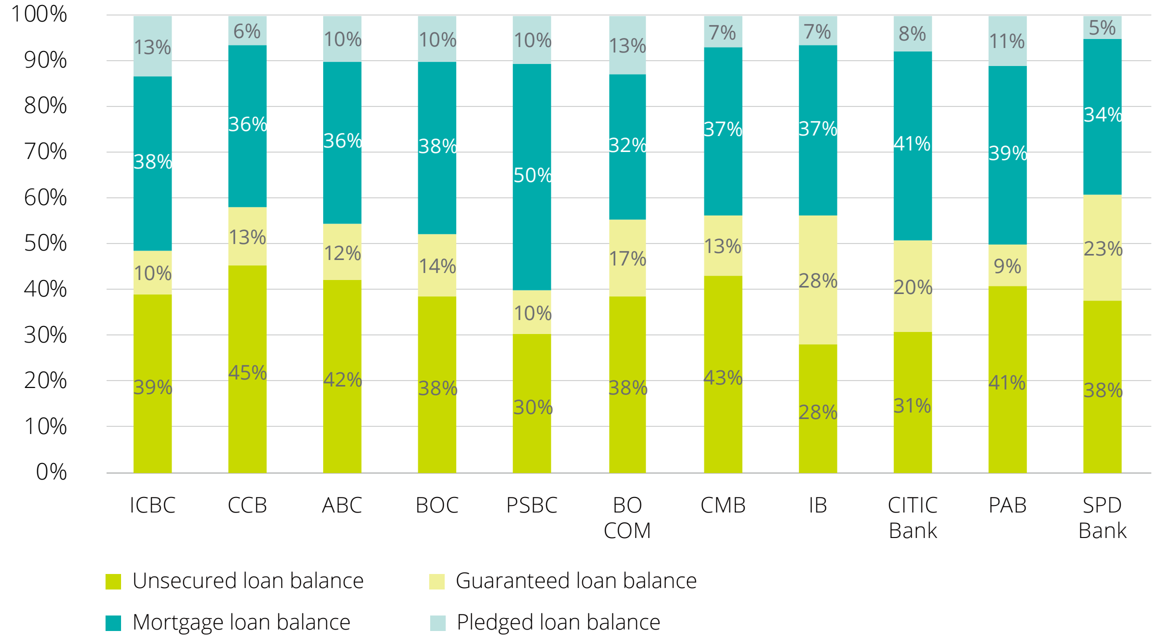
Note: BOC did not separately disclose loans to the wholesale & retail sector. PAB did not separately disclose loans to the leasing and commercial services sector.

Domestic banks' credit structure continued to improve, with unsecured loans increasing steadily

In 2024, domestic banks vigorously embraced the guiding principles of the Central Financial Work Conference, continually refining and upgrading their credit structures while pioneering new service models. Through intensifying the financial sector's supply-side reform, they've channeled increased financial resources into the key sectors and vulnerable areas of the real economy, supporting high-quality economic development. At the end of 2024, the average proportions of domestic banks' unsecured loan, guaranteed loan, mortgage loan, and pledged loan were 39.58%, 13.35%, 37.39%, and 9.68%, up 4.30, down 0.05, down 1.32, and up 0.52 percentage points, respectively, from the beginning of the year, indicating a tendency towards unsecured loans.

Domestic banks' proportions of unsecured loans rose, except for PSBC, IB, SPD Bank, CITIC Bank, and PAB. CCB's proportion (45.41%) was the highest. At the end of 2024, the six state-owned banks' average proportion of unsecured loans stood at 40.37%, up 3.82 percentage points. Joint-stock banks' average proportion was 36.01%, down 0.48 percentage points.

Figure 7: Credit Assets at the End of 2024

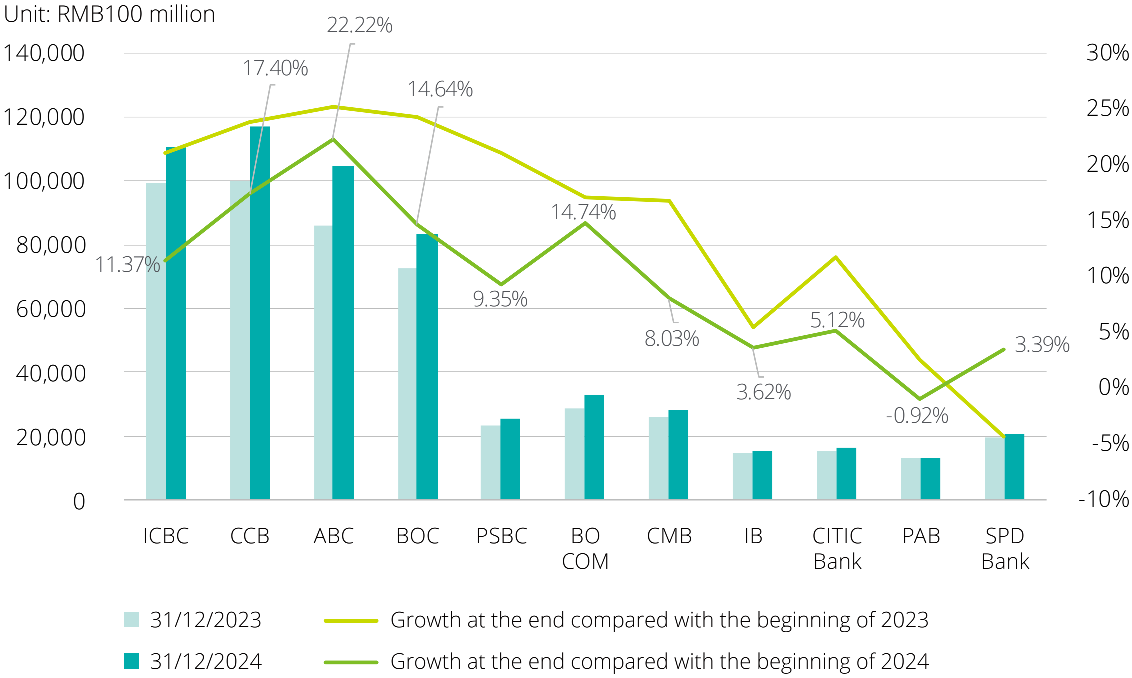


Note: ICBC, CCB, ABC, BOC, and BOCOM did not separately disclose their bill discount balances, which were included in their unsecured, guaranteed, mortgage, and pledged loans.

Domestic banks' total balance of unsecured loans at the end of 2024 was RMB56.74 trillion, an increase of RMB6.87 trillion or 13.78% from the beginning of the year, marking the second year of growth, though at a lower rate than in 2023. The six state-owned banks' average growth rates of unsecured loans in 2024 and 2023 were 14.95% and 22.09%, respectively, indicating an upward trend for two consecutive years. Joint-stock banks' average growth rates in 2024 and 2023 trended down, respectively at 3.85% and 9.11%. In general, domestic banks' balances of unsecured loans climbed, while the six state-owned banks' and joint-stock banks' growth rates fell. However, the growth rate of SPD Bank turned positive (3.39%) in 2024. PSBC recorded the most significant drop of 11.75 percentage points. ABC's growth rate (22.22%) was the highest among domestic banks.

In 2024, banks adjusted their credit supply strategies with varied priorities. Specifically, all domestic banks except for PAB increased unsecured loans. ICBC, CCB, ABC, and CMB reduced guaranteed loans; ICBC, BOCOM, CMB, and SPD Bank increased pledged loans. Except for PSBC, IB, SPD Bank, CITIC Bank, and PAB, the proportions of unsecured loans in the rest of the domestic banks climbed. All domestic banks continually attached importance to unsecured loans.

Figure 8: Balance of Unsecured Loans

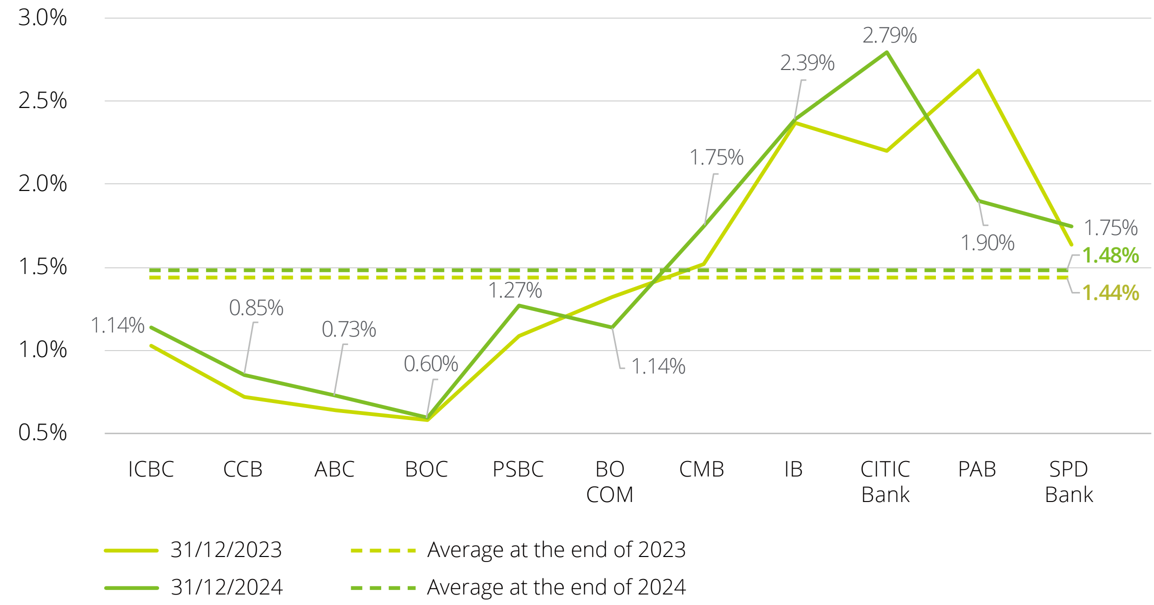


At the end of 2024, domestic banks' average ratio of overdue unsecured loans was 1.48%, up 0.04 percentage points from the beginning of the year. The gap between the six state-owned and joint-stock banks' ratios of overdue unsecured loans narrowed. At the end of 2024, the state-owned and joint-stock banks' average ratios were 0.95% and 2.12%, respectively, up 0.06 and 0.03 percentage points from the beginning of the year. Therefore, the average ratio gap narrowed to 1.17 percentage points at the end of 2024, down 0.02 percentage points from the beginning of the year. BOCOM's and PAB's ratios of overdue unsecured loans fell, while the rest of the banks' ratios rose slightly. CITIC Bank's ratio increased most by 0.59 percentage points. BOC's ratio (0.60%) was still the lowest despite a mild rise.

In general, as domestic banks' unsecured loan balances grew rapidly, their ratios of overdue unsecured loans rose slightly. Their credit quality was challenged, but relevant risks were controllable. While strengthening the supply of unsecured loans, domestic banks recorded a higher ratio of overdue loans.

Among domestic banks, the six state-owned banks still dominate the unsecured loan sector, while joint-stock banks are increasing their loan supply. Domestic banks' ratio of overdue unsecured loans rose slightly in 2024, indicating that relying solely on expansion may jeopardize asset quality. To optimize the credit structure and enhance sustainability, banks should strengthen their intelligent risk control capabilities and improve digital risk control levels.

Figure 9: Ratio of Overdue Unsecured Loans

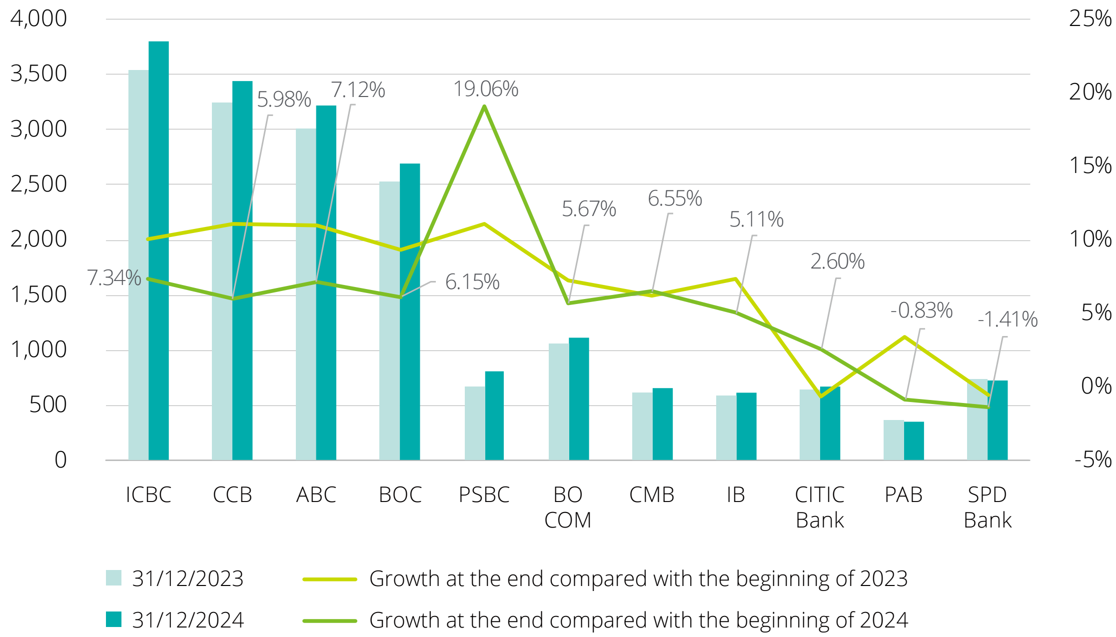


Credit asset quality remained robust, demonstrating risk-resistance capability

In 2024, domestic banks continued to improve their risk management systems and ramped up efforts to dispose nonperforming assets, achieving initial success in risk control in critical areas such as the real estate sector and local governments' financing platforms. Banks maintained overall asset quality stability. At the end of 2024, domestic banks' balance of nonperforming loans totaled RMB1,809.6 billion, an increase of RMB108.6 billion or 6.38% from the beginning of the year. Specifically, the six state-owned banks' and joint-stock banks' balances of nonperforming loans totaled RMB1,507.1 billion and RMB302.5 billion, an increase of RMB101.2 billion or 7.20%, and RMB295.1 billion or 2.49%, respectively, from the beginning of the year.

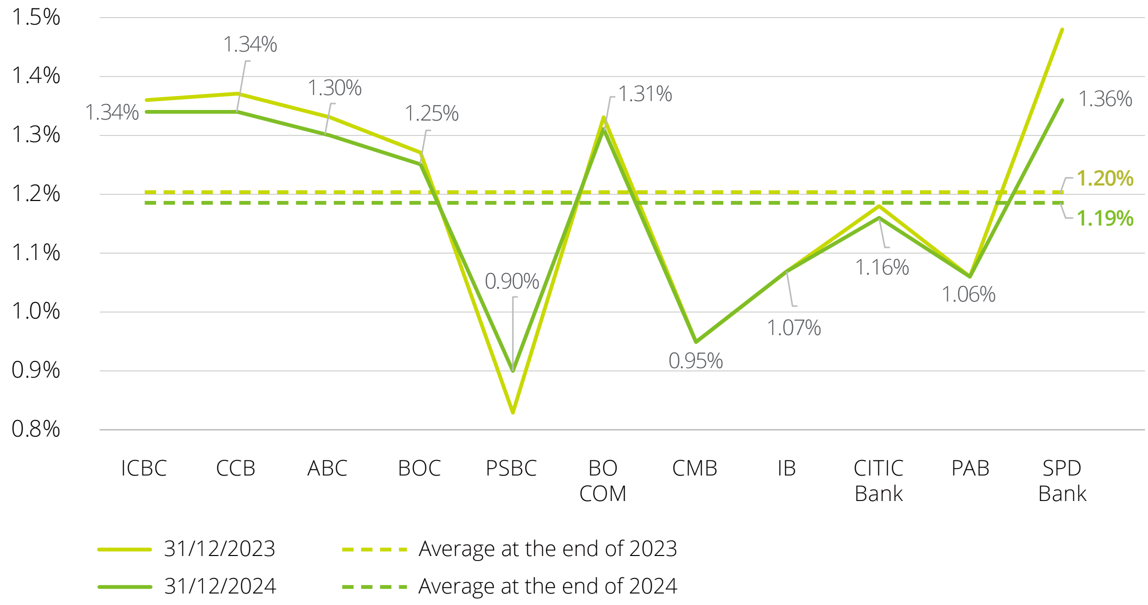
Figure 10: Nonperforming Loan Balance

Unit: RMB100 million



Domestic banks' average nonperforming loan ratio was 1.19%, down 0.01 percentage points from the beginning of the year. The nonperforming loan ratio of PSBC rose by 0.07 percentage points, while that of the rest of the banks dropped. Specifically, SPD Bank's ratio fell by 0.12 percentage points, the largest drop among domestic banks; PSBC's ratio (0.90%) remained the lowest; CMB's ratio remained at 0.95%. Domestic banks' nonperforming loan balances increased, but their nonperforming loan ratios steadily dropped. Domestic banks' credit asset quality remained stable.

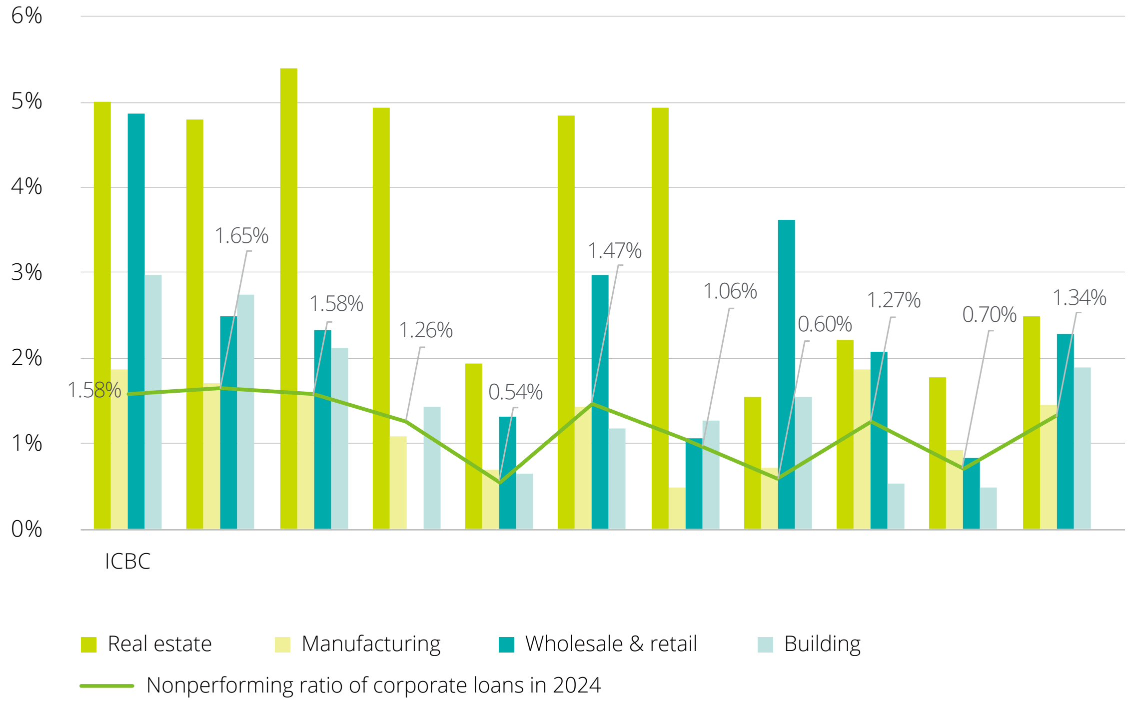
Figure 11: Nonperforming Loan Ratio



Real estate credit risk dropped steadily; asset quality in key areas further improved

In 2024, China's economy sustained its upward trajectory, and market entities exhibited heightened business vitality. Domestic banks comprehensively strengthened risk control of financial assets, strictly followed regulatory classification standards, optimized credit asset structures, and continuously improved nonperforming asset disposal efficiency using diverse channels and innovative measures. Banks' credit asset quality remained stable despite the complex environment. At the end of 2024, domestic banks' average nonperforming ratio of corporate loans was 1.19%, down 0.14 percentage points from the beginning of the year. SPD Bank's nonperforming loan ratio fell by 0.33 percentage points, the largest drop; the nonperforming ratios of PSBC, PAB, and IB were below 1%. The nonperforming loan ratio of the wholesale & retail sector climbed, while those of other sectors dropped from the beginning of the year.

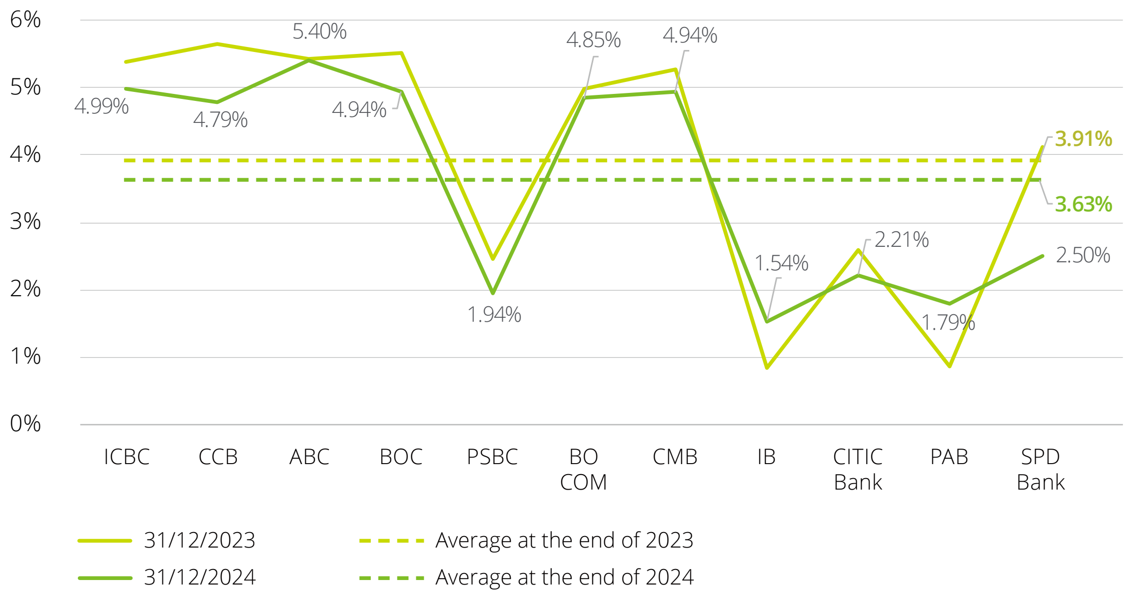
Figure 12: Industries with a Higher Nonperforming Loan Ratio at the End of 2024



Note: BOC did not disclose its nonperforming loan ratio in the wholesale & retail sector; CITIC Bank did not disclose its nonperforming loan ratio in the mining sector.

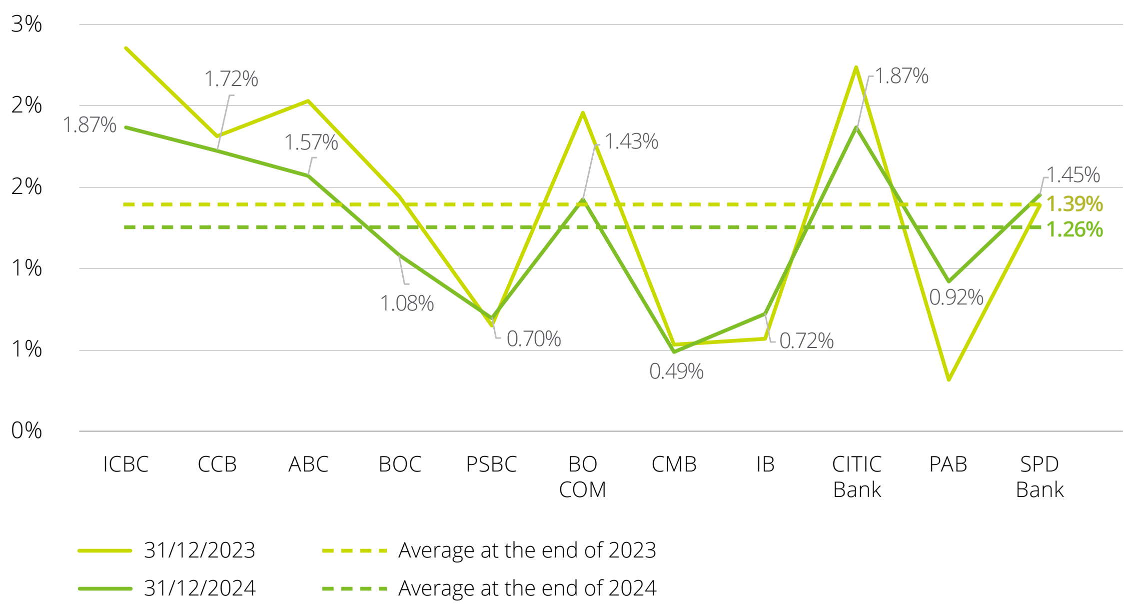
The real estate industry has been undergoing in-depth adjustments since 2024, with accumulated credit risks steadily surfacing. Some highly leveraged real estate enterprises delayed debt restructuring, and bond defaults sporadically emerged in both domestic and foreign markets. However, domestic banks' differentiated credit strategies ensured reasonable financing support for high-quality real estate enterprises and "whitelist" projects. Therefore, their non-performing loan ratio's growth slowed from 2023. At the end of 2024, domestic banks' average nonperforming loan ratio in the real estate sector was 3.63%, down 0.28 percentage points from the beginning of the year. Domestic banks' real estate risk exposures are polarized. IB's and PAB's nonperforming ratios climbed continually. IB recorded the lowest nonperforming ratio of 1.54%. Other banks' nonperforming ratios decreased, with SPD Bank recording the sharpest decline of 1.61 percentage points.

Figure 13: Nonperforming Loan Ratio in the Real Estate Sector



In 2024, domestic banks optimized credit resource allocation, focusing on key industries, regions, and customers. Nonperforming loan ratios in some key industries, such as the manufacturing sector, dropped. At the end of 2024, the average nonperforming ratio of loans to manufacturing enterprises was 1.26%, down 0.13 percentage points from the beginning of the year. Banks achieved notable results in adjusting their credit structures.

Figure 14: Nonperforming Loan Ratio in the Manufacturing Sector



Real estate sales pressure persisted; nonperforming ratio fell, with risks being controllable yet structural adjustment pressures lingered

In 2024, China's real estate market kept undergoing in-depth adjustments, with sales initially dropping and then rising. In Q1, the Spring Festival and insufficient market confidence led to a 25% year-on-year sales decline for the top 100 real estate enterprise, marking a recent low. From Q2 onwards, favorable policies have stabilized real estate markets in core cities, leading to a recovery in the typical sales peaks of September and October. The total floor area of sold units remained at roughly 1.2 billion square meters, decreasing by 5% from 2023. The Central Economic Work Conference specified the overarching goal of "building a new development model for the real estate sector," shifting the focus from "supporting the market to prevent risks" to "reforming existing practices while introducing new measures." Authorities continued to bolster demand-side policies and deepen supply-side reforms in parallel, spurring homebuying among residents.

In 2024, real estate regulatory policies continued to ease and efforts to ease industry pressures intensified. The sector gradually recovered, and the overall market entered a new phase marked by "hitting a low point, stabilizing, and undergoing structural changes." That year, national real estate investment amounted to RMB10,028.0 billion, down 10.60 percentage points from 2023; residential housing investment declined by 10.50 percentage points. The total floor area of sold newly built units amounted to 973.85 million square meters, decreasing by 12.90 percentage points; newly built commercial housing sales amounted to RMB9,675.0 billion, decreasing by 17.10 percentage points; residential housing sales decreased by 17.60 percentage points. The homebuyer confidence index among residents rebounded by 0.09 percentage points from the end of 2023, but it was still below the critical level.

In 2024, domestic banks actively implemented the country's guidelines and regulatory requirements for real estate credit. They adopted differentiated policies based on cities' local conditions, lowered outstanding mortgage interest rates, and actively supported residents' rigid and housing-improving needs, to promote the stable development of the real estate market. The residential property purchase market began recovering. As a result, domestic banks' individual housing loans rose slightly compared with the beginning of the year, though the nonperforming ratio also increased marginally. At the end of 2024, the total balance of domestic banks' individual housing loans reached RMB30.59 trillion, up RMB180.6 billion or 0.59% from the beginning of the year. All other domestic banks' individual housing loan balances increased except ICBC, CCB, and ABC. Among them, BOC had the largest increase of 11.82%, followed by PAB's 7.42%. At the end of 2024, domestic banks' average nonperforming ratio of individual housing loans was 0.70%, up 0.17 percentage points from the beginning of the year. Among them, CITIC Bank recorded the highest nonperforming ratio of 1.25%; SPD Bank's nonperforming ratio rose most by 0.33 percentage points.

Figure 15: Balance of Individual Housing Loans

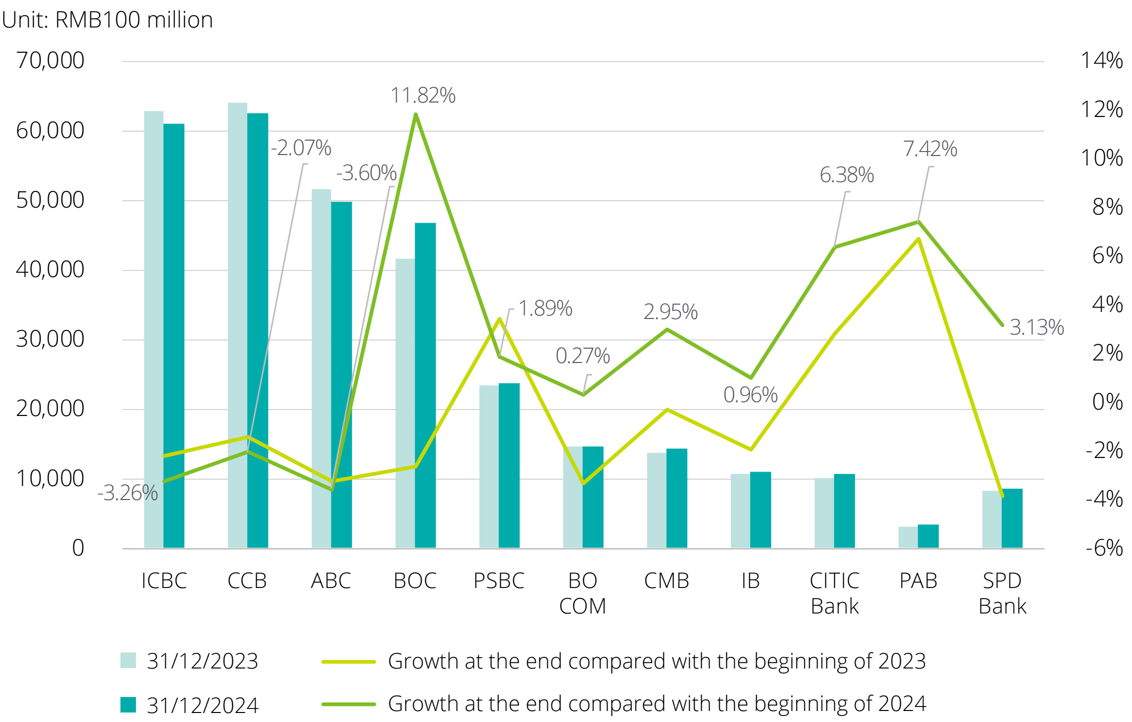
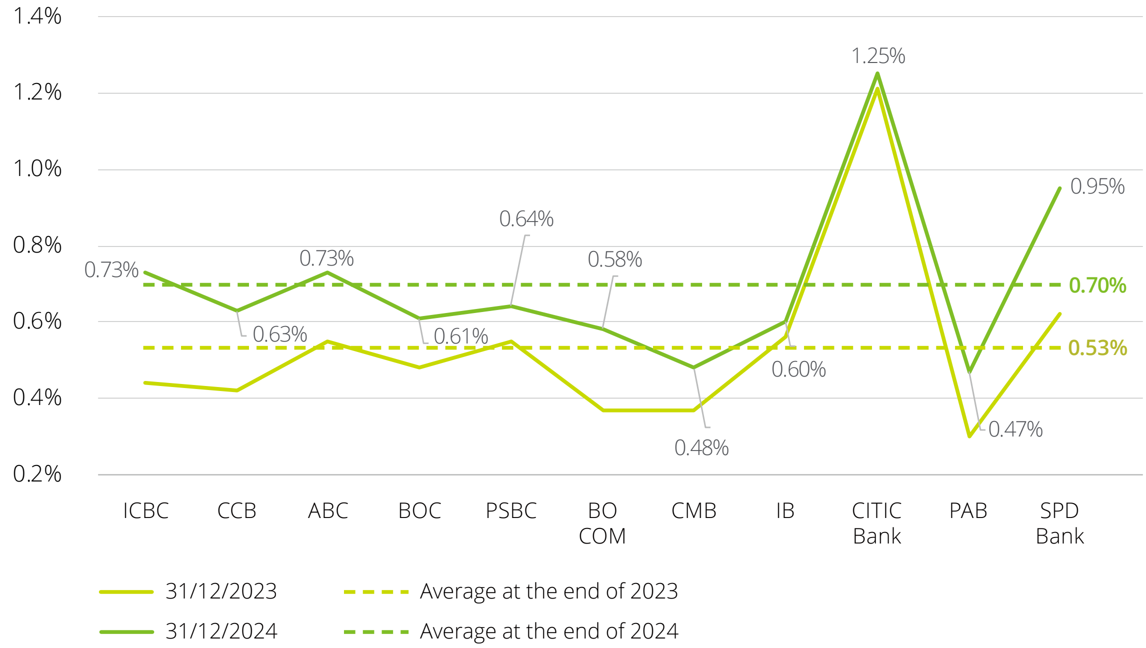


Figure 16: Nonperforming Ratio of Individual Housing Loans



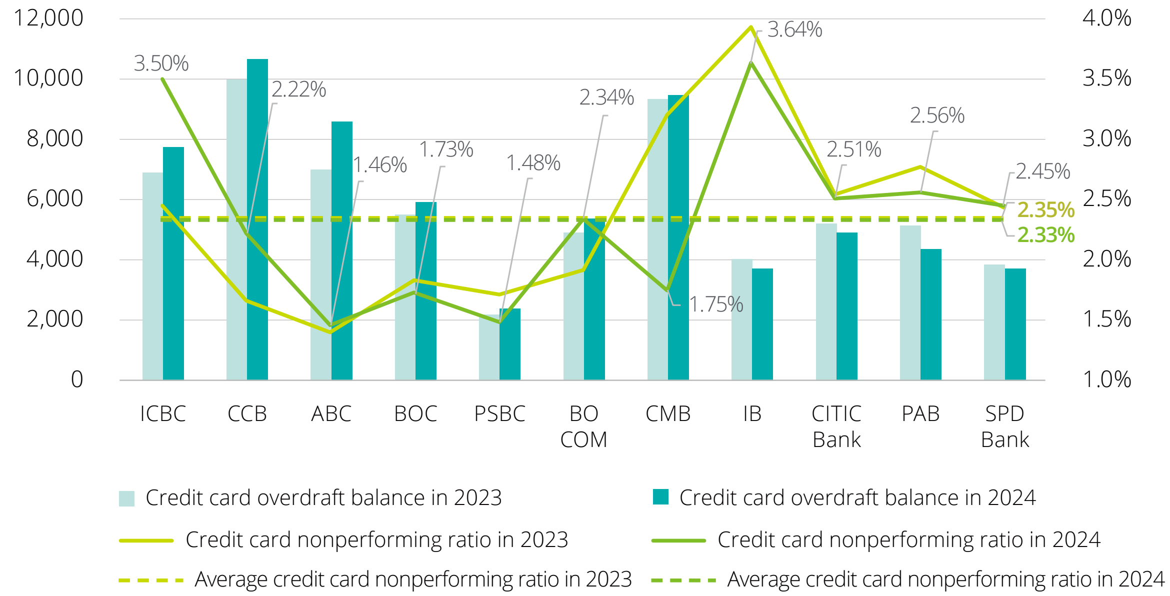
The credit card business scale and nonperforming ratio rose slightly, exposing risk management and control pressure

In 2024, amid a modest economic uptick and a tiered consumption landscape, the outstanding balance of bankcard credit in China's banking sector increased by 3.2% to RMB8.5 trillion. However, the credit card payment overdue by half a year or more rose by 12% year-on-year due to structural pressures on the job market, heightening risk management and control pressures. According to PBC's Payment System Report (2024), the total bankcard credit line was RMB22.90 trillion, a year-on-year increase of 1.06%; the outstanding balance of bankcard credit was RMB8.71 trillion, up 0.23% year-on-year; the credit card payment overdue by half a year or more totaled RMB123.964 billion, up 26.32 percentage points year-on-year. The total balance of domestic banks' credit card loans reached RMB6.04 trillion at the end of 2024, increasing by RMB212.7 billion from the beginning of the year, representing a growth rate of 3.65%. Domestic banks' scales of credit card loans changed divergently. Specifically, IB, SPD Bank, CITIC Bank, and PAB recorded varying declines, while the rest of the domestic banks' credit card loans were scaled up. ABC registered the highest growth rate of 22.68%, while PAB recorded the most remarkable decline of 15.39%. CMB's credit card loans exceeded RMB940.0 billion, second only to CCB's RMB1.07 trillion.

Domestic banks' average credit card nonperforming loan ratio was 2.33% at the end of 2024, down 0.02 percentage points from the beginning of the year. Specifically, ICBC's, CCB's, ABC's, BOCOM's, and SPD Bank's nonperforming ratios climbed, while other banks' ratios dropped. Among them, ICBC's and CCB's nonperforming ratios increased by 1.05 and 0.56 percentage points, respectively, to 3.50% and 2.22%; IB and PAB recorded relatively higher nonperforming ratios, respectively at 3.64% and 2.56%.

Figure 17: Credit Card Overdraft Balance and Nonperforming Loan Ratio

Unit: RMB100 million

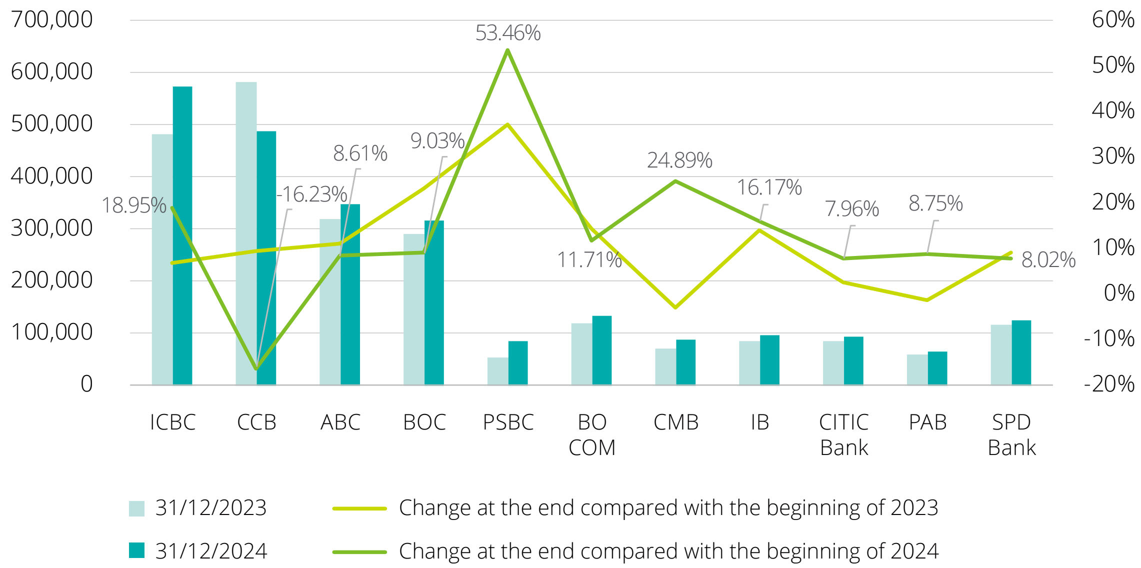


Special-mention loan balance rose but migration ratio varied, with increasing pressure on potential nonperforming loans

Domestic banks' special-mention loans increased in 2024, with a total balance of RMB2.42 trillion, up RMB147.2 billion from the beginning of the year, representing an average increase of 6.49%. Specifically, the six state-owned banks' special-mention loan balance totaled RMB1.94 trillion, an increase of RMB94.3 billion or 5.10%. Among them, ICBC recorded the most significant increase of RMB91.5 billion; PSBC registered the highest growth rate of 53.46%. Joint-stock banks' special-mention loan balance totaled RMB472.2 billion, an increase of RMB52.9 billion or 12.62% (9.29 percentage points higher than 2023). Among them, CMB's and IB's special-mention loans increased by 24.89% and 16.17%, respectively, compared to the beginning of the year. Other joint-stock banks also logged a proportionate increase in their special-mention loan balances.

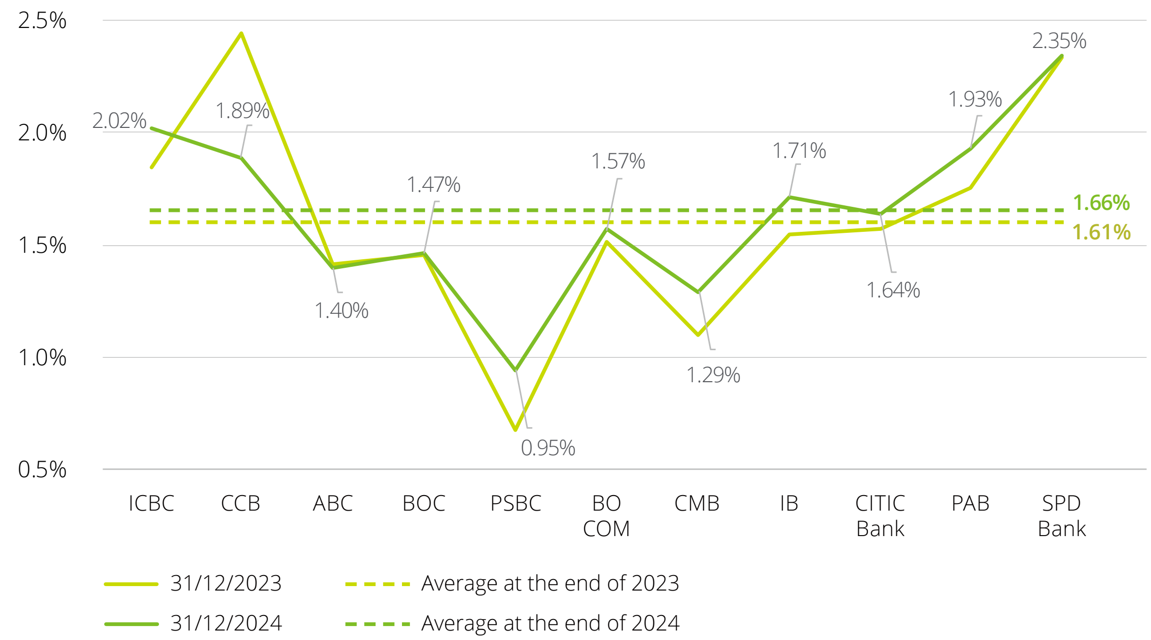
Figure 18: Special-mention Loan Balance

Unit: RMB100 million



The average proportion of domestic banks' special-mention loans was 1.66%, up 0.05 percentage points from the beginning of the year. Specifically, PSBC's proportion remained the lowest among domestic banks, despite a most remarkable rise of 0.27 percentage points to 0.95%; CCB and ABC recorded a declined proportion compared with 2023. The rest of the domestic banks' proportions rose. Among them, CCB's proportion dropped 0.55 percentage points to 1.89%. SPD Bank's proportion remained at 2.35% and was still the highest. In general, the differences between domestic banks' special-mention loan proportions widened.

Figure 19: Proportion of Special-mention Loans



In 2024, the average migration ratio of domestic banks' pass loans was 1.42%, down 0.18 percentage points from 2023. As the national economy improved, banks' migration ratios of pass loans dropped. Among them, CCB had the largest decline of 0.59 percentage points year-on-year. The average migration ratio of special-mention loans was 24.62%, down 4.76 percentage points from 2023. CMB's migration ratio of special-mention loans rose slightly; the remaining banks' down-migration eased. Among them, CITIC Bank recorded the largest migration ratio decline of 10.26 percentage points. In 2024, real estate enterprises' risks were increasingly exposed, consumer demand weakened, and employment stress intensified. Therefore, domestic banks still faced considerable pressure from potential new nonperforming loans.

Overall, all domestic banks' migration ratios of pass and special-mention loans fell except for ICBC, PSBC, and CMB.

Figure 20: Migration Ratio of Pass Loans

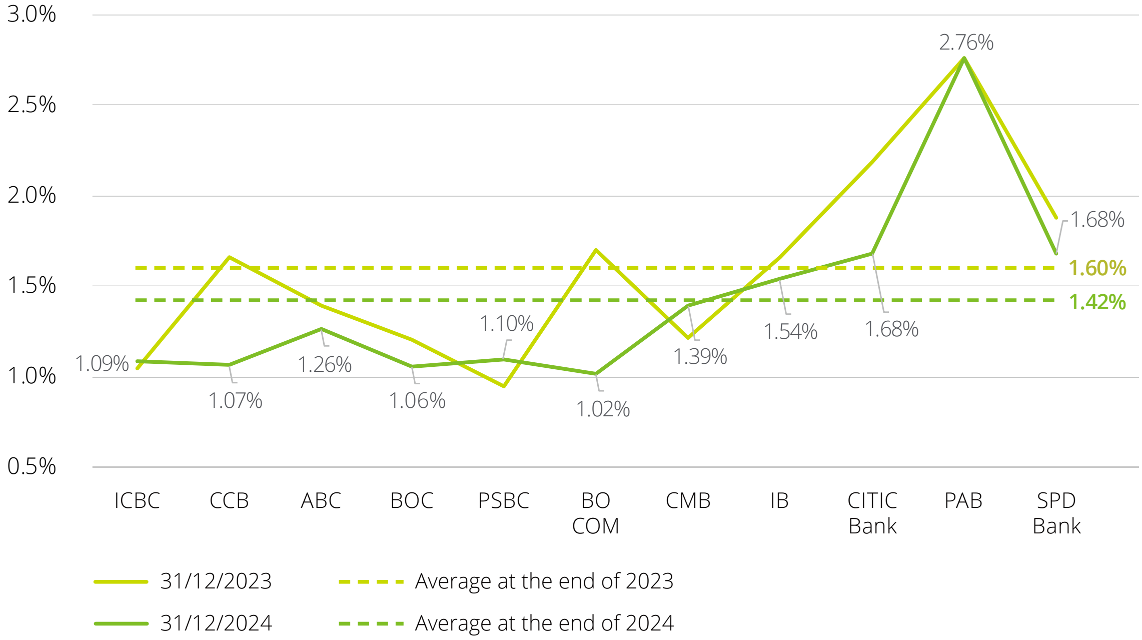
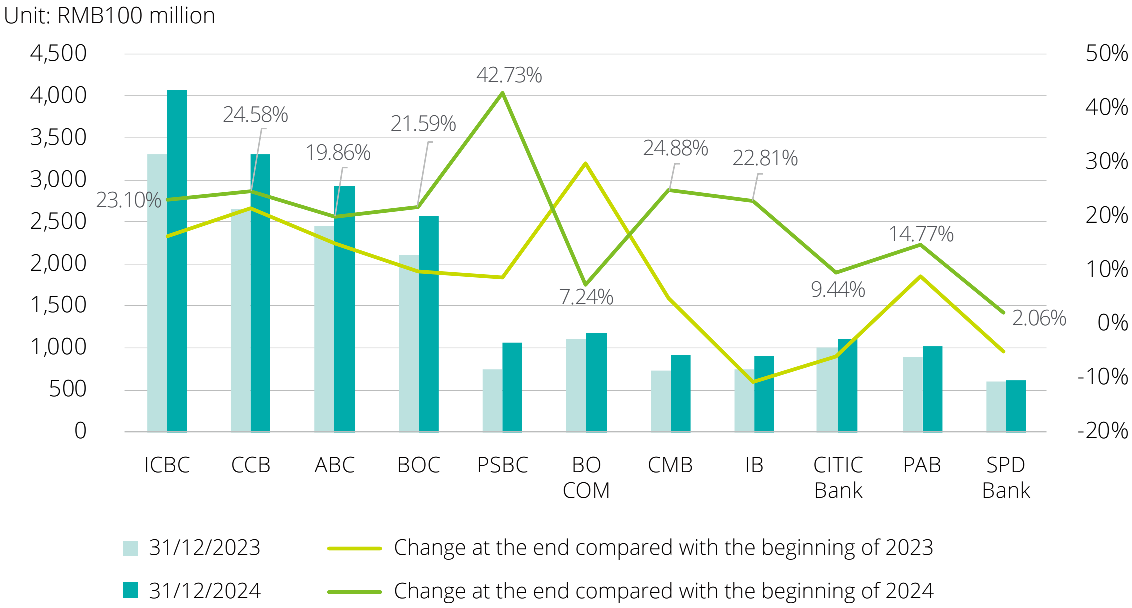


Figure 21: Migration Ratio of Special-mention Loans

Growth rate and proportion of overdue loans increased and the overdue impairment ratio continues to rise

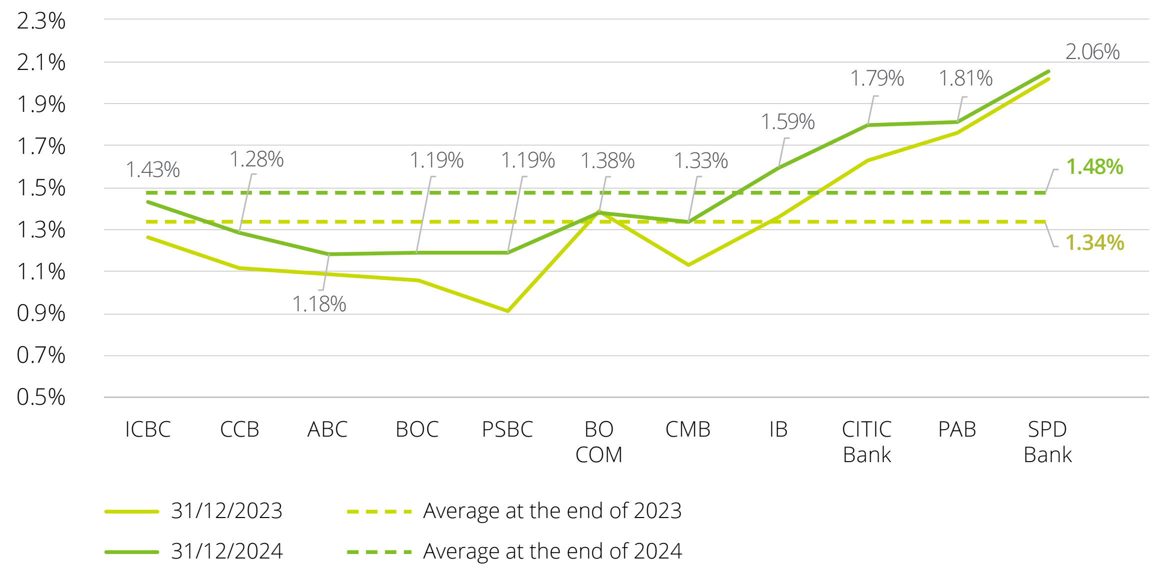
At the end of 2024, domestic banks' overdue loan balance totaled RMB1.97 trillion, an increase of RMB334.6 billion or 20.48% from the beginning of the year. All domestic banks' balances increased. PSBC, CMB, and CCB recorded a relatively higher growth rate of overdue loans, respectively by 42.73%, 24.88%, and 24.58%.

Figure 22: Overdue Loan Balance



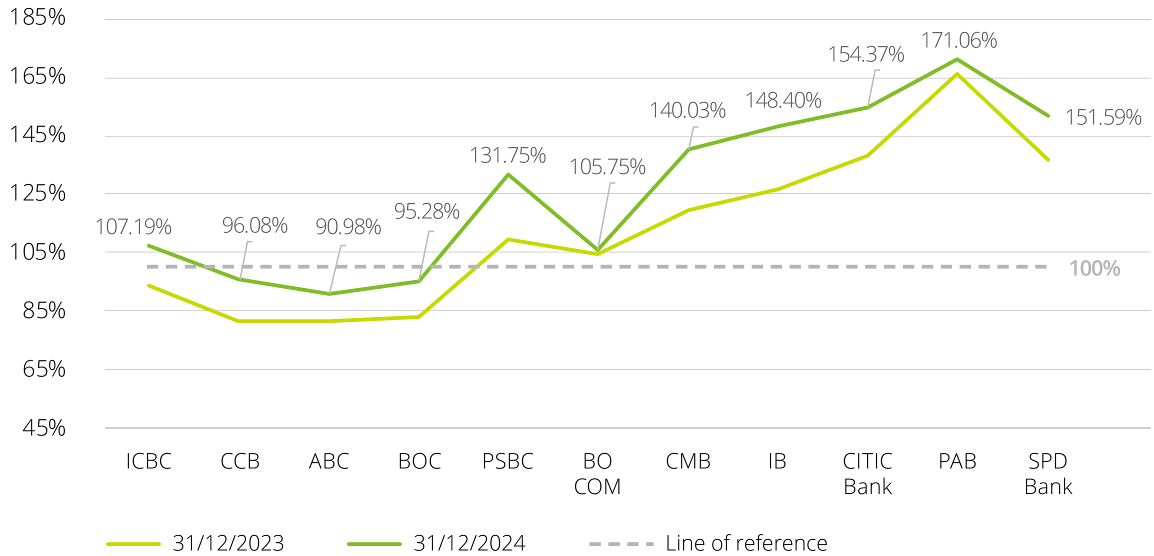
In 2024, domestic banks' average overdue loan ratio was 1.48%, an increase of 0.14 percentage points from the beginning of the year. BOCOM kept its overdue loan ratio steady, while other domestic banks' overdue loan balances and ratios grew.

Figure 23: Overdue Loan Ratio



In 2024, domestic banks' average ratio of overdue loans to nonperforming loans was 126.59%, up 0.14 percentage points from the beginning of the year. All domestic banks had a higher ratio compared with 2023. The highest and lowest ratios were recorded at PAB (171.06%) and ABC (90.98%). All banks' ratios grew by over 10 percentage points except for the four major state-owned banks. PSBC's ratio fell most by 0.22 percentage points.

Figure 24: Ratio of Overdue Loans to Nonperforming Loans



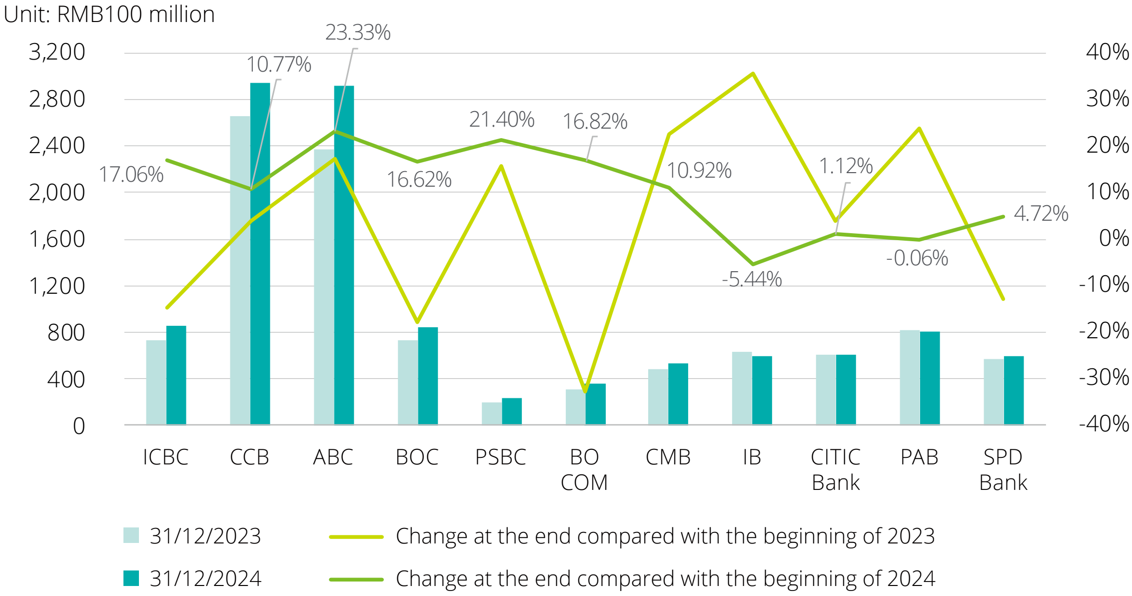
Banks took various approaches to strengthen disposing of non-performing assets and accelerated resolution of risks in key areas

According to the NFRA, in 2024, commercial banks' NPL balance totaled RMB3.3 trillion, an increase of 3.12% from the beginning of the year. Yet, this growth rate fell by 5.02 percentage points from 2023, signaling a notable slowdown in the expansion of NPLs among commercial banks. Amid the real economy's downward pressure, domestic banks cumulatively disposed of more than RMB2 trillion in non-performing assets during 2024, setting a record high. Banks continued to improve credit risk management, strengthened risk control in key areas, and enhanced nonperforming asset disposal quality and efficiency. They adopted various methods, such as recovery, writing-off, debt offsetting, securitization, transfer, restructuring, and debt-to-equity swap, to reduce NPLs, maintaining the industry's average nonperforming ratio at a stable and manageable level.

According to the *Asset-Backed Securities Development Report for 2024* released by China Central Depository & Clearing Co., Ltd. (CCDC) and public data, in 2024, 130 NPL ABS products were issued in the inter-bank public offering market, covering NPLs of credit cards, personal consumption loans, auto loans, individual housing loans, small and micro-loans, and corporate loans, totaling RMB50.867 billion, up 9.15% year-on-year, accounting for 18.81% of the total credit ABS issuance. In 2024, the total principal and interest of NPLs disposed of through asset securitization were RMB318.863 billion, an increase of 16.28% over the previous year. States-owned banks were the main issuers of NPL ABS products in the inter-bank public offering market. The top three issuers of NPL ABC products in 2024 were CCB, BOC, and ABC, totaling RMB20.303 billion, accounting for 39.91% of the total. The NPL ABS products became increasingly diversified. The "ICBC – Goldstate Securities – Yangtze River Delta Maritime Silk Road Phase 1 Green Asset Support Special Program (Yangtze River Delta Integration)" marks China's first usufruct ABS of green port. Its underlying assets are the relevant revenues from Dafeng Port. The program plays a benchmarking and demonstration effect in promoting the development of port green finance.

According to the latest statistics of PBC, the written-off NPLs in the banking sector totaled RMB1.2 trillion, an increase of RMB150.0 billion from 2023. In 2024, domestic banks' loans written off and transferred out totaled RMB1,130.6 billion, a year-on-year increase of RMB122.832 billion or 12.19%. Except for IB and PAB, the rest of the domestic banks' written-off and transferred-out loans grew, with an average increase of 13.64%. Specifically, ABC and PSBC increased by RMB55.3 billion (or 23.33%) and RMB4.2 billion (or 21.40%), respectively; IB's written-off and transferred-out loans decreased by RMB3.5 billion or 5.44%, a significant decline from 2023.

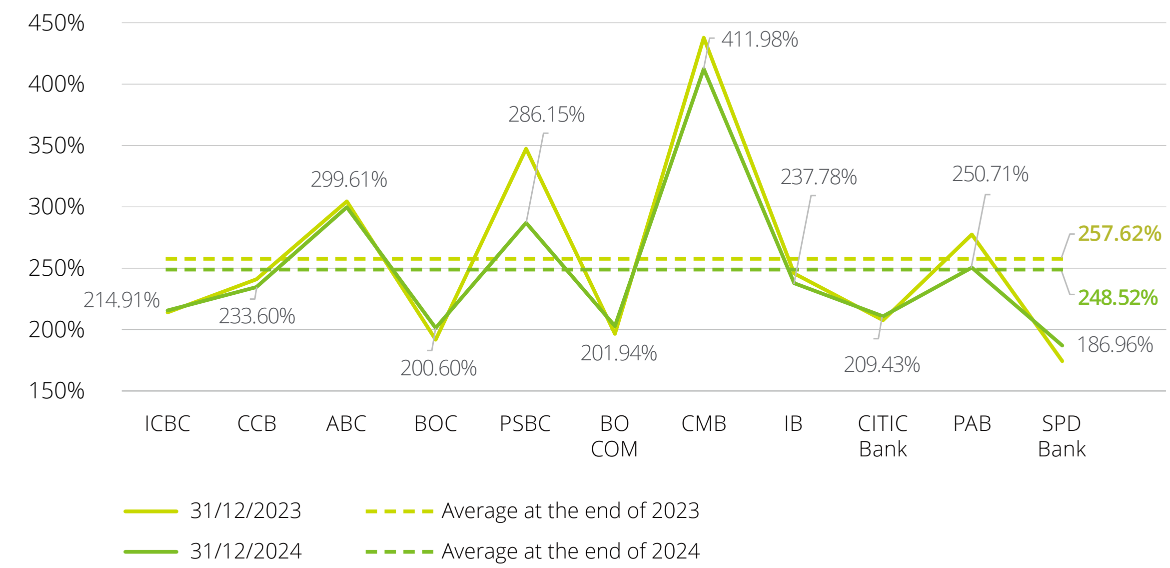
Figure 25: Written-off and Transferred-out Loans



Provision coverage and loan provision ratios decreased slightly with sufficient risk compensation capacity

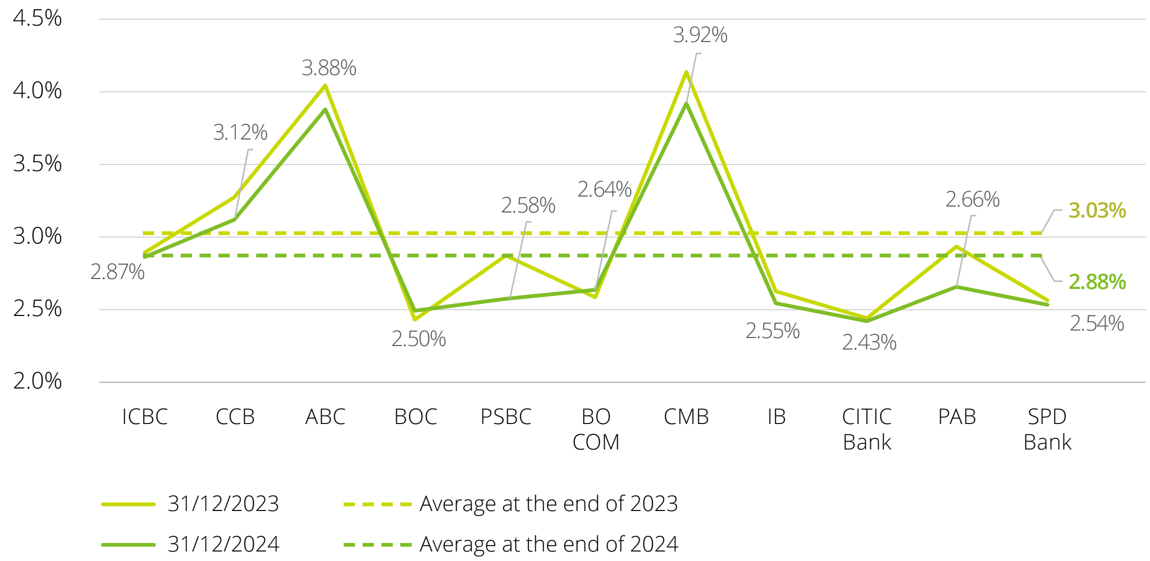
In 2024, domestic bank's average provision coverage and average loan provision ratio were 248.52% and 2.88%, down 9.10 and 0.11 percentage points, respectively, from the beginning of the year. Specifically, ICBC, SPD Bank, and CITIC Bank each exhibited varying growth in their provision coverages. ICBC's provision coverage rose by 0.94 percentage points, whereas its loan provision ratio dropped by 0.03 percentage points. SPD Bank's provision coverage increased by 13.45 percentage points, while its loan provision ratio dropped by 0.03 percentage points. CITIC Bank's provision coverage grew by 1.84 percentage points, but its loan provision ratio declined by 0.02 percentage points. Among domestic banks, BOCOM and BOC recorded increases in both their loan provision ratios and provision coverages, while the remaining banks experienced declines. SPD Bank's year-end provision coverage was 186.96%, lower than other banks. CMB's provision coverage (411.98%) was the highest among domestic banks despite a drop of 25.72 percentage points from the beginning of the year. In 2024, domestic banks' provision coverages declined slightly but remained at high levels. There remain notable disparities in the provision coverage ratios across different banks.

Figure 26: Provision Coverage



In 2024, most domestic banks' loan provision ratios dropped except for BOC and BOCOM. PSBC, PAB, and CMB had a more remarkable decline, respectively by 0.30, 0.28, and 0.22 percentage points, from the beginning of the year.

Figure 27: Loan Provision Ratio

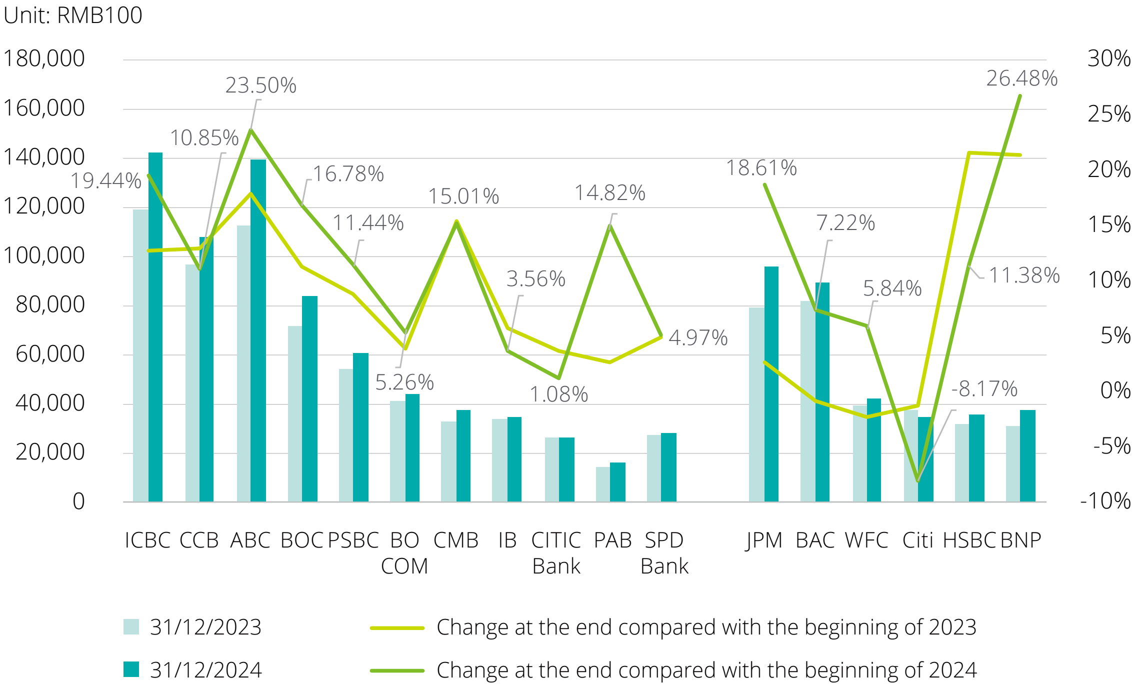


Financial asset investment varied significantly in the changeable and complex external environment

In 2024, the supply of funds in the domestic financial market was generally stable; bond yields dropped. Inflation in major overseas economies was lower than the prior year. The Federal Reserve reduced interest rates by 100 basis points three times, leading to increased fund supply, reduced borrowing costs, and loosening liquidity. At the end of 2024, the book value of domestic banks' financial asset investments totaled RMB71.53 trillion, an increase of RMB8.98 trillion from the beginning of the year, with an average growth rate of 14.37, the growth rates of domestic banks varied. The book value of state-owned banks' financial asset investments totaled RMB57.37 trillion, an increase of RMB8.02 trillion from the beginning of the year, representing an average growth rate of 16.25%. Among them, most banks achieved double-digit growth except for BOCOM. ICBC's and ABC's investment scale exceeded RMB14 trillion and RMB13 trillion, respectively, at the end of the year. The total book value of joint-stock banks' financial asset investments was RMB14.15 trillion, an increase of RMB0.97 trillion from the beginning of the year, with an average growth rate of 7.36%, lower than that of state-owned banks. CMB's and PAB's growth rates were 15.01% and 14.82%, respectively, significantly higher than other domestic joint-stock banks.

The book value of foreign banks' financial asset investments totaled RMB33.14 trillion, an increase of RMB3.41 trillion or 10.29% from the beginning of the year. Most foreign banks' financial asset investment scale increased except for Citi. JPM's book value of financial asset investments rose by RBM1.61 trillion since the year began, outpacing other foreign banks. BNP's financial investment scale grew by above 20% for two consecutive years. HSBC's total financial assets grew by 11.38% from the beginning of the year, though the growth rate was notably slower than 2023.

Figure 28: Financial Asset Investment



Note: Changes in the financial asset investment scale of foreign banks were calculated in the original currency.

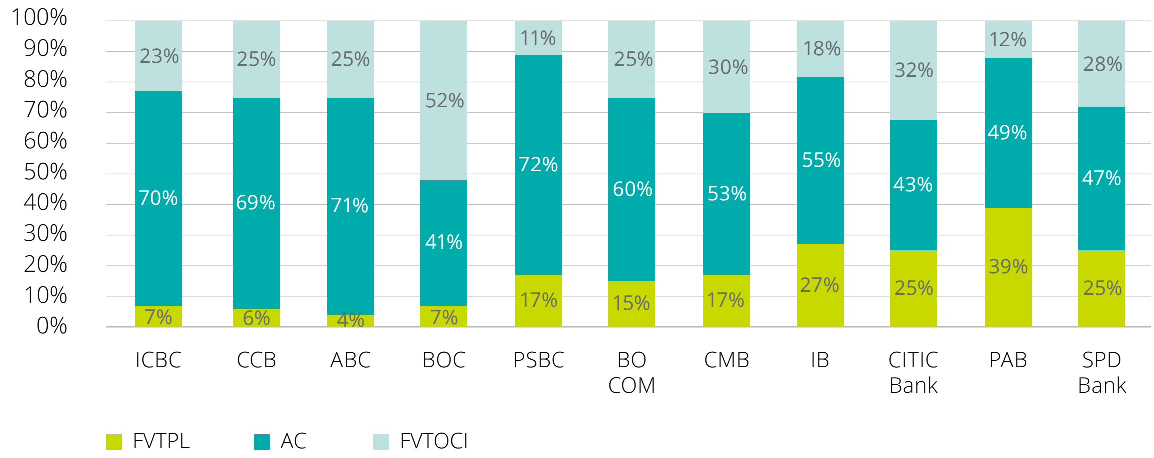
State-owned banks had a higher proportion of financial assets measured at the amortized cost, while joint-stock banks had more financial assets measured at fair value

In 2024, domestic banks' financial asset investment structures (by measurement method) varied significantly. The four major state-owned banks' proportions of FVTPL (fair value through profit and loss) were lower than 10%—lower than that of PSBC and BOCOM, and significantly lower than joint-stock banks' average proportion (26.45%). Among joint-stock banks, PAB's FVTPL accounted for nearly 40%, and IB's, CITIC Bank's, and SPD Bank's accounted for more than 25%. State-owned banks (except for BOC) had a higher proportion of financial assets measured at the amortized cost (AC). Specifically, the proportions of ICBC, ABC, and PSBC exceeded 70%, and CCB's and BOCOM's exceeded 60%. BOC's dropped by 6.62 percentage points compared to the year-end figure of 2023. However, joint-stock banks' average proportion of financial assets measured at the amortized cost was about 49%.

Regarding the FVTOCI (fair value through other comprehensive income) proportion, state-owned banks' averaged 27%. Specifically, BOC had the highest proportion of 52%, up 7.12 percentage points from the prior year-end. Joint-stock banks' average proportion was 24%. Specifically, CITIC Bank's and CMB's each exceeded 30%, and SPD Bank's was 28%.

Generally, as the leading force in financial services, state-owned banks continued to support the development of the real economy; thus, they had a higher proportion of held-to-maturity government bonds and financial assets measured at the amortized cost. Joint-stock banks' financial asset investments were more diversified, with a higher proportion of financial assets measured at fair value.

Figure 29: Financial Asset Investment Structure at the End of 2024 (by Method of Measurement)

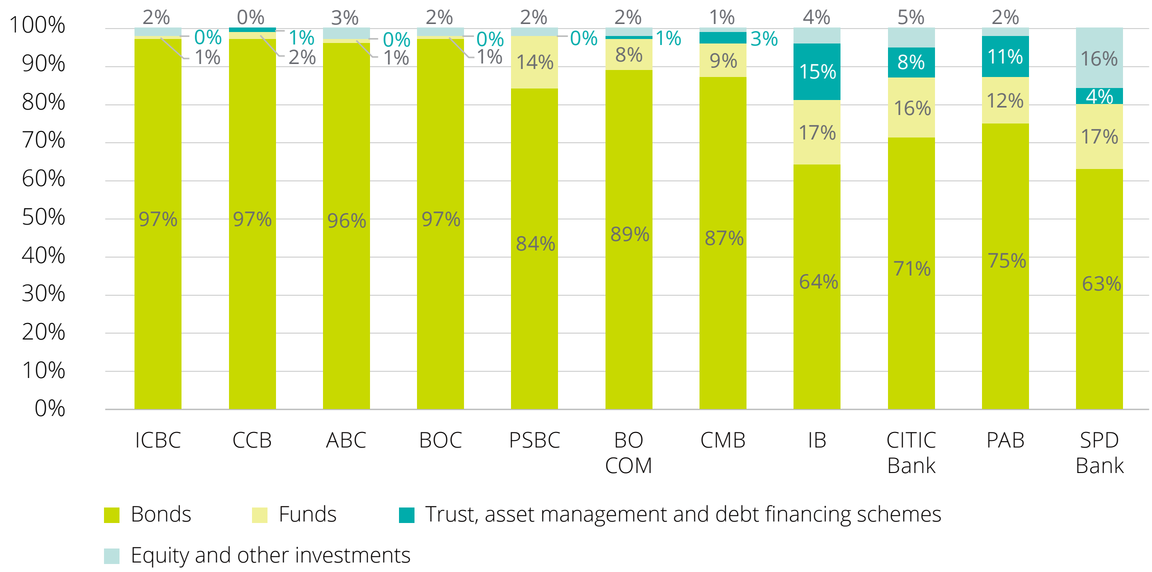


State-owned banks had more proprietary bond investments; joint-stock banks had more investment varieties

At the end of 2024, the four major state-owned banks' proprietary bond investments accounted for more than 95%, and such investments of PSBC, BOCOM, and CMB exceeded 80%. The four major state-owned banks' fund investments were relatively smaller, with an average ratio of only 1.31%; PSBC was the only state-owned bank whose fund investment accounted for more than 10%. Joint-stock banks had a significantly higher average ratio (14.20%) of fund investment; among them, IB's, CITIC Bank's, and SPD Bank's fund investment ratios exceeded 15%, PAB's was about 12%, and CMB's was about 9%; the underlying assets were primarily standard investments such as financial bonds, credit bonds, and interbank certificates of deposit. State-owned banks' proportions of trust, asset management and debt financing schemes were deficient, while such investments of joint-stock banks were about 8.30%; the underlying assets included bond investments and non-standard investments. Major state-owned, commercial, and joint-stock banks' equity and other investments accounted for about 2% on average, primarily including asset-backed securities, equity investment & debt-repaid equity, and interbank wealth management products.

State-owned banks had a dominant proportion of proprietary bond investments, while joint-stock banks mainly allocated their assets through various structured entities.

Figure 30: Financial Asset Investment at the End of 2024 (by Investment Varieties)

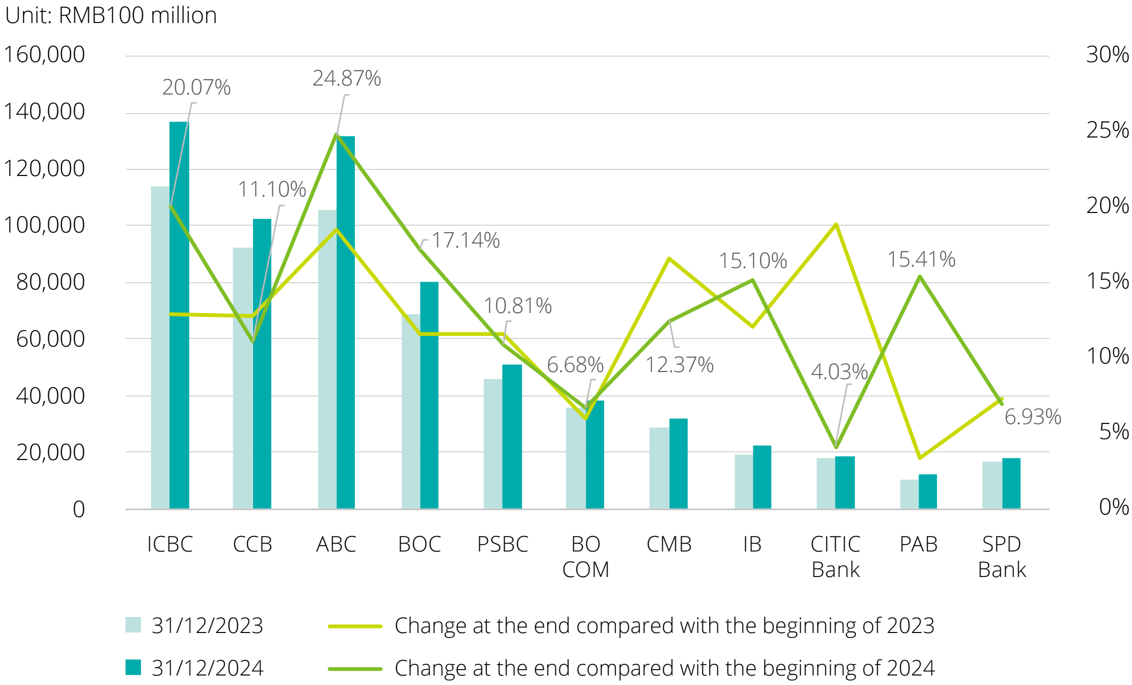


Domestic banks' bond investment proliferated, requiring them to strengthen their investment and risk management ability continuously

In 2024, bond yields trended down. The RMB exchange rate against the U.S. dollar depreciated early in the year, strengthened sharply mid-year, and then weakened again toward year-end. It demonstrated resilience, marked by bidirectional fluctuations across 2024. At the end of 2024, domestic banks' bond investment balance was RMB64.26 trillion, an increase of RMB8.83 trillion or 15.93% from the beginning of the year. State-owned banks' bond investment balance was RMB54.01 trillion, an increase of RMB784 million or 16.98%. Among them, ICBC's, CCB's, and ABC's balances exceeded RMB10 trillion. The growth rates of major state-owned banks rose except for CCB and PSBS. Specifically, ABC's and ICBC's growth rates reached 24.87% and 20.07%, respectively; the balance of joint-stock banks' bond investment was RMB10.25 trillion, an increase of RMB0.99 trillion or 10.70% from the beginning of the year. CMB's, CITIC Bank's, and SPD Bank's growth slowed. As the primary investment institutions in the bond market, domestic banks' bond investment is related to credit asset distribution, market interest rate changes, policy orientation and regulatory policies. Banks must comprehensively consider the impacts of bond market fluctuations, expected credit losses, bonds' tax-saving effect, and potential investment gains and losses (other comprehensive income).

The complex market environment continually challenged commercial banks' ability to grasp investment opportunities and improve bond duration management. Some foreign banks' risk events highlighted the liquidity risks caused by mismatching assets and liabilities. This spurred domestic banks to pay more attention to managing liquidity risks and adjust their asset structures. Therefore, domestic banks are more seriously considering asset liquidity and asset-liability coordination when deploying bond assets. With declining interest rates in the bond market, domestic commercial banks must also attach importance to managing bond asset yields and screening bond investment opportunities.

Figure 31: Bond Investment

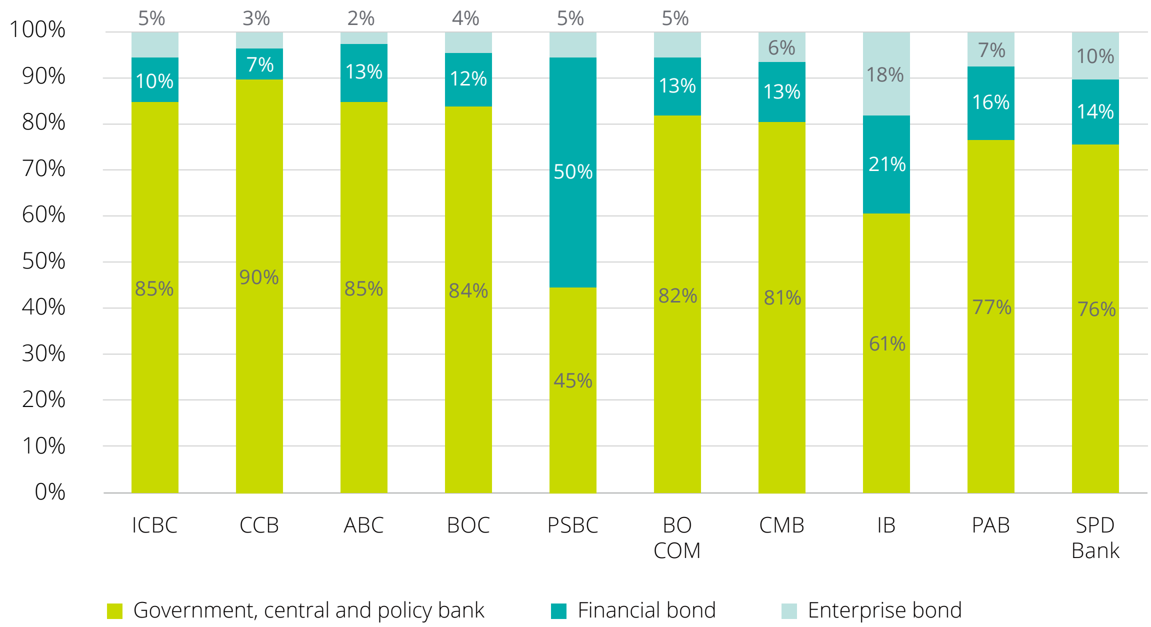


Domestic banks had a higher proportion of rate bonds and paid more attention to debenture bond risks

In 2024, domestic banks' bond investments were dominated by government bonds, central bank bills, and policy banks' financial bonds. Specifically, CCB's accounted for approximately 90%; PSBC's and IB's accounted for 45% and 61%, respectively; other domestic banks' bond investments typically accounted for about 80%. PSBC's and IB's financial bond investments accounted for about 50% and 21%, respectively, much higher than that of other domestic banks. Most domestic banks' enterprise bonds accounted for less than 10% except for IB and SPD Bank. Generally, domestic banks' rate bonds accounted for a higher proportion, reflecting a prudent investment approach.

Banks sustained their investment in government bonds and refined the investment structure of debenture bonds. With the aim of supporting the high-quality growth of the real economy, they catered to the financing requirements of green industries and strategic sectors like new infrastructure development and new energy. With the overall bond yield decline in 2024, the release of the *Administrative Measures for the Capital of Commercial Banks (hereinafter referred to as the "Measures")*, and rising risk weights of investments in publicly offered funds, banks were more willing to deploy bond assets. Meanwhile, dissolution of local government debts impacted commercial banks' liquidity indicators and capital occupation, which may weaken banks' bond deployment demand. The Central Economic Work Conference required lowering financing costs, so the benchmark rates of long-term bonds may continue to decline. Banks should pay continuous attention to bonds' coupon rate income, credit and market risks. They should examine their current investment structures and capital consumption, and dynamically, foresightedly adapt their bond deployment according to the risk weight adjustments for various bonds proposed in the Measures.

Figure 32: Bond Investment by Issuers at the End of 2024



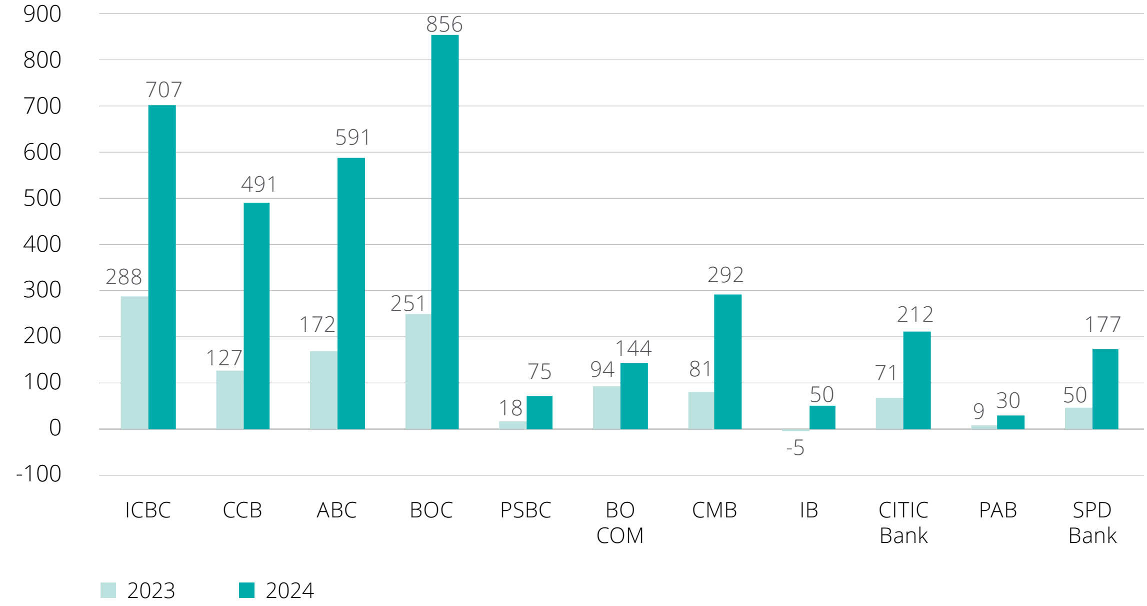
Note: CITIC Bank didn't separately disclose its bond investments by different issuers.

Pay attention to the fair value variation of financial assets not included in current profits and losses; continue to enhance risk management

In 2024, the global interest rate landscape stayed accommodative. Falling interest rates drove up bond prices. Domestic banks saw a rise in the valuation of financial assets measured at fair value, with the changes included in other comprehensive income. The total amount included in other comprehensive income of the year (not directly affecting the profits and losses) was RMB362.5 billion, an increase of RMB246.8 billion or 213.31% from the previous year. Domestic banks recorded higher floating gains. Their fair value of financial assets measured at the amortized cost increased significantly, and the total amount not included in the income statement was RMB1,808.6 billion, an increase of RMB1,340.3 billion or 286.22%. They recorded a relatively higher growth rate except for SPD Bank.

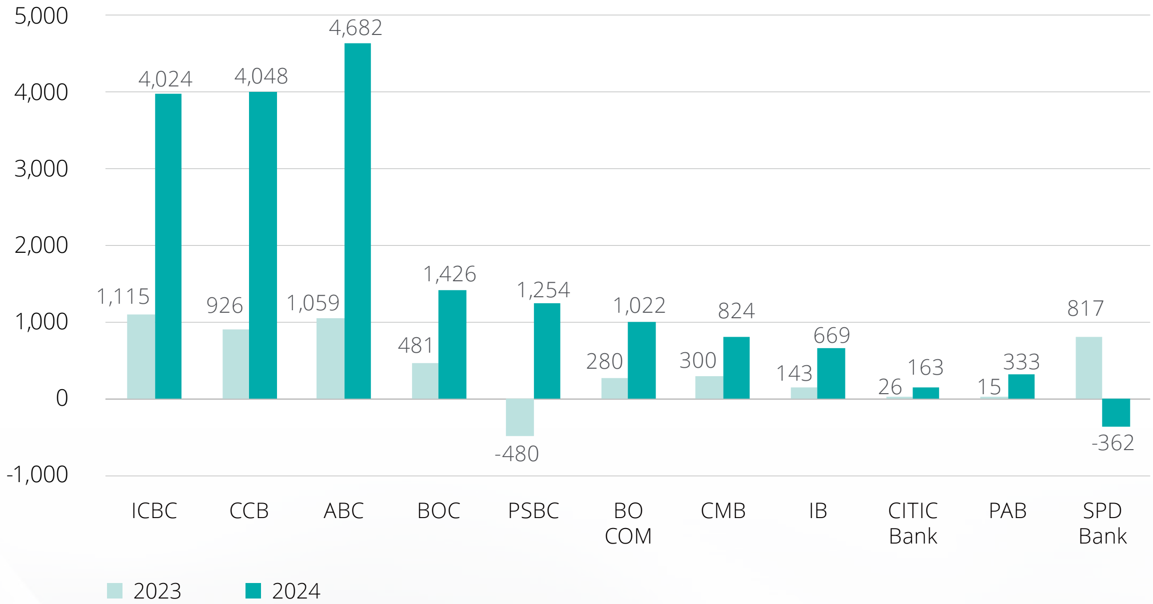
In 2025, the macro economy will continue to recover. However, with the effect of U.S. tariffs, declining interest rates, and the new capital regulations, banks must still pay attention to bond yields and valuation fluctuations and effectively manage liquidity risks.

Figure 33: Changes in Fair Value of Financial Assets (Changes Included in Other Comprehensive Income)



Note: It is the current-year pre-tax amount included in other comprehensive income (including loans and financial investments through fair value with the changes included in other comprehensive income)

Figure 34: Changes in Fair Value of Financial Assets Measured at the Amortized Cost



Note: It is based on the two-year changes in the difference between the fair value and carrying value of financial assets measured at the amortized cost.

Pay attention to interest rate risks of financial asset investment and strengthen investment duration management

At the end of 2024, domestic banks' financial asset investments with interest rate risk periods within one year, one-to-five years, and over five years accounted for 20%, 34%, and 40%, respectively. The proportion of financial asset investments with a duration of more than one year increased. Long-term investments accounted for a higher proportion and were mainly held to maturity. Regarding rate repricing investments within one year, the financial asset investment balances accounted for more than 25% at CMB and BOC individually, while at ICBC, IB, and CITIC Bank, the balances exceeded 20% each. For rate repricing investments between one and five years, CITIC Bank's financial asset investment balance accounted for more than 40%, ABC's and IB's balances accounted for less than 30%; and other banks' accounted for 30% to 40%. For rate repricing investments over five years, the financial asset investment balances of CCB and ABC accounted for more than 45%, and that of ICBC accounted for more than 40%. Except for CITIC Bank, which accounted for 19%, the rest of the banks' accounted for more than 30%. The benchmark interest rate will continue to fall. Banks should strengthen investment duration management to reduce the impact of interest rate fluctuations on bond yields.

Figure 35: Interest Rate Risk of Financial Asset Investment at the End of 2024

Note: It is the total amount of interest rate risks of: 1) financial assets measured at fair value included in current profit and loss, 2) financial assets measured at the amortized cost, and 3) financial assets measured at fair value included in other comprehensive income

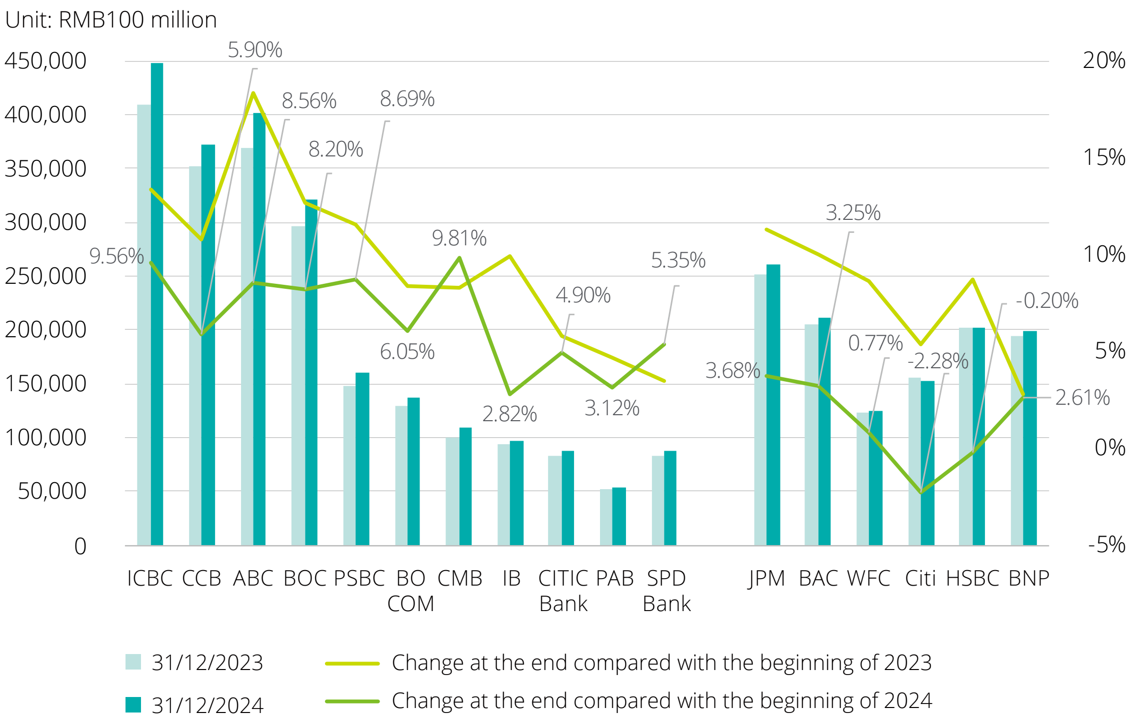
2.3 Liabilities

Domestic and foreign banks' total liabilities continued to rise, with stable asset-liability structure

In 2024, domestic banks' total liabilities reached RMB227.36 trillion, an increase of RMB15.90 trillion from the beginning of the year, representing a growth rate of 7.52% (lower than 2023's 12.23%). All other state-owned banks' total liabilities increased by more than 8%, except for CCB and BOCOM. Except for CMB and SPD Bank, other joint-stock banks' growth rates continued to drop compared with 2023.

In 2024, foreign banks' liabilities totaled RMB114.87 trillion, a modest increase from the beginning of the year. BNP, JPM, BAC, and WFC recorded liability growth rates of 4.39%, 3.12%, 2.68%, and 0.22%, respectively, while Citi and HSBC experienced liability declines of 2.81% and 0.75%, respectively (in the original currency).

Figure 1: Total Liabilities

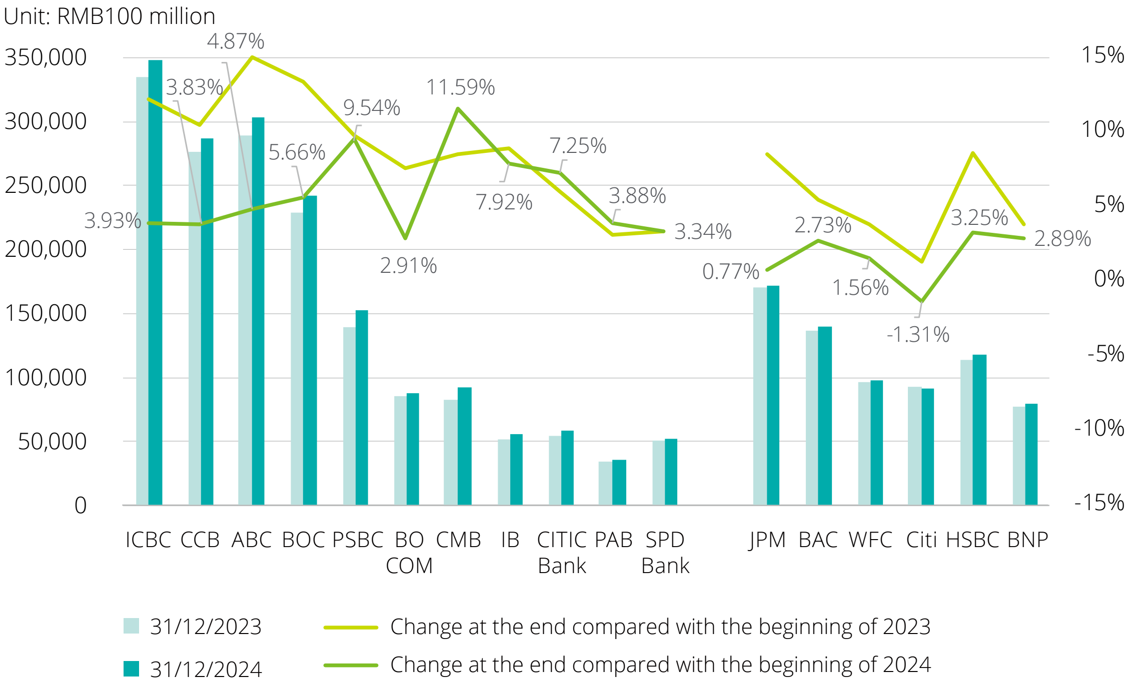


Customer deposits were scaled up; product/service quality and quantity boost profits

In 2024, domestic banks' customer deposit balance totaled RMB171.66 trillion, an increase of RMB8.73 trillion or 5.36% from the beginning of the year. Although the growth rate fell further from the previous year, customers' willingness to save remained high. State-owned banks' deposit balance totaled RMB142.15 trillion, up 4.91% year-on-year. Among them, PSBC recorded a growth rate of 9.54%, followed by BOC and ABC. Except for CMB, CITIC Bank, and PAB, the growth rates of other state-owned and joint-stock banks slowed compared to 2023.

Foreign banks' customer deposit balance totaled RMB69.83 trillion, an increase of RMB1.13 trillion or 1.64% from the beginning of the year. Citi pressed ahead with its strategy to exit global consumer banking by closing or divesting its consumer operations in several markets, including the Chinese mainland, South Korea, and Russia. Consequently, its customer deposit balances declined. By contrast, other foreign banks' customer deposits increased slightly (in the original currency), largely due to the global economic recovery and looser monetary policies.

Figure 2: Customer Deposits



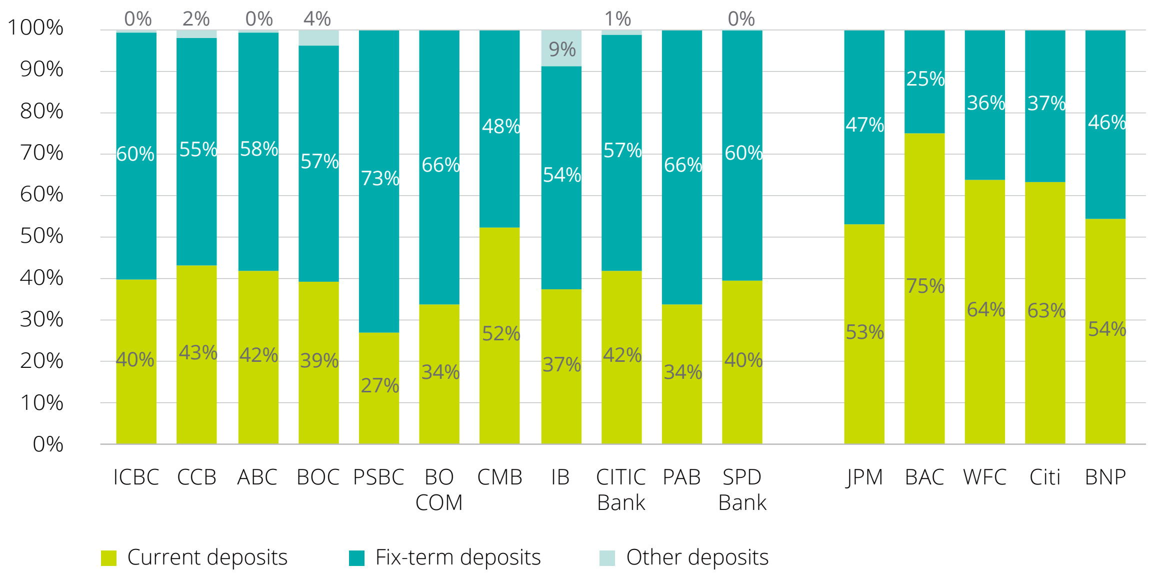
Fixed-term deposits increased

In 2024, as investors' demand for value preservation and increase heightened, domestic banks' average proportion of fixed-term deposits was 59.40%, up two percentage points from the previous year. Major state-owned and commercial banks experienced only a slight shift in this proportion. Among domestic banks, PSBC recorded the highest fixed-term deposit proportion of 72.88%, up 1.88 percentage points from the beginning of the year. CMB recorded the highest current deposit proportion of 52.25%, down 2.75 percentage points from the beginning of the year.

The average proportion of foreign banks' fixed-term deposits stood at 38.92%, while their average proportion of current deposits was 61.08%. BAC's current deposits accounted for 75.18%, increasing by 2.12 percentage points from the beginning of the year, the highest among foreign banks. JPM's fixed-term deposits registered the highest proportion of 46.90%, up 0.41 percentage points from the beginning of the year.

In general, residents tended to be conservative in investment, affected by factors such as unstable economic growth and disappointing capital market performance. Domestic banks' fixed-term deposits will expand, and loan interest rates will fall continually. Banks should pay attention to managing costs and optimizing asset and customer structures to ease the narrowing of interest margins.

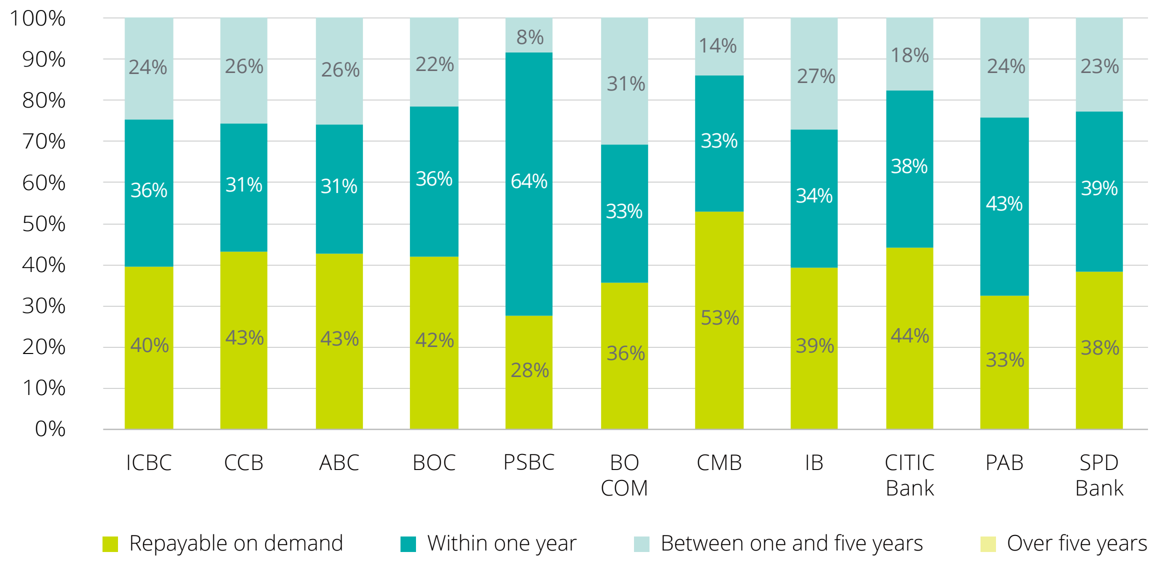
Figure 3: Deposit Composition at the End of 2024



Note: HSBC did not disclose its deposit composition.

From the perspective of remaining maturity of deposits, in 2024, the average proportion of domestic banks' deposits repayable on demand was 39.79%, down 1.08 percentage points from the beginning of the year; the average proportion of deposits maturing within one year was 38.06%, up 2.33 percentage points; the average proportion of deposits maturing between one and five years was 22.09%, down 1.47 percentage points; the average proportion of deposits over five years was 0.06%, largely unchanged from the beginning of the year. In 2024, the People's Bank of China continued to guide the optimization of the deposit structure and reduce deposit rates. State-owned and joint-stock banks cut interest rates twice in July and October, covering current and fixed-term deposits. Domestic banks strictly controlled high-cost liabilities, and expanded settlement, clearing and bankcard businesses to increase current deposits and low-cost liabilities.

Figure 4: Proportion of Deposits by Remaining Maturity

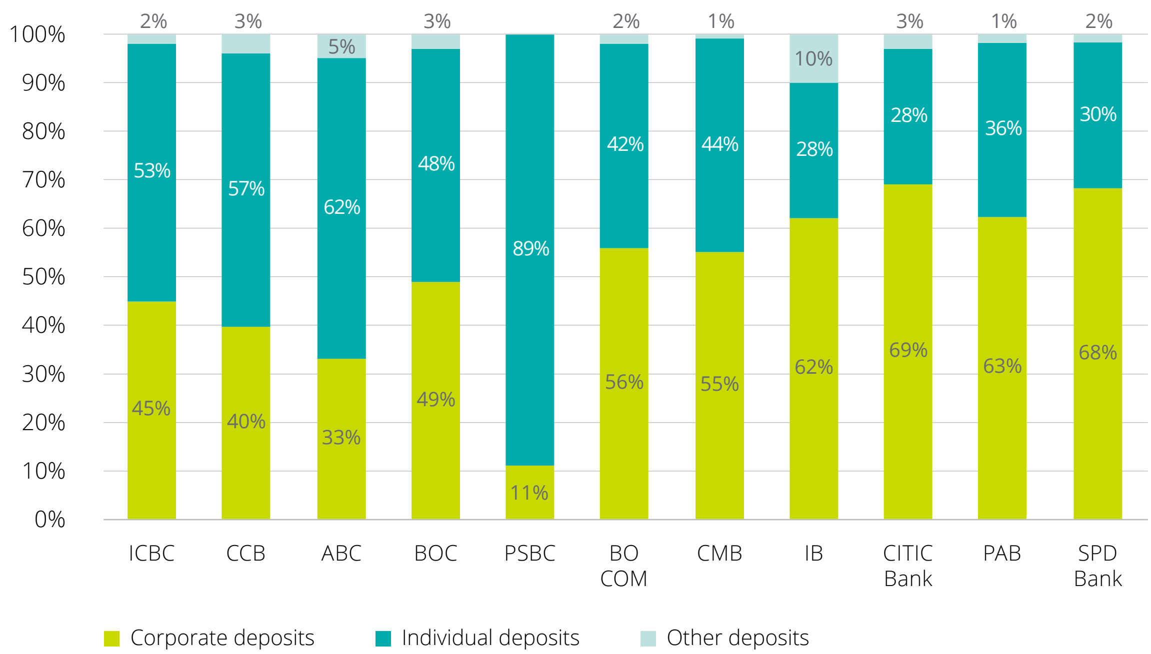


The social and economic conditions have returned to normal, deposit structure stabilized broadly

From the perspective of customer types, the average proportion of the four major state-owned banks' deposits of corporate and individual customers were 41.31% and 55.18%, down 3.01% and up 2.76%, respectively, from the beginning of the year. Relying on its extensive outlets, PSBC's deposits of individual customers recorded the highest proportion among domestic banks, reaching 89.15%. The average proportion of joint-stock banks' deposits from corporate customers was 63.36%, up 0.4 percentage points from the beginning of the year, and their average proportion of individual deposits was 33.19%, down 0.43 percentage points.

Generally, the proportions of individual and corporate customer deposits within domestic banks remained steady. The proportion of individual deposits climbed slightly as residents showed a strong willingness to save.

Figure 5: Proportion of Corporate and Individual Customer Deposits at the End of 2024



Active debts diverged due to market-oriented interest rate reform and global volatility

In 2024, domestic banks' balance of bonds payable and certificates of deposit issued totaled RMB16.73 trillion, an increase of RMB3.19 trillion or 23.53% from the beginning of the year. PSBC's and PAB's active debts were scaled down compared with the beginning of the year, while the rest of the domestic banks' active debts grew, with the overall growth rate higher than 2023's average rate, which may be the result of banks' efforts in optimizing the liability structure and lowering financing costs.

Foreign banks' balance of bonds payable and certificates of deposit issued totaled RMB10.00 trillion, down 0.04% from the beginning of the year. The active debts of BNP, HSBC, Citi, and JPM climbed, while WFC's and BAC's contracted (in the original currency).

Overall, the external environment and policies changed in 2024. With deepening market-oriented interest rate reform and lower benchmark interest rate, domestic commercial banks issued certificates of deposit to optimize their liability structures and reduce deposit costs, increasing active liabilities marginally. Given the intricate and fluctuating international financial environment, foreign banks adopted varied responses this year.

Figure 6: Bonds Payable and Certificates of Deposit Issued

2.4 Capital position

According to the *Administrative Measures for the Capital of Commercial Banks, Additional Regulatory Provisions on Systemically Important Banks (for Trial Implementation)* (D-SIBs) and relevant regulations for global systemically important banks (G-SIBs), the capital regulation bottom line requirements for the 11 domestic banks as of 2024 are shown in the table below. Among them, ICBC, CCB, BOC, and ABC fell into Bucket 2 in the G-SIBs category, and BOCOM retained its position in Bucket 1, mirroring the 2023 classification. BOCOM marked its second consecutive year in the category. As of 2024, the 11 banks' core tier 1 capital adequacy ratio, tier 1 capital adequacy ratio, and capital adequacy ratio met the regulatory requirements.

Table 1: Capital Regulation Bottom Line

Bank	Core Tier 1 Capital Adequacy Ratio	Tier 1 Capital Adequacy Ratio	Capital Adequacy Ratio	SIB Category
ICBC	9.00%	10.00%	12.00%	G-SIBs, Bucket 2 D-SIBs, Bucket 4
CCB	9.00%	10.00%	12.00%	G-SIBs, Bucket 2 D-SIBs, Bucket 4
BOC	9.00%	10.00%	12.00%	G-SIBs, Bucket 2 D-SIBs, Bucket 4
ABC	9.00%	10.00%	12.00%	G-SIBs, Bucket 2 D-SIBs, Bucket 4
BOCOM	8.50%	9.50%	11.50%	G-SIBs, Bucket 1 D-SIBs, Bucket 3
CMB	8.25%	9.25%	11.25%	D-SIBs, Bucket 3
IB	8.25%	9.25%	11.25%	D-SIBs, Bucket 3
PSBC	8.00%	9.00%	11.00%	D-SIBs, Bucket 2
CITIC Bank	8.00%	9.00%	11.00%	D-SIBs, Bucket 2
SPD Bank	8.00%	9.00%	11.00%	D-SIBs, Bucket 2
PAB	7.75%	8.75%	10.75%	D-SIBs, Bucket 1

Domestic banks' capital adequacy ratios generally rose, while foreign banks' ratios diverged

As of 2024, the core tier 1 capital adequacy ratio, tier 1 capital adequacy ratio, and capital adequacy ratio of state-owned and joint-stock banks met the regulatory requirements. The 11 domestic banks' average core tier 1 capital adequacy ratio, tier 1 capital adequacy ratio, and capital adequacy ratio were 11.31%, 13.03%, and 16.32%, up 0.43, 0.39, and 0.64 percentage points, respectively, from the beginning of the year. PAB's capital adequacy ratio fell, while other selected banks' improved.

The average core tier 1 capital adequacy ratio, tier 1 capital adequacy ratio, and capital adequacy ratio of foreign banks were 14.11%, 15.56%, and 17.27%, respectively. Specifically, the core tier 1 capital adequacy ratio and capital adequacy ratio rose by 0.11 and 0.02 percentage points, respectively, while the tier 1 capital adequacy ratio fell by 0.02 percentage points.

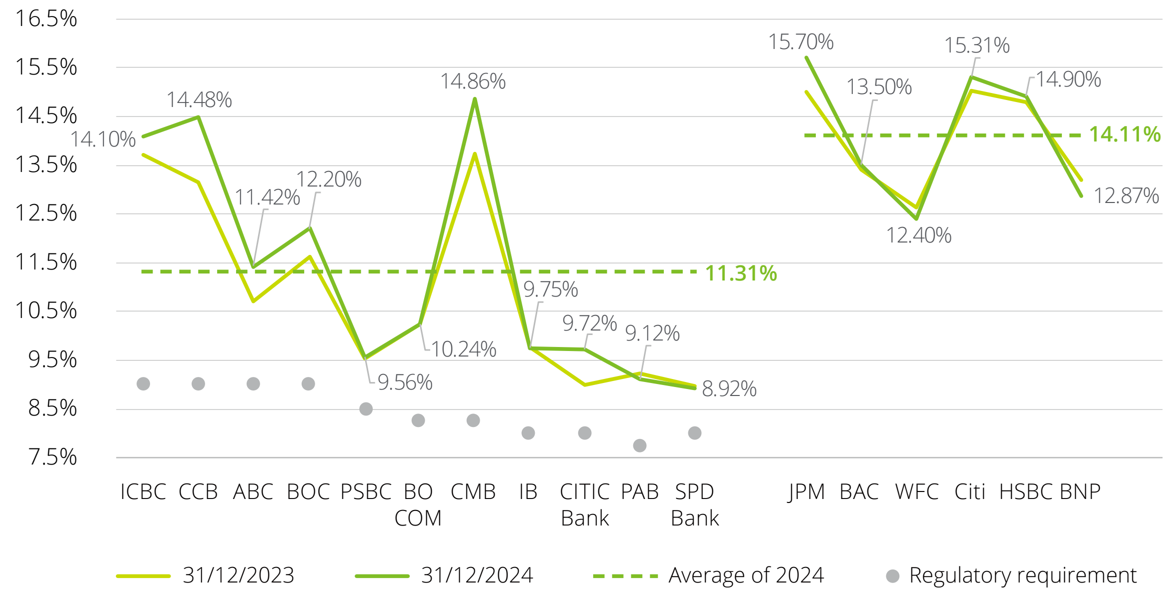
The pace of global economic recovery is uneven, bank's core tier 1 capital adequacy ratios increased slightly

In 2024, advanced economies' monetary policies diverged due to accelerated global transformations and waned global economic growth. Despite this, China's economy maintained stability. Chinese banks continued to refine capital allocation and tightened asset-liability management. Although the selected domestic banks' core tier 1 capital adequacy ratios surpassed regulatory requirements, their changes varied widely. Domestic banks collectively boosted their core tier 1 capital adequacy ratios, with CCB, CMB, and CITIC Bank posting notable gains. Foreign banks' performance was steady, with most showing minimal change. JPM was the exception, as it recorded an increase.

Major state-owned banks strengthened capital resilience and risk management through initiatives like Ministry of Finance-backed special treasury bond infusions, raising funds through private placements, asset structure optimization, and risk control enhancements. They also improved capital structure and efficiency. As a result, their core tier 1 capital adequacy ratios rose steadily. CCB led the increase, jumping 1.33 percentage points. Among joint-stock banks, CMB and CITIC Bank boosted their core tier 1 capital adequacy ratios, with CMB surging 1.13 percentage points, a standout gain. The remaining joint-stock banks saw slight declines in their ratios.

Among the foreign banks, JPM, BAC, Citi, and HSBC boosted their core tier 1 capital adequacy ratios. JPM recorded the most remarkable rise, from 15.00% to 15.70%. WFC and BNP witnessed declines of 0.23 and 0.33 percentage points, respectively.

Figure 1: Core Tier 1 Capital Adequacy Ratio

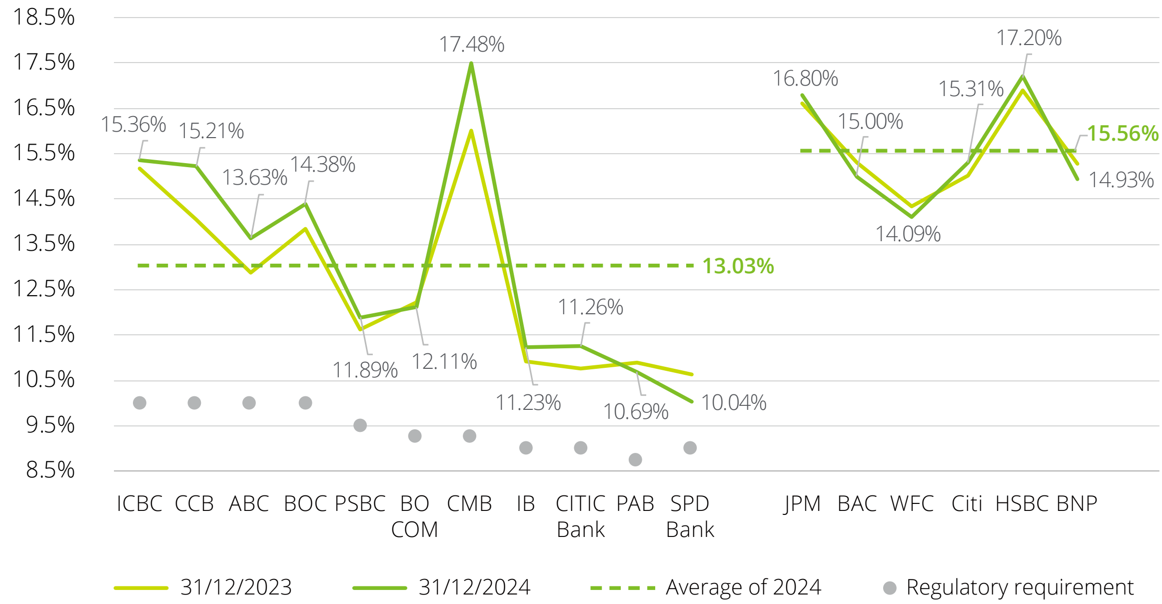


Most domestic banks' tier 1 capital adequacy ratios and capital adequacy ratios increased, while foreign banks' changed insignificantly

The 11 domestic banks' tier 1 capital adequacy ratios increased. Among the four major state-owned banks, ICBC's, ABC's, BOC's, and CCB's ratios grew by 0.19, 0.76, 0.55, and 1.17 percentage points, respectively. CMB's rose by 1.47 percentage points to 17.48%, remaining the highest among domestic banks. PSBC's, IB's, and CITIC Bank's also rose but were still below the selected banks' average of 13.03%. BOCOM's, SPD Banks', and PAB's fell by 0.11, 0.59, and 0.21 percentage points, respectively.

Foreign banks' tier 1 capital adequacy ratios were different. JPM's, Citi's, and HSBC's increased, with HSBC leading the pack by achieving the most prominent rise, reaching 17.2% and claiming the top position. BAC's fell to 15.00%, WFC's to 14.09%, and BNP's to 14.93%, all below the average.

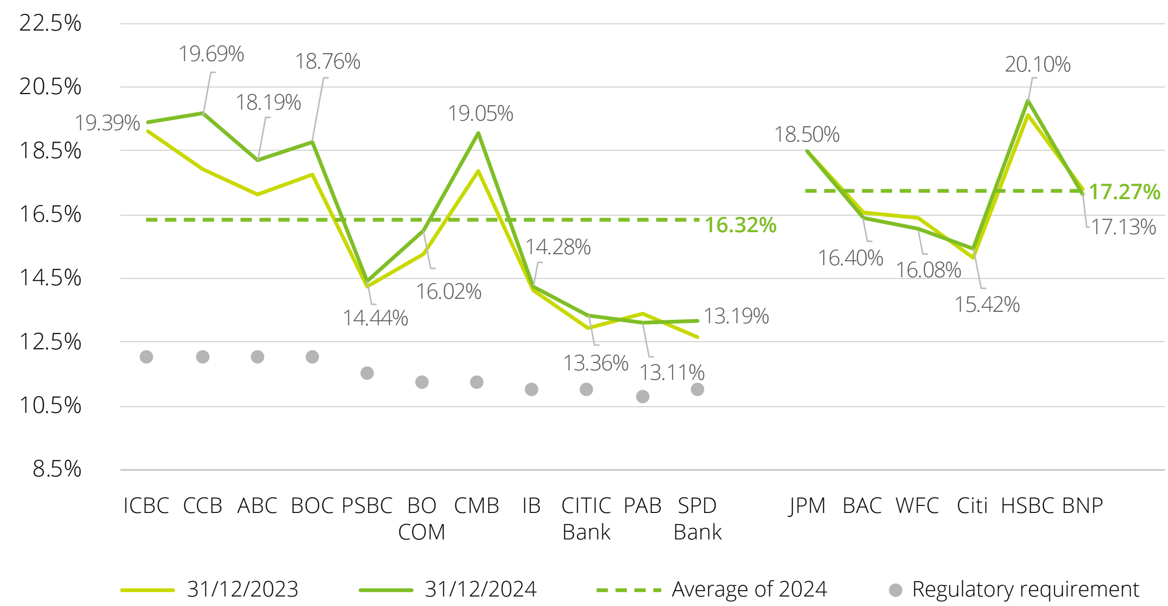
Figure 2: Tier 1 Capital Adequacy Ratio



CCB, ABC, BOC, and CMB achieved significant rises in their capital adequacy ratios, increasing by 1.74, 1.05, 1.02, and 1.17 percentage points, respectively. CCB held the top position for the capital adequacy ratio among domestic banks. ICBC, PSBC, IB, and some others saw only modest fluctuations in their capital adequacy ratios, with PAB being the sole exception to record a drop of 0.32 percentage points.

Among the foreign banks, JPM's capital adequacy ratio held steady in 2024. Citi's and HSBC's rose to 15.42% and 20.10%, respectively. Meanwhile, WFC's, BAC's, and BNP's dropped by 0.32, 0.20, and 0.17 percentage points, respectively.

Figure 3: Capital Adequacy Ratio



Domestic banks actively sought external capital supplement

In 2024, domestic banks strengthened their capital structures through exogenous financing strategies, with their total capital instruments amounting to RMB1,171.0 billion. Eight banks supplemented other tier 1 capital, amounting to RMB400.0 billion, and another eight banks added tier 2 capital, amounting to RMB691.0 billion. ABC issued large amounts of capital instruments in 2024, totaling RMB270.0 billion, accounting for 23.06% of its total capital instruments.

Table 2: External Capital Supplement

Unit: RMB100 million

Bank	Financing Instrument	Capital	Financing Scale
ICBC	Perpetual bonds	Other tier 1 capital	500
	Tier 2 capital bonds	Tier 2 capital	900
CCB	Tier 2 capital bonds	Tier 2 capital	1,350
ABC	Perpetual bonds	Other tier 1 capital	1,400
	Tier 2 capital bonds	Tier 2 capital	1,300
BOC	Perpetual bonds	Other tier 1 capital	500
	Tier 2 capital bonds	Tier 2 capital	1,200
PSBC	Perpetual bonds	Other tier 1 capital	300

Bank	Financing Instrument	Capital	Financing Scale
BOCOM	Tier 2 capital bonds	Tier 2 capital	560
	Straight bonds	Green financial bonds	750
	Green financial bonds	Straight bonds	50
	Perpetual bonds	Other tier 1 capital	400
IB	Perpetual bonds	Other tier 1 capital	300
	Tier 2 capital bonds	Tier 2 capital	500
CMB	Perpetual bonds	Other tier 1 capital	300
CITIC Bank	Perpetual bonds	Other tier 1 capital	300
SPD Bank	Tier 2 capital bonds	Tier 2 capital	800
PAB	Tier 2 capital bonds	Tier 2 capital	300

Note: Equity-based capital supplement instruments include initial public offerings, non-public offerings, allotment of shares, and preferred shares. Debt instruments are limited to tier 2 capital bonds. Hybrid instruments are mainly convertible bonds.

PSBC's and BOCOM's external capital instruments accounted for more than 40% of their total net capital. CCB's and CMB's external capital instruments accounted for less than 25%. Other banks' external capital instrument proportions were between 25% and 40%. In 2024, PAB's proportion of capital instruments decreased significantly, by 13.66 percentage points, year-on-year.

Table 3: Proportion of Capital Instruments

Unit: RMB100 million

Item	Year	ICBC	CCB	ABC	BOC	PSBC	BOCOM	CMB	IB	CITIC Bank	PAB
Total capital instruments	2024	14,705	9,451	13,699	14,264	5,818	6,078	2,823	2,868	2,293	1,493
	2023	15,032	8,823	13,099	13,106	5,518	5,818	2,523	3,068	2,370	2,203
	Growth rate	(2.18%)	7.12%	4.58%	8.83%	5.44%	4.47%	11.89%	(6.52%)	(3.24%)	(32.21%)
Total net capital	2024	49,865	43,033	41,127	36,056	12,441	15,088	13,117	11,205	9,442	5,827
	2023	47,071	40,207	38,282	32,974	11,654	13,511	11,815	10,331	8,699	5,608
	Growth rate	5.94%	7.03%	7.43%	9.35%	6.75%	11.67%	11.02%	8.47%	8.54%	3.91%
Proportion of capital instruments	2024	29.49%	21.96%	33.31%	39.56%	46.77%	40.28%	21.52%	25.59%	24.29%	25.63%
	2023	31.94%	21.94%	34.22%	39.75%	47.35%	43.06%	21.36%	29.70%	27.25%	39.29%
	Growth rate	(2.45%)	0.02%	(0.91%)	(0.19%)	(0.58%)	(2.78%)	0.17%	(4.10%)	(2.96%)	(13.66%)

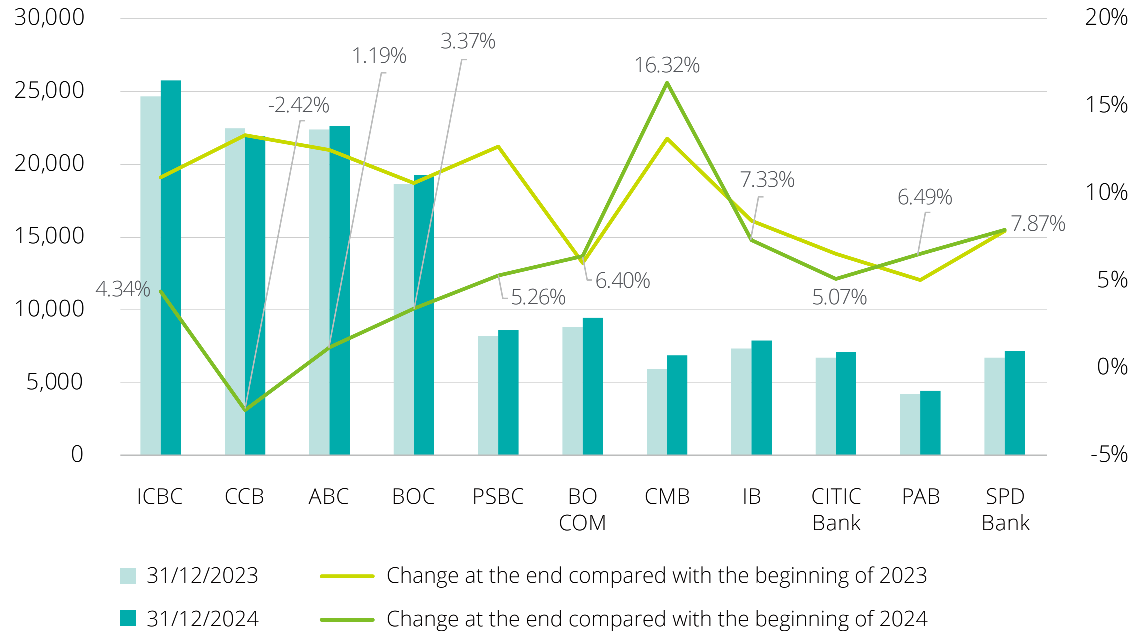
Note: Total capital instruments refer to the amount (regulatory standard) of the key features of capital instruments and qualified external Total Loss-Absorbing Capacity (TLAC) non-capital debt instruments for commercial banks. Given that SPD Bank did not disclose pertinent data in 2023, it was omitted from the statistical analysis.

Risk-weighted assets grew slowly; credit risk-weighted assets accounted for a smaller proportion

In 2024, domestic banks' risk-weighted assets totaled RMB140.86 trillion, increasing by RMB5.06 trillion from the beginning of the year, representing an average growth rate of 3.72%, and the growth rate has slowed down. Among them, ICBC's total risk-weighted assets reached RMB25.71 trillion, ranking first among the domestic banks; CMB recorded the largest increase of RMB0.97 trillion, with a growth rate of 16.32%; only CCB's contracted by RMB0.54 trillion. The significant growth of risk-weighted assets pressed the banks' capital adequacy ratio.

Figure 4: Risk-weighted Assets

Unit: RMB100 million



Specifically, except for CMB and PAB, domestic banks' credit risk-weighted assets accounted for more than 90% of their total risk-weighted assets, averaging 91.13%, a decline of 2.14 percentage points from the beginning of the year. SPD Bank's credit risk-weighted assets recorded the highest proportion of 94.20%. PAB's, IB's, and CMB's market risk-weighted assets accounted for 5.33%, 2.99%, and 2.86%, respectively. CMB's operational risk-weighted assets recorded the highest proportion of 10.39%.

Table 4: Risk-weighted Asset Composition

Item	ICBC	ABC	PSBC	CMB	IB	PAB	SPD Bank
Credit risk-weighted assets	90.96%	92.72%	93.50%	86.75%	91.75%	88.02%	94.21%
Market risk-weighted assets	1.48%	0.70%	1.03%	2.86%	2.99%	5.33%	0.93%
Operational risk-weighted assets	7.16%	6.58%	5.47%	10.39%	5.26%	6.65%	4.86%
Risk-weighted assets for switch between trading book and banking book	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Note: CCB, BOC, BOCOM, and CITIC Bank did not disclose their risk-weighted asset composition.

Authors

Calvin Zeng
Banking & Capital Markets Leader, FSI
Audit & Assurance Deputy Leader
Deloitte China
Tel: +86 21 6141 1821
Email: calzeng@deloittecn.com.cn

Sophia Wu
Senior Manager, Audit & Assurance FSI
Deloitte China
Tel: +86 10 8512 5020
Email: sophiwu@deloittecn.com.cn

Grace Hu
Manager, Audit & Assurance FSI
Deloitte China
Tel: +86 21 2316 6272
Email: ghu@deloittecn.com.cn

Data collection and collation: **April Li, Rachelle Xu, Luke Wang, Sherry Ding, Hans Chen**

Observation of Listed Banks' Business in 2024

3.1 Quantity to quality: technological risk control and common prosperity amid inclusive finance credit slowdown and cost reduction

3.2 Scale to efficiency: commercial banks tackle retail challenges in resident debt cycles and advance transformation through "smart" strategies

3.3 Policy to practice: commercial banks' credit support facilitates real estate restructuring

3.4 Net value-based transformation promotes high-quality development of wealth management subsidiaries

3.5 Integration of business and technology creates digital financial service ecosystems

3.1

Quantity to quality: technological risk control and common prosperity amid inclusive finance credit slowdown and cost reduction

Commercial banks deeply cultivated inclusive finance; policy dividends nurtured micro and small enterprises' growth

Under the macroeconomic pressures, marked by weak domestic demand and a complex, volatile external environment, inclusive finance is a pivotal tool for supporting the real economy, with its strategic significance growing steadily. In 2024, China's inclusive loans for micro and small enterprises continued to be a crucial source of financial liquidity, steering inclusive credit into a new development phase focused on "ensuring quantity, stabilizing price, and optimizing structure." According to the NFRA, as of 2024, the balance of inclusive finance lending to micro and small enterprises was RMB33.34 trillion, an increase of 14.73% year-on-year. The average interest rate of newly issued inclusive loans was 4.36%, down 0.42 percentage points from the end of 2023, and it further fell to 4.03% in the first two months of 2025. This trend shows commercial banks' steady support for micro and small enterprises, agriculture-related entities, and key groups needing help, highlighting the NAFR's success in cutting costs of inclusive finance lending for micro and small enterprises.

Based on the NAFR, the outstanding balance of inclusive finance lending for micro and small enterprises provided by China's banking financial institutions has grown steadily over the past three years, registering RMB23.57 trillion, RMB29.06 trillion, and RMB33.34 trillion, with growth rates of 23.60%, 23.29%, and 14.73%, respectively. Commercial banks and other financial institutions are the cornerstone of China's inclusive finance system, driving its high-quality development in an indispensable way. Among them, large commercial banks have continued to lead the way, consistently propelling inclusive finance development. Their market share expanded from 36.50% in 2022 to 42.77% in 2024, establishing a robust foundation for the sustained growth of inclusive finance assets. In 2024, the NAFR issued the *Notice on Effectively Promoting Inclusive Credit for 2024* (the "Notice"), urging large commercial banks to consolidate professional mechanisms for inclusive credit, improve branches' product approval efficiency, and intensify services for debt-free customers. Joint-stock banks should optimize their line management modes, improve the department setting at the first- and second-level branches to enhance their independent service ability. Local corporate banks should focus on exploring local customers, offering clear directions for financial institutions to optimize their inclusive financial services.

In November 2013, the Third Plenary Session of the 18th CPC Central Committee formally proposed "developing inclusive finance." Inclusive finance has seen remarkable progress over the past 11 years. In 2024, China implemented many measures to refine the inclusive finance policy framework and employed diverse policies to overcome hurdles that have been holding back the growth of inclusive finance.

Table 1: Inclusive Finance Policies Introduced in 2024

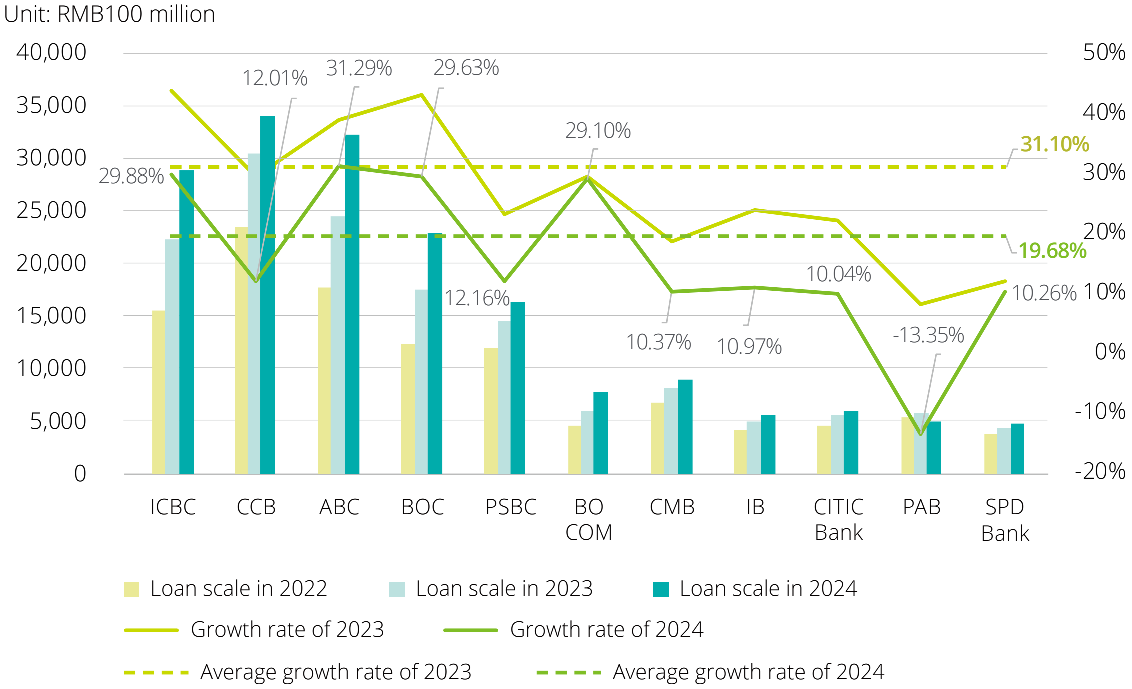
Date	Issued by	Policy	Highlight
January, 2024	Department of Inclusive Finance, NFRA	*Construct a Holistic Inclusive Financial Framework Encompassing Credit, Insurance, and Wealth Management*	• Enhance the inclusive credit system further • Develop an inclusive insurance framework • Establish a tailored inclusive wealth management system • Broaden the reach of inclusive financial services • Optimize the growth environment for inclusive finance
March, 2024	General Office, NFRA	*Notice on Effectively Promoting Inclusive Credit for 2024*	• Sustain steady credit support, keep credit pricing stable, and refine the structure of credit offerings • Foster high-quality growth for micro and small enterprises, offer robust and effective backing for the all-around rural revitalization, and bolster support for key groups needing help • Revamp institutional frameworks, boost service capabilities, and meticulously execute the duty-exemption policy • Streamline inclusive credit management and elevate the data quality of inclusive credit • Enhance information exchange, ramp up financing alignment initiatives, and amplify the dissemination of financial expertise and proven strategies
April, 2024	People's Bank of China, National Development and Reform Commission, Ministry of Industry and Information Technology, and Ministry of Civil Affairs	*Notice on Matters Concerning the Continuation of Implementation of Special Lending for Inclusive Elderly Care*	• Clarify the continuation of implementation of special lending for inclusive elderly care up to 2024 and expand the scope of pilots to the entire country • Extend support to the operation of public welfare and inclusive elderly care institutions, the construction of in-home community-based elderly care systems, and the manufacturing of elderly care products included in catalogues to boost the availability of inclusive elderly care services

Date	Issued by	Policy	Highlight
May, 2024	NFRA	*Guiding Opinions on Effectively Performing the "Five Major Tasks" in the Banking and Insurance Industries*	• Keep escalating financial backing for private firms, micro and small enterprises, and self-employed individuals. Foster the creation of customized products and services for micro and small enterprises and self-employed individuals, and ramp up the issuance of first, renewal, and unsecured loans and medium and long-term lending • Proactively contribute to the all-round rural revitalization by bolstering financing support for high-standard farmland development, seed industry revitalization, industrial growth, and agricultural infrastructure undertakings • Augment the range of inclusive insurance offerings, refine underwriting and claims handling processes, and deliver comprehensive insurance protection for pivotal segments of inclusive finance • Investigate and broaden credit enhancement approaches, considering the financing needs of agriculture-related entities, and refine financial products and service models to better suit the agricultural sector
August, 2024	NFRA	*Circular on Release from Liability due to Proper Fulfillment in Inclusive Lending*	When risks emerge in inclusive credit operations managed by banking financial institutions, and following the relevant review processes, if it is established that the personnel involved have performed their duties, they shall be relieved of all or partial responsibilities. Such relief includes deductions from internal evaluation scores, administrative disciplinary actions, economic penalties, and other associated liabilities. Banking financial institutions ought to: • Define clear criteria for determining responsibility • Establish a reasonable tolerance threshold for NPLs • Formalize the mechanisms and processes for duty-exemption due to proper fulfillment • Guarantee thorough implementation and reinforce regulatory oversight and guidance
August, 2024	People's Bank of China, NFRA, China Securities Regulatory Commission, Ministry of Finance, and Ministry of Agriculture and Rural Affairs	*Circular on Launching the Special Action to Learn from and Apply the Experience of "Thousand Villages Demonstration and Ten Thousand Villages Renovation" Project and Strengthen Financial Support for Comprehensive Rural Revitalization*	• Initiate a dedicated initiative focused on financial safeguards to ensure food security • Initiate a dedicated initiative aimed at consolidating and amplifying the successes of financial aid efforts • Initiate a dedicated initiative to provide financial services that foster the growth of rural industries • Initiate a dedicated initiative to offer financial backing for rural development • Initiate a dedicated initiative to empower rural governance through financial means • Enforce policy safeguards and drive organizational efforts

Steady scale expansion, continuous service outreach, and efficient cost cutting

Commercial banks disclose information about inclusive finance businesses separately in their annual reports. The 11 commercial banks' scale and customer number of inclusive finance lending, and the interest rates of newly issued loans were as follows:

Figure 1: Scale of Inclusive Loans to Micro and Small Enterprises



Note: CCB's loan scale criteria are "inclusive finance loans"; IB's is "inclusive loans for small and micro enterprises"; SPD Bank's is "inclusive loans meeting the 'two increases and two controls' assessment requirements". The remaining eight banks all employ inclusive loans to micro and small enterprises as their loan scale criterion.

Credit supply continued increasing, offering consistent and long-term support to micro and small enterprises

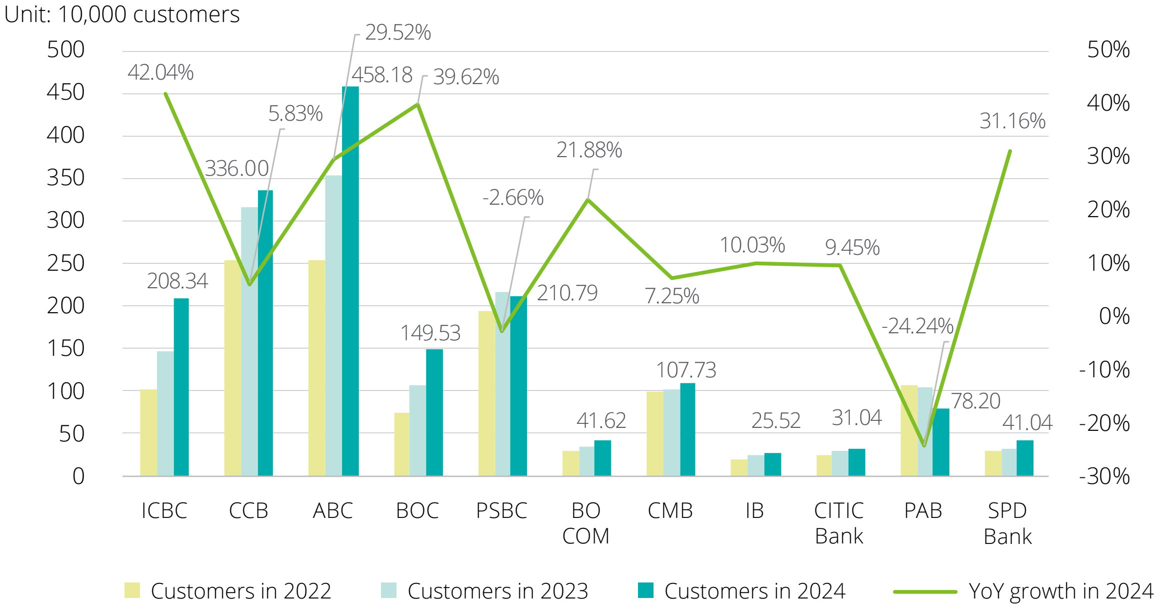
In 2024, major commercial banks continued to step up their efforts in inclusive finance. Data from the NFRA shows that large commercial banks' balance of inclusive loans for micro and small enterprises made up 42.77% of the total across all banking financial institutions. These banks have showcased their role as pivotal participants in inclusive finance by providing strategic direction, fostering institutional innovation, and building collaborative ecosystems, thus shouldering the responsibility of advancing inclusive finance. After CCB first exceeded RMB3 trillion in the balance of inclusive loans for micro and small enterprises in 2023 (RMB3.04 trillion at the end of the year), ABC's balance reached RMB3.23 trillion in 2024, up RMB769.3 billion from the beginning of the year, placing it second to CCB's RMB3.41 trillion. ABC's inclusive loan balance grew by 31.29% year-on-year at the end of 2024, the highest among commercial banks, marking six straight years of over 30% growth. ICBC followed with a year-end balance of RMB2.89 trillion, up 29.88% year-on-year. BOC's inclusive loan balance hit RMB2.28 trillion, up 29.63% year-on-year. BOCOM kept its growth rate above 29%, similar to 2023. Among joint-stock banks, CMB had the largest inclusive loan balance at RMB887.679 billion, while IB grew the fastest, with its inclusive loan balance reaching RMB555.932 billion, up 10.97% from the end of 2023.

Large commercial banks, joint-stock commercial banks, urban commercial banks, and rural financial institutions have cooperated to implement inclusive financial strategies. While tackling the financing hurdles micro and small enterprises face, they've built a layered, sustainable financial service ecosystem that boosts the real economy's high-quality growth.

Though the scale of inclusive loans for micro and small enterprises rose in 2024, the growth pace eased, averaging 19.68%, down from 31.10% in 2023. The 11 banks saw slower inclusive loan growth in 2024 compared to 2023. PAB's inclusive loan scale shrank by 13.35% in 2024 from the end of 2023. CCB, ICBC, BOC, IB, CITIC Bank, PSBC, and PAB each recorded a drop of over 10 percentage points in their loan growth rates from 2023 to 2024. After years of surging growth, the inclusive loan market has less room to expand. The sector is shifting from a focus on scale to one on optimizing structure and enhancing quality, explaining the reasonable slowdown in overall growth.

Financial liquidity nourished millions, while average loan balances per borrower continued to diverge

Figure 2: Number of Inclusive Loan Customers



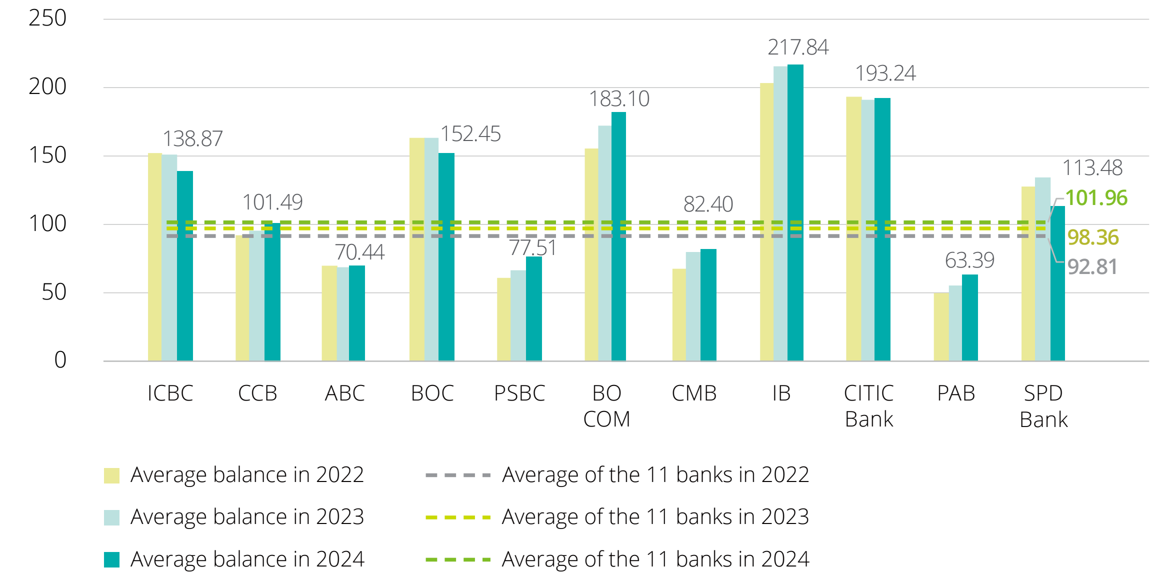
Note: ICBC's, BOC's, PAB's, ABC's, PSBC's, BOCOM's, CMB's, CITIC Bank's, CCB's, IB's, and SPD Bank's customer criteria are "inclusive small and micro enterprise loan customers," "inclusive loan customers," "small and micro-sized enterprise customers with inclusive loans," "small and micro enterprises receiving credit support," "customers with outstanding loans," "customers with loan balances," "inclusive small- and micro-sized enterprises with loan balance," "customers with outstanding loans," "inclusive finance loan customers," "customers of inclusive loans for small and micro enterprises," and "inclusive customers," respectively.

According to the People's Bank of China, more than 60 million inclusive micro and small businesses obtained credit approval nationwide in 2024, encompassing roughly one-third of all entities.

As of 2024, ABC had more than 4.50 million inclusive loan customers, ranking first in the industry, an increase of 1.04 million or 29.52% over 2023; CCB, PSBC, and ICBC served 3,360,000, 2,107,900, and 2,083,400 inclusive loan customers, respectively. ICBC boasted the highest growth rate at 42.04%, trailed by BOC and SPD Bank with growth rates of 39.62% and 31.16%, respectively. PAB witnessed a 24.24% drop in its customer base compared to the end of 2023.

Figure 3: Average Inclusive Loan Balance of Micro and Small Customers

Unit: RMB10,000



In 2024, in terms of enterprises' balance of inclusive loans, the average amount of the 11 commercial banks was RMB1.02 million, an increase of 3.67%. By the end of 2024, PAB's inclusive loan customers' average balance was the lowest (about RMB630,000); ABC, PSBC, and CMB each had the average balance of less than RMB1 million; CCB broke the RMB 1 million barrier for the first time in the average balance; IB and CITIC Bank had higher average balances of RMB2.18 million and RMB1.93 million, respectively. The average balances across the 11 banks diverged notably.

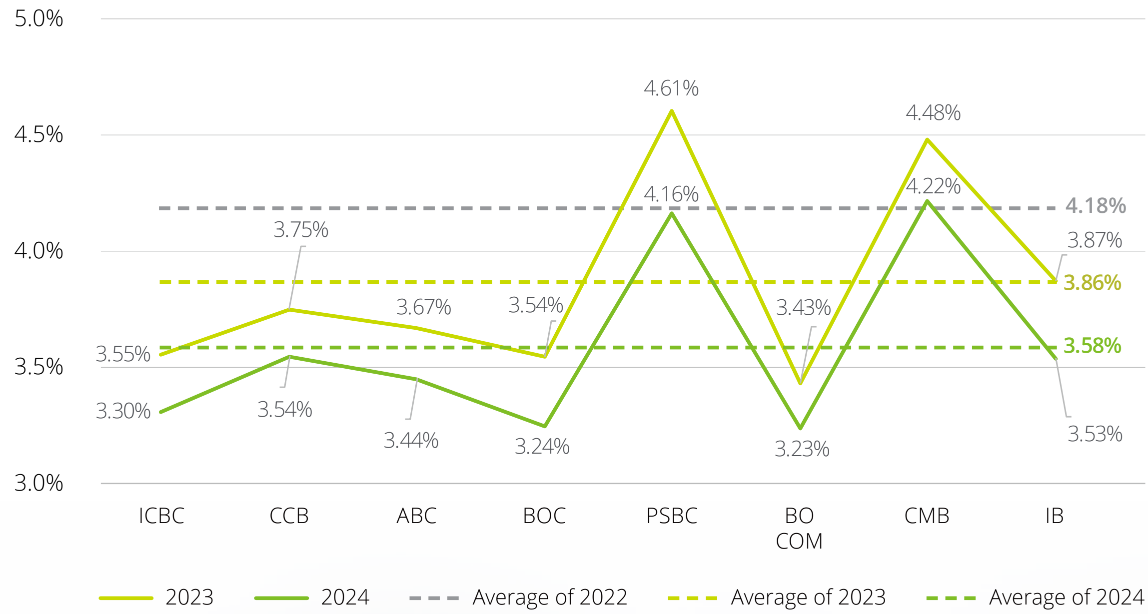
ICBC's, BOC's, and SPD Bank's inclusive loan customers' average balances dropped from 2023, with their customers continuing to expand in lower-tier cities and rural areas; CCB's, ABC's, PSBC's, CMB's, and PAB's balances were below the 11 banks' average.

Financing costs declined, lowering costs for micro and small enterprises

Provinces and municipalities have rolled out guidelines in response to the *Administrative Measures for the Special Funds for Inclusive Financial Development* (Cai Jin [2023] No. 75) issued by the Ministry of Finance, providing policy support like financial interest discounts, incentives for fee reductions, and risk compensation to inclusive finance development demonstration zones and rural financial institutions. These steps gave play to the guiding and leverage role of fiscal funds and improve the quality and effectiveness of the policies relating to providing financial support for the development of inclusive finance.

Banking institutions have proactively aligned with national and local inclusive finance policies. All commercial banks' interest rates of newly issued inclusive loans declined year-on-year. Except for CITIC Bank, PAB, and SPD Bank, which haven't disclosed specific loan interest rates, the remaining eight commercial banks saw their average interest rates on newly issued inclusive loans drop by a cumulative 0.60 percentage points from 2022 to 2024. Except for PSBC and CMB, the interest rates of the other six commercial banks were lower than 4%. BOCOM had the lowest rate at 3.23%. Apart from SPD Bank, which hasn't revealed data on interest rate changes, the remaining ten banks all reduced their newly issued loan interest rates by at least 0.20 percentage points in 2024. These banks implemented the national requirements for inclusive financial services, responded to the call to make fee cuts and interest concessions to support the real economy, further lowering financing costs for micro and small enterprises, with the aim of driving high-quality development in inclusive finance.

Figure 4: Interest Rate of Newly Issued Inclusive Loans



Note 1: CITIC Bank, PAB, and SPD Bank did not disclose specific interest rates in their annual reports. However, CITIC Bank noted a 0.33 percentage point year-on-year drop in the interest rates on newly issued inclusive loans to micro and small enterprises in 2024, and PAB revealed a 0.51 percentage point year-on-year decrease in the weighted average interest rate of new loans during the same period.

Note 2: The banks' interest rate criteria were the average interest rates of inclusive loans for small and micro enterprises.

Central ministries and local governments have closely collaborated to meet the goal of "ensuring quantity, stabilizing price, and optimizing structure" of inclusive lending in 2024 and to drive economic stabilization, growth, and efficiency. They have also continually enhanced the policy framework for inclusive finance aimed at micro and small enterprises, implementing various strategies to cut down enterprises' operational financing expenses. Here are some examples:

- In March 2024, the Financial Commission Office of the CPC Hainan Provincial Committee, the Hainan Provincial Development and Reform Commission, and three other departments issued the *Measures for Accelerating Financial Industry Development in Hainan Province*. Under these measures, MSMEs in Hainan that have secured approval for unsecured credit loans of up to RMB10 million (inclusive) via the Hainan Intelligent Financial Integrated Service Platform will get a 1% interest subsidy on the actual loan amount. The subsidy duration is capped at one year, and each MSME can avail of this benefit a maximum of three times.

- In March 2024, the CPC Shaanxi Provincial Committee and the People's Government of Shaanxi Province unveiled a notice outlining the *Three-Year Action Plan for Developing the Qinchuangyuan Innovation-Driven Platform (2024-2026)*. The plan aims to propel the "Ten Banks and Hundreds of Billions Empowering Thousands of Enterprises" financing campaign. The notice requires revamping the credit rating system for tech firms, enhancing product and service quality in inclusive finance and technology, leveraging financial tools like the Qinke Loan and the Gongxin Loan, and boosting innovative services such as intellectual property pledges, bank-insurance collaborations, and investment-loan synergies. These steps are taken to boost the quantity, broaden the reach, and lower the expenses of tech-focused credit.

- In May 2024, the Hunan Provincial Department of Finance released a notice outlining the *Administrative Measures for Risk Compensation of "Xiaoxiang Caiyin Loan" in Hunan Province* to enhance the credit loan risk compensation mechanism collaboratively managed by provincial and municipal/county governments, as well as the fiscal sector and banks. By doing so, the department can maximize the credit-boosting impact and leveraging power of fiscal risk compensation funds, particularly targeting industrial parks, to steadily ease the financing challenges encountered by private MSMEs.

- In October 2024, the General Office of the Shanghai Municipal People's Government rolled out a notice titled *Measures on Strengthening the Financing Support for Small and Medium-sized Enterprises in Shanghai*. The notice delineates the following strategies: implement the policy of loan renewal without principal repayment for small and medium-sized enterprises, give full play to the guiding roles of central bank policy tools, establish a coordinated working mechanism to support the financing of small and micro enterprises, improve the working mechanism for due diligence and liability exemption in inclusive credit loans, promote the scale and coverage of policy-based financing guarantee fund, optimize a new round of credit incentive and subsidy policies for MSMEs, coordinate and make good use of government fiscal policies on interest and fees subsidies, promote the establishment of financing credit service platform, and accelerate the construction of financing service centers.

Refine development mechanisms, enhance product portfolios, advance inclusive finance to a new level of high-quality growth

Bank	Strategic positioning	Development model	Main products
ICBC	Continuously improved the coverage, accessibility, and satisfaction of inclusive financial services, and better met the diverse financial needs of small and micro enterprises, agriculture-related business entities, and key customer groups designated under the assistance program, striving to become a model bank for inclusive finance.	• Service channels were deepened. Outlets featuring inclusive finance were built based on self-operated institutions. The inclusive edition of mobile banking was developed to provide one-stop services dedicated to small and micro enterprises; • Risk management has been intensified. In order to apply technology to risk control, the bank consolidated internal and external data and improved the "One Customer + N Products" risk control system; • Comprehensive services have been refined. The bank promoted iterative upgrading of the "ICBC Business Matchmaker" platform, provided one-stop services such as product recommendation, supply and demand matchmaking, and financing support and built a "model platform" of integrated financial services for small and micro enterprises.	• The product system was optimized. The bank upgraded the Quick Lending for Operation and launched "Manufacturing e Loan," a digital inclusive unsecured loan facility for micro and small manufacturers; • The "e-Quick Loan," an Online Revolving Loan facility, was developed to meet the medium- and long-term funding needs of small and micro enterprises seeking reproduction on extended scale; • In terms of Digital Supply Chain products, the bank provided financing solutions for key industries, channeling financial resources precisely into upstream and downstream small and micro enterprises in supply chains.
CCB	Continued to advance the innovation of inclusive finance models, improve the quality and efficiency of services for agriculture-related, high-tech, and small and micro businesses, and offer diversified inclusive financial services.	• Pressed ahead with the building of the online business risk scanning and detection (RSD) system. Continued to improve the application of scorecard tool in the retail business segment, covering Quick Loan for Small and Micro Businesses, Yunong Quick Loan, qualified revolving retail loan, and special instalment services, and put customer risk assessment in place; • To expand the linkage between corporate and personal scenarios for enterprise mobile banking, the bank added services such as cloud archives, loan amount estimation, and cross-border business benefits; the single-person mode supported digital wallets and online payment functions, helping small and micro businesses reduce costs and increase efficiency.	• The "CCB Huidongni" platform provided integrated ecological services covering credit financing, comprehensive financial services, and public services for inclusive finance customer groups such as small and micro businesses, individual business operators, sci-tech enterprises, and agriculture-related entities to meet the needs of enterprises in their entire life cycles; • Intensified financial input for rural household and improved the exclusive service system. By the end of 2024, the balance of "Yunong Loan" exceeded RMB280 billion, with a loan growth rate of more than 45%; • Supported the development of inclusive rural collective economic organizations and innovated products such as "Collective Credit Loan."

Bank	Strategic positioning	Development model	Main products
ABC	Continued to deepen the implementation of the strategy of rural and inclusive finance, enhance the adaptability and inclusiveness of financial services in key areas and weak links, and deepen the implementation of the coordination mechanism for supporting small and micro enterprises in obtaining financing. Constructed the development model of integration and mutual empowerment between online and offline channels with ABC's characteristics.	• Deepened the implementation of the coordination mechanism for supporting small and micro enterprises in obtaining financing. In accordance with relevant national requirements, a dedicated task force was established to carry out the "Large-scale Visits to Thousands of Enterprises and Customers" campaign in industrial parks, communities, and villages; • Built a highly adaptable service system. Upgraded the Inclusive E-station 3.0 and set up a one-stop online service platform for small and micro enterprises; • Continued to give preference to inclusive finance in terms of credit management, assessment and evaluation, and resources support. Improved the policy of due diligence and liability exemption for inclusive credit business; • Optimized policies and measures for customer access, post-loan early warning, overdue loans collection, and disposal of non-performing loans. As a result, the quality of inclusive financial assets was consistently aligned with regulatory requirements.	• Launched Micro Quick Loans 3.0 and Merchant E-loan, and optimized processes of loans to address the issue of slow financing of market entities. Upgraded Xujie E-loan to alleviate the loan renewal pressure on small and micro enterprises and reduce their financing costs. Developed Technology Quick Loans, Loans for Specialized and Sophisticated Little Giant Enterprises that Produce New and Unique Products, and Agricultural Park Sci-tech Enterprise Loans to better serve technology-based small and micro enterprises. Innovated Government Guarantee E-loan, realizing batch guarantees, to provide quality services for small and micro enterprises which lacked collateral through cooperation with the government; • Pushed on the registration of rural households' information and the evaluation of credit villages and credit households, promoted featured products such as Huinong E-loan, Huinong Internet Loan, and Fumin Loan, to expand the service coverage for agricultural-related small and micro enterprises and rural households.
BOC	Focused on the needs of micro and small-sized market entities, urban and rural residents, and other inclusive customer groups, kept optimizing the quality and efficiency of its products and services, and promoted the high-quality development of inclusive finance business.	• Took full advantage of the relending facility for inclusive eldercare services and provided preferential loans to eligible institutions and enterprises engaged in inclusive eldercare services, with the aim of expanding and enriching the supply of eldercare services; • Focused on micro and small-sized technological enterprises and improved its full life-cycle services, providing a package of financial services such as account opening, agency payroll payment, settlement, private banking, and capital services, etc.; • Advanced the implementation of the bank's "special coordination mechanism for supporting small and micro enterprises in obtaining financing," precisely aligning with the financing demands of micro and small-sized businesses and self-employed individuals.	• Continued to improve the offline and online accessibility of its inclusive finance services, built a total of more than 4,700 inclusive finance outlets, and optimized the service functions of online channels such as the "BOC Inclusive Finance" app and "BOC E-Cooperation" app; • Enriched agricultural-related products and services, promoted the "Grain Planting Loan," launched the "Aquaculture Loan" and "Fishery Loan" for marine fisheries, and rolled out the online product of "Agriculture Quick Loan" to improve the convenience of financial services; • Launched the exclusive product series "individual entrepreneurship guarantee loan + Huichuang Loan" to address funding challenges faced by new urban residents in innovation and entrepreneurship; • Released the brand-new 5.0 version of domestic corporate mobile banking, which introduced cross-border finance and inclusive finance themes.

Bank	Strategic positioning	Development model	Main products
PSBC	Built itself as the main force for rural revitalization, the benchmark in inclusive finance to strengthen its inclusive service capabilities. Based on the daily production and operation scenarios and financial needs of SMEs, the bank innovated product offerings and provided customers with comprehensive services, including financing, payment and settlement, and wealth management, etc. Firmly focused on serving Sannong customers, urban and rural residents, and SMEs. Relied on its unique model and resource endowment featuring directly operated outlets and agency outlets, the bank was committed to meeting the financial needs of the most promising customers during China's economic transformation.	• The bank, based on the "1 plus N" financial service philosophy, introduced financial technologies such as big data development and application, machine learning, and blockchain to create a new industrial chain financing model with less reliance on the credit line and guarantee from core enterprises for MSEs, with "1" as the entry point; • With nearly 10,000 inclusive financial service representatives and equipped with digital tools such as inclusive marketing maps, enterprise 360-degree views and digital grid portraits, the bank delivered more integrated and professional services to MSEs; • Further advanced proactive credit extension for Sannong customers, built an omni-channel and multi-dimensional customer marketing system, and accelerated the transformation towards digital and intensive operation of micro loans, resulting in stable and healthy development of personal micro loans in a consistent manner.	• By leveraging big data models, the bank conducted real-time online intelligent risk assessments for corporate customers applying for the "Inclusive Finance Discount." By doing so, the bank met the needs of MSEs for obtaining credit lines and completing bill discounting without leaving their premises; • Launched the "PSBC Express" exclusive loan products for Chongqing's rural specialty products; • The balance of the bank's agro-related loans reached RMB2.29 trillion. The number of customers served with agro-related loans exceeded 5.20 million. The weighted average interest rate of newly granted agro-related loans in 2024 was 4.35%. The balance of loans under the Sannong proactive credit extension program was RMB199,272 million. Personal micro loans amounted to RMB1,537,363 million, representing an increase of RMB145,136 million, or 10.42% compared with the prior year-end.
BOCOM	Inclusive finance expanded and grew. By adhering to the principle of finance benefiting the people, building a long-term mechanism for inclusive finance development, the bank increased effective credit supply for micro- and small-sized enterprises, the private economy, rural revitalization, and other fields, making every effort to promote common prosperity.	• The bank continued to optimize its credit structure; increased investments in key areas such as small and micro first borrowers, technology-based small and micro enterprises, and rural revitalization; and continued to expand the volume and scope of inclusive credit while improving quality and efficiency; • Implemented structural reform of the inclusive finance system and built a "credit+" comprehensive service; • Deepened the reform of the structure of inclusive finance; establishing the "Inclusive Finance Digital Operations Centre" by special work teams.	• Enriched its BoCom Zhanyetong and BoCom Yinongtong brands, and improved online access to the "Inclusive e-Loan" and "Xingnong e-Loan" series products; • Launched the innovative "Enterprise Mobile Banking Inclusive Edition 2.0"; • Created a special product system for small and micro technology-based enterprises and expanded the active credit extension service model.

Bank	Strategic positioning	Development model	Main products
CMB	Made every effort to integrate the inclusive financial services into its long-term development strategy and operation and management, thereby continuously enhancing the quality and efficiency of serving the real economy.	• Leveraged Fintech to explore product and service innovation, so as to further improve the quality and efficiency of financial services for small- and micro-sized customers; • Continuously strengthened quantitative risk control capabilities, improved the quantitative risk control system in response to changes in the risks of small- and micro-sized customers.	• Closely collaborated with policy banks to continuously enhance the coverage of funds from sub-loans for manufacturing and technology-based inclusive small- and micro-sized enterprises in pilot areas, thus benefiting more small- and micro-sized enterprises; • Continuously iterated supply chain financial products such as "CMB Chain Easy Loan" and "Distribution Easy Loan," which facilitated to create a number of benchmark projects.
IB	Persistently strived to construct a top-tier inclusive financial system, efficiently assisting micro and small enterprises in overcoming challenges of sluggish and arduous financing. Introduced innovative inclusive scenarios and products to propel the high-caliber growth of inclusive finance and advance the cause of shared prosperity.	• Carefully nurtured the "CIB Inclusive" platform, employing a "standardized + scenario-specific + key branch" approach to position it as a vital avenue for acquiring inclusive finance customers; • Originated the "3+N+X" standardized risk assessment framework for inclusive finance, merging diverse data streams, blending multiple models, and enabling collaborative efforts across different levels. By harnessing the "Smart Market System," the bank has crafted many service models customized for the requirements of G-end, B-end, and C-end stakeholders.	• Continuously enriched the "Xing Su Loan" product series, advancing the "product digitization" initiative to gradually establish an online financing product system under the "Xing Su Loan" brand, including "Xing Su Loan (exclusive for tax credit)", "Xing Su Loan (exclusive for asset mortgage)", and "Xing Su Loan (exclusive for black golden private banking customers)"; • Promoted the "Lian Lian Loan" for micro and small enterprises, effectively reducing their financial costs; • Launched the online financing product "Business Xingshan Loan (exclusive for agricultural wholesale and trade business)" tailored for merchants in agricultural wholesale markets.
CITIC Bank	As for inclusive finance, the bank adhered to the principles of "stabilizing growth, pursuing high quality, forging characteristics, and expanding influence." It established and implemented the "Five Specials and Five Strengthens" model of the coordinated financing mechanism for micro and small enterprises.	• Accelerated the expansion of the application scenarios for its "Blockchain+" product matrix "from breadth to depth," and applied in many key scenarios such as inclusive finance, chain finance, fund supervision, and big asset management; • Increased investment in science and technology, used big data, cloud computing, artificial intelligence, and other emerging technologies to improve risk management capabilities and optimize customer service experience.	• Launched "Operation E Loan," restructured the "Housing Mortgage E Loan," and continuously enriched the "CITIC Easy Loan" product system; • Upgraded "Smart Online Banking," refined the features of electronic channels, and put into operation "*Xinzhihui*," a mini program, enabling fast and convenient online application for customers, and effectively improving customer experience; • Vigorously forged AI marketing channels, created the "Benefit Marketing" platform for business opportunities, and promoted digital marketing tools such as "Inclusive AI Business Manager."

Bank	Strategic positioning	Development model	Main products
PAB	Improved the inclusive financial service capability to implement "true inclusive service and true micro/small enterprises."	• Focused on "ecosystem, supply chain, and platforms," creating scenario and batch-based service models; • Built a "credit+" service mode to provide comprehensive services such as settlement, payroll business, etc.; • Further reduced the service costs of small and micro-sized enterprises by sending interest coupons, reducing and exempting settlement fees, etc.; • Built a new-generation digital management platform for inclusive business, deepening the application of "fund flow credit information sharing platform," and promoted the construction of digital and intelligent integration of risk management system.	• Enhanced the inclusive product portfolio by introducing "credit loan," "guaranteed loan," "mortgage loan," "SciTech innovation loan," "scenario loan" and other products to address the financial requirements of micro, small and medium sized enterprises; • Dived into Guangdong local industrial clusters and initiated "aquaculture loan," "toy loan," "dried tangerine or orange peel loan" and other characteristic businesses; • Constructed and operated inclusive financial service stations to extend bank services to industrial parks, communities, counties, towns, and villages; • Established the "Ping An Intelligent Fishing Base" to increase overall economic benefits of aquaculture.
SPD Bank	Kept broadening the reach of inclusive financial services for micro and small businesses, intensifying the bank's efforts in this area, and fully complying with the "two increases and two controls" assessment requirements for inclusive finance. By utilizing the "Intelligent · Inclusive · Digital" service framework, the bank built a tailored support network for the micro and small economic sector, thus energizing the real economy from the ground up.	• Crafted more than ten intelligent risk control models, specifically designed for the unique traits of customer segments and business models of micro and small enterprises, thereby setting up a digital inclusive risk management framework that spans the whole loan journey—from pre-approval to post-repayment; • Rolled out the "SPD Comes" app, forging an enterprise-wide gateway, product suite, and system platform for inclusive customer service; • Proactively enforced the policy of loan rollover without principal repayment, refined procedures, systems, and processing speed, and unveiled the "one-click loan renewal" function to better cater to the ongoing financing demands of micro and small businesses.	• Rolled out four key "SPD Series" products in inclusive finance, characterized by their online availability, standardization, customization, and broad accessibility; • Aligning with the national "green" and "inclusive" finance strategies, the bank has pioneered the market's first batch of China Bond-Green Inclusive Finance Themed Public Funds, along with China's inaugural climate change index fund; • Amalgamated ecological scenarios including merchants, business districts, automotive, and inclusive trade transactions and launched initiatives like installment discounts for 3C appliance trade-ins, spurring the improvement and widening of inclusive financial services.

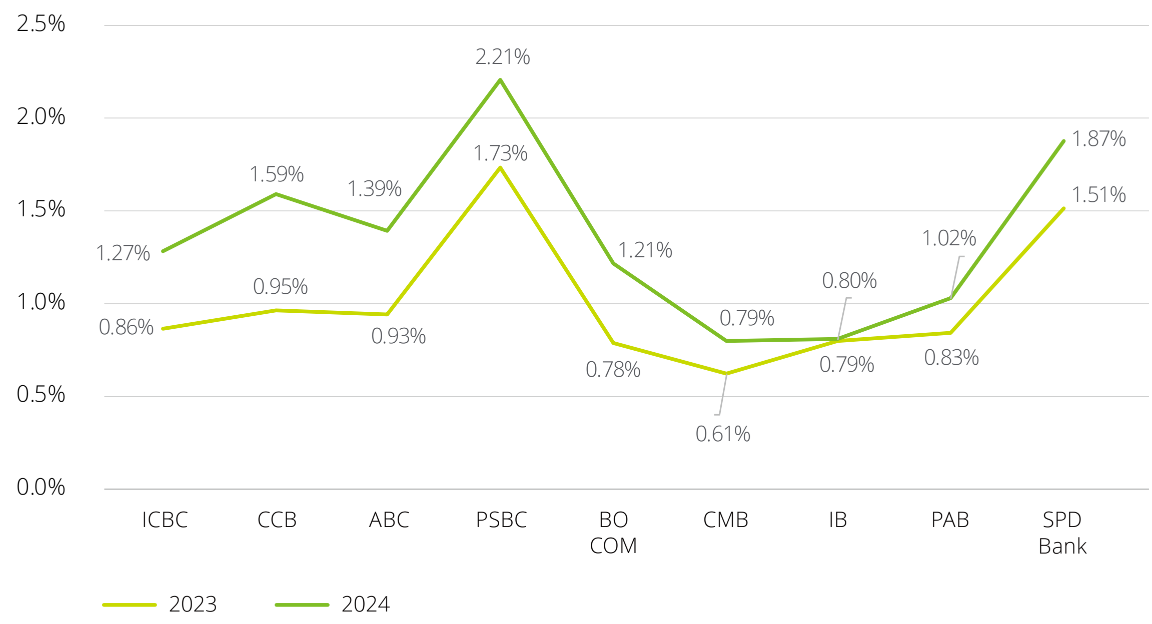
From "boosting reach and volume" to "improving quality and managing risks"

China's inclusive loans to micro and small enterprise have grown rapidly since 2018. With credit volume surging, the denominator effect has caused a delay in the current NPL ratio for inclusive finance lending. Besides, loans issued recently haven't experienced risk assessment in a full economic cycle. Moreover, policies that let borrowers defer loan principal and interest payments have inevitably delayed the surfacing of certain credit risks.

As credit expansion grows in both scale and reach, potential risks in inclusive finance also started to emerge. Problems like rising NPL ratios in some regions, worsening loan quality in certain industries, increased vulnerability of micro and small enterprises, and low risk resilience among self-employed individuals are challenging the sustainable growth of inclusive finance. For example, BOCOM reported an NPL ratio of 0.98% for its inclusive loans provided to micro and small enterprise, up 0.28 percentage point over the end of the previous year. IB recorded an NPL ratio of 1.09% for its inclusive loans, up 0.14 percentage points from the end of the prior year.

Other banks, except for BOCOM and IB, did not fully disclose their NPL data for inclusive micro and small loans. Inclusive finance typically focuses on micro and small enterprises in manufacturing and wholesale & retail sectors under corporate lending, as well as personal operating loans under retail lending. Due to limited data availability, this report analyzed the NPL ratio of personal operating loans to reasonably gauge the overall risk of inclusive loans. Reviewing the NPL data from the 11 banks reveals a notable upward trend in the NPL ratios of personal operating loan compared to 2023. Excluding BOC and CITIC Bank, which did not disclose their data, ICBC, CCB, ABC, PSBC, and BOCOM all saw their NPL ratios of personal operating loan rise by over 0.40 percentage points from 2023. CCB recorded the steepest increase of 0.64 percentage points. As major state-owned banks have recently ventured into lower-tier markets with personal operating loans, they've encountered renewal pressures and gradually uncovered NPL risks from the macroeconomic climate, real estate cycles, and residents' income stability.

Figure 5: NPL Ratio of Personal Operating Loans



Note 1: BOC and CITIC Bank did not disclose the NPL ratios for their personal operating loan services.

Note 2: PSBC disclosed data on the NPL ratio for personal micro-loans.

Note 3: CMB disclosed data concerning the NPL ratio for loans to micro and small enterprise within its retail loan offerings.

Under the pressures of "expanding outreach and boosting volume" while "managing risks and ensuring quality" for inclusive loans to micro and small enterprises, commercial banks should strengthen their credit systems and refine precision-driven risk management:

Push on the registration of rural households' information and the evaluation of creditworthy villages and households to set up a robust credit recording and information-sharing system. Construct authentic, comprehensive, and up-to-date credit archives by comprehensively gathering crucial data on rural household assets, production activities, business operations, and credit histories, and rigorously cross verifying the legitimacy of loan purposes through multiple dimensions. This strategy significantly curbs information asymmetry risks, allows for a more accurate assessment of borrowers' repayment abilities, offers financial institutions reliable data for credit decisions, and consequently lowers the likelihood of loan defaults.

Innovate financial products and craft tailored service plans. For example, adapt repayment schedules and methods according to the industries, growth stages, and risk profiles of micro and small enterprises.

Tighten customer admission controls to block illegal intermediaries from acquiring clients, prevent customer information from being misrepresented, and stop NPLs from piling up, thus mitigating systemic risks.

Utilize government-established risk compensation mechanisms by connecting with "risk compensation funds" to gain support for sharing NPL risks. With risks under control, ramp up credit extension, optimize the risk-return balance, and better harness financial support for the real economy.

Expand risk resolution avenues by prioritizing cash collection, deepening market-oriented disposal frameworks, streamlining NPL write-off management, enhancing contingency planning, refining the mix of disposal tools, and consistently improving the efficiency of non-performing asset disposal.

At the start of 2025, China unveiled a fresh set of guidelines and mandates to develop inclusive finance, laying out a definitive path for the expansion of inclusive loans for micro and small enterprises. Here are the details:

In March 2025, the General Office of the State Council released the Guidelines on *Advancing Technology Finance, Green Finance, Inclusive Finance, Old-age Finance, and Digital Finance* (the "Guidelines"). Anchored in the strategic objective of building China into a financial powerhouse, the Guidelines urges the creation of a resilient, multi-layered organizational framework for inclusive financial institutions and the enhancement of product and service provisions in pivotal inclusive domains. It underscores the execution of strategies to bolster financial service proficiency for MSMEs, encompassing the ongoing advancement of the Credit-Based Lending initiative and the "One Chain-One Policy-One Batch" Financing Initiative for MSMEs. These endeavors are designed to spur growth in the scale, reach, and quality of inclusive loans for micro and small enterprises. Furthermore, the Guidelines requires refining policy structures to bolster private enterprise financing, elevating financial services for rural revitalization, ensuring national food security, and cementing and expanding poverty alleviation gains. Ultimately, it aspires to construct a "multi-layered, widely accessible, and enduring" inclusive financial ecosystem.

In March 2025, the People's Bank of China convened a credit market conference to chart the direction for financial services to the real economy for the entire year. For the inclusive finance sphere, PBC urged service providers to direct their efforts toward the grassroots and advance the data-driven credit approval approach. In 2025, a dedicated campaign will be launched to cultivate first-time loan recipients, with the goal of boosting loans to micro and small enterprises by RMB2 trillion.

In April 2025, during a State Council Information Office press conference, the Director of the Inclusive Finance Department at the NFRA highlighted that the social credit system's development has fostered a supportive environment for micro and small enterprises' financing. The NFRA prioritizes the social credit system's construction, viewing the collection and sharing of micro and small enterprises' credit data as pivotal for boosting financing accessibility and convenience. Moving ahead, the NFRA will advance enhanced information sharing, steer financial institutions toward precise matchmaking, sustain the vigor of loan issuance to small and micro enterprises, elevate loan quality, judiciously establish loan interest rates, refine loan business structures, and bolster support for first-time loans, loan renewals, and credit-based loans, all to better serve the financing requirements of creditworthy micro and small enterprises.

Clearly, while the banking sector sustains steady growth in inclusive finance operations, it's pivoting its focus to enhancing quality and optimizing structure. This shift follows policy guidance and meets the market's intrinsic needs. Banking financial institutions should diligently execute the financing coordination mechanism for micro and small enterprises, focusing on "direct grassroots access, quick and easy processes, and reasonable interest rates" to fully leverage the mechanism's effectiveness. They should also intensify the integration of technology into risk management, creating a comprehensive risk control system that blends "innovative risk control techniques, refined risk management frameworks, and robust risk culture development."

The goal is to shift from reactive risk prevention to proactive risk management, ensuring the high-quality growth of inclusive finance; keep improving the institutional setup for inclusive finance, promoting the "Five Major Tasks," shouldering social responsibilities, supporting the real economy, and addressing the financial requirements of inclusive customers, including micro and small businesses, self-employed individuals, and agriculture-related entities. In this way, inclusive financial credit supply will be guaranteed to offer adequate volume, stable pricing, and a well-balanced structure.

Inclusive finance acts as the bedrock for common prosperity and the vital force driving rural revitalization. It's channeling targeted support to the micro-level of the real economy, offering essential support for propelling high-quality economic growth. As we look to the future, inclusive finance, given its fundamental, inclusive, and adaptable characteristics, is ready to pen a remarkable chapter in the new era of China's modernization efforts, by extending financial services to the real economy and promoting shared prosperity.

3.2

Scale to efficiency: commercial banks tackle retail challenges in resident debt cycles and advance transformation through "smart" strategies

The banking industry is stepping into an era marked by low interest rates, slim interest margins, and declining profitability. The retail business has become a primary focus for commercial banks to uncover new profit growth avenues, spurring them to ramp up their strategic retail business deployments. Nonetheless, amid shifting external conditions marked by cautious consumer spending, rising asset quality concerns, and an ongoing squeeze on interest margins, the conventional retail growth model has encountered a temporary roadblock. As national policies to stimulate consumption continue to roll out, commercial banks are vigorously building a new consumer finance landscape. They are propelling swift retail business expansion via product innovation and the fusion of consumption scenarios. Simultaneously, commercial banks are prioritizing the bolstering of their retail risk management competencies. They are investigating intelligent enhancements in risk control and expanding risk mitigation avenues to balance risk and reward, ensuring sustainable growth in their retail endeavors.

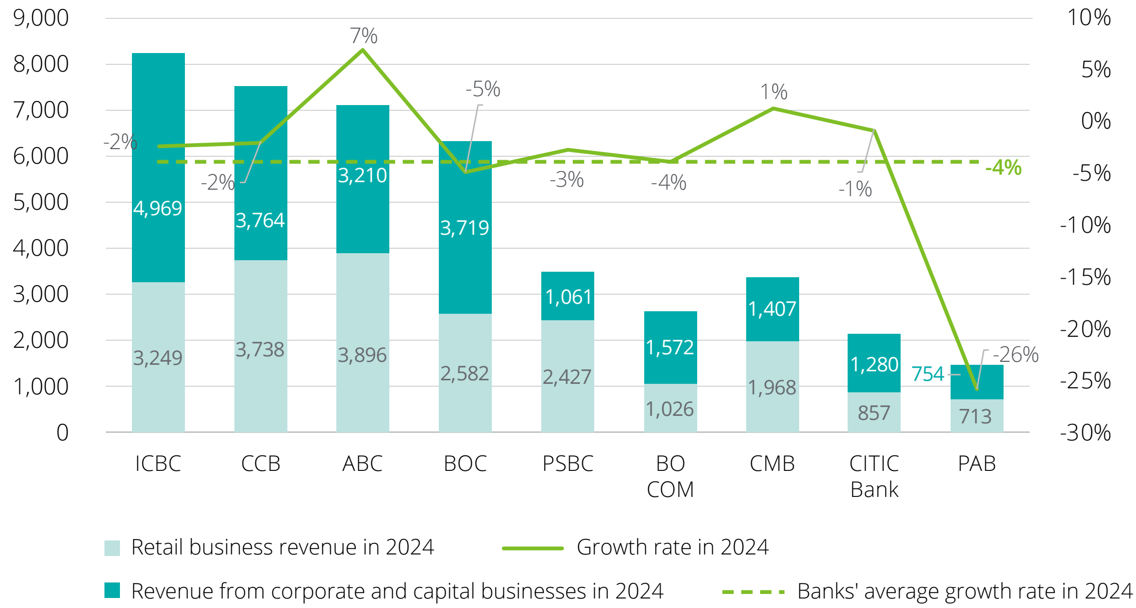
Retail revenue contributions dropped, and risk exposures tightened profit margins

Among the 11 banks, IB and SPD Bank did not reveal the retail business performance in their annual reports. The remaining nine banks disclosed that in 2024, the average revenue contribution from their retail finance business was 49%, down two percentage points from the prior year. Among the six major state-owned banks, PSBC led with the highest retail business revenue contribution at 70%. ABC and CCB followed, with contributions of 55% and 50%, respectively. All other major state-owned banks, except BOCOM, also recorded retail business revenue contributions exceeding 40%. Among the joint-stock banks, CMB contributed 58% from its retail business, while CITIC Bank's and PAB's retail business contributed more than 40% of their total revenue.

In 2024, the average decrease rate of the nine commercial banks' retail business revenue was 4%, down six percentage points from the previous year's growth rate of 2%. Most banks faced substantial drops in their retail revenue. However, ABC and CMB maintained growth in their retail business, with revenues rising by 7% and 1%, respectively. The other seven commercial banks reported year-on-year decreases in their 2024 retail banking revenue. PAB recorded the sharpest decline, with a 26% drop from the previous year. Generally, in 2024, the nine commercial banks saw a slower growth rate in their retail business revenue, and their share of total operating revenue also declined slightly.

Figure 1: Retail Business Revenue

Unit: RMB100 million



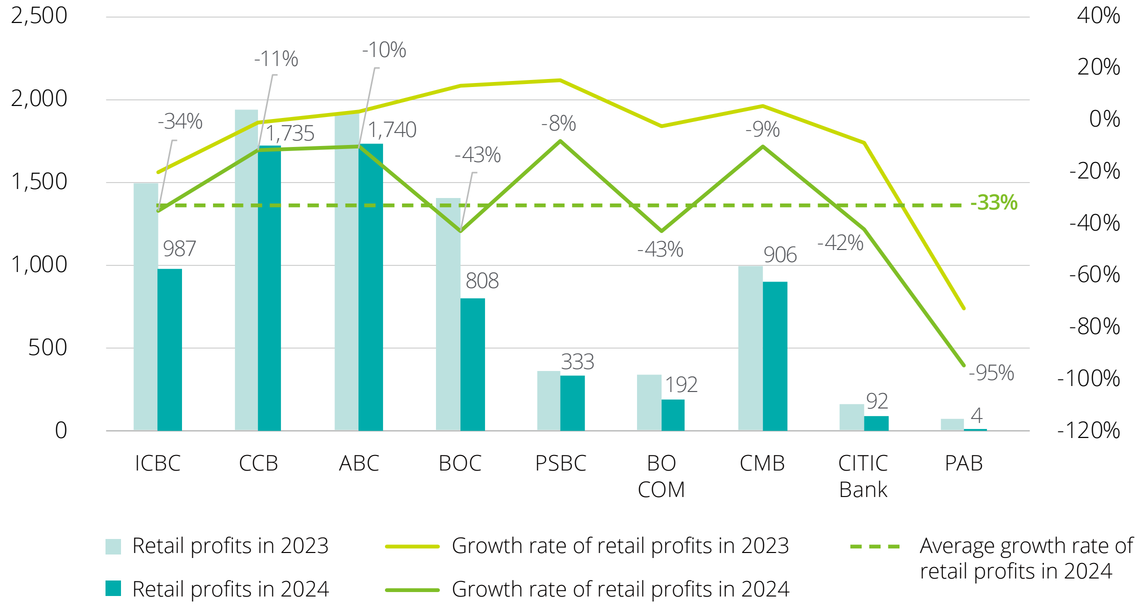
Note: IB and SPD Bank did not disclose information about the retail financial business in their FY2024 annual reports.

In 2024, the retail business profits of the nine commercial banks fell by an average of 33%. PAB, BOC, BOCOM, and CITIC Bank had year-on-year profit drops of 95%, 43%, 43%, and 42%, respectively. BOC and ICBC recorded the largest decline, by RMB60.2 billion and RMB51.8 billion in retail profits, which together made up 58% of the total profit decline across the nine banks. Three main factors drove this downturn in retail profit contributions.

First, macroeconomic shifts and fluctuating resident incomes dampened home-buying and spending appetites, hurting banks' retail credit demand and commission charge-based income. Second, lower Loan Prime Rates (LPR) and consumer loan rates cut into banks' retail credit asset yields. Third, deteriorating retail credit asset quality forced some banks to boost write-offs and provisions for risky assets, tightening profit margins in their retail operations.

Figure 2: Retail Business Profits

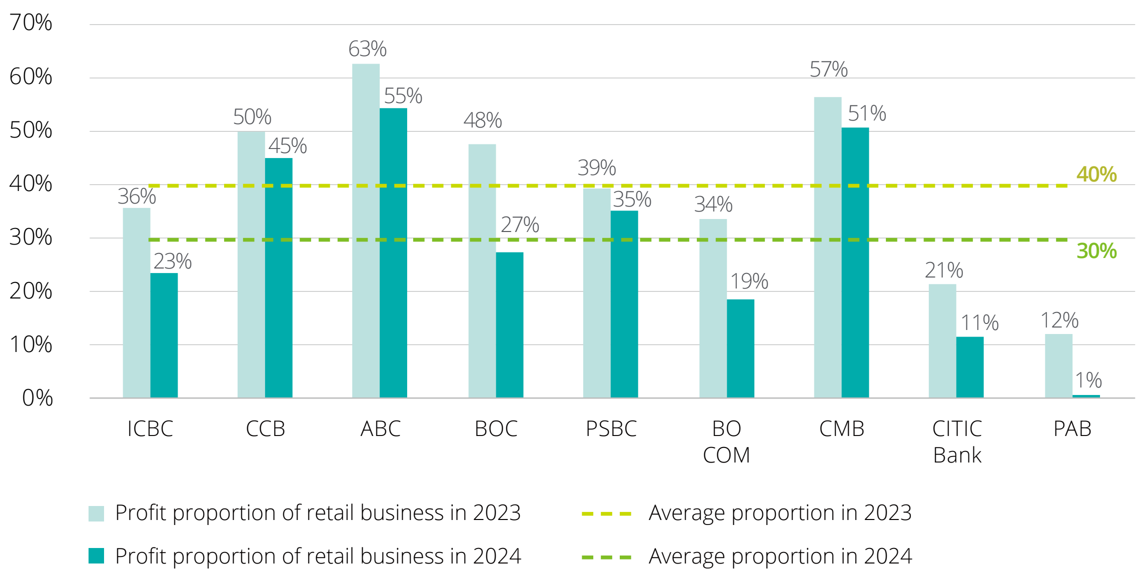
Unit: RMB100 million



Note: IB and SPD Bank did not disclose information about the retail financial business in their FY2024 annual reports.

According to the data the nine commercial banks disclosed in 2024, their retail business profits averagely accounted for 30% of their total profits, down ten percentage points from the previous year. Specifically, BOC recorded the largest decline, by 21 percentage points to 27%, followed by BOCOM, with retail profits accounting for 19% of its total profits, down 15 percentage points from the previous year. In addition, ICBC's, CITIC Bank's, and PAB's retail business profit share declined by more than ten percentage points compared to the previous year, with PAB's share declining from 44% in 2022 to 12% in 2023, and further sliding to 1% in 2024.

Figure 3: Proportion of Retail Business Profits



Note: IB and SPD Bank did not disclose information about the retail financial business in their FY2024 annual reports.

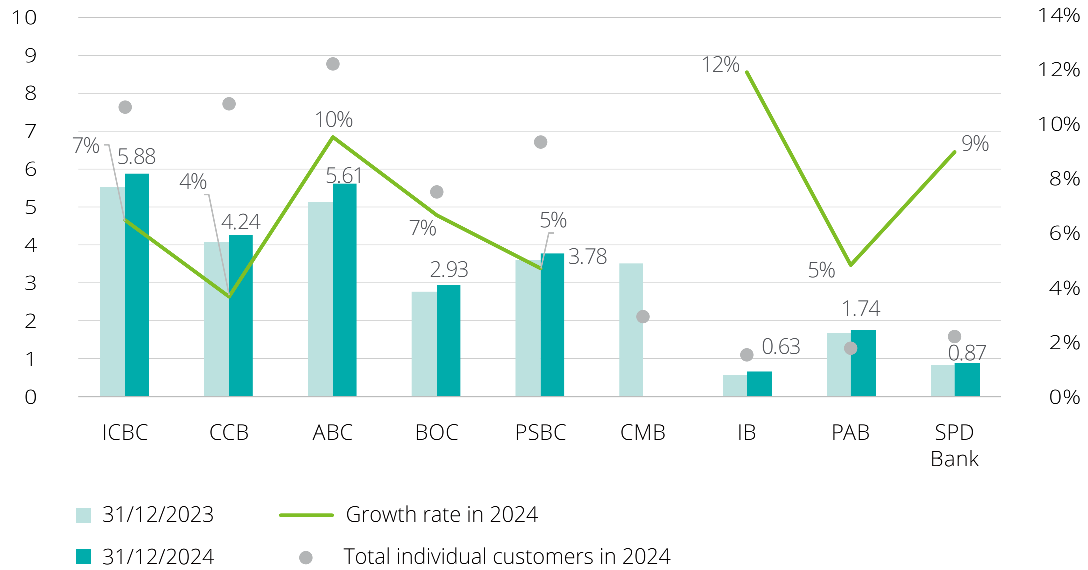
Mobile banking user growth slowed, and activity declined amid bottleneck period

With the progress in digitalization and artificial intelligence technologies, mobile banking has become the primary online channel for commercial banks to serve their retail customers. As competition heats up in the banking sector, banks are struggling to boost both the quantity and activity of their retail customers. To maintain existing customer loyalty and uncover fresh avenues for acquiring new ones, banks are continuously innovating their financial service models by enhancing user experiences, improving service functionalities, and expanding ecosystems to accommodate various scenarios. They are also honing their online operations to drive up customer activity and increase financial asset values.

According to the banks' FY2024 annual reports, eight commercial banks (with BOCOM, CMB, and CITIC Bank excluded due to undisclosed data) saw their mobile banking user bases expand, though at a more sluggish rate than in prior years. IB's and ABC's growth rates led the pack, reaching 12% and 10%, respectively. Regarding monthly active users (MAU) for mobile banking, ICBC, ABC, and CCB reached 260 million, 250 million, and 223 million, respectively. CMB led the pack among joint-stock banks with the MAU of the CMB APP and the CMB Life APP reaching 123 million. In 2024, the average MAU growth rate for mobile banking across the 11 commercial banks was 10%, down eight percentage points from 18% in 2023, signaling a broader growth slowdown. Despite this, PSBC, IB, and ABC sustained relatively high MAU growth rates for their mobile banking, at 18%, 18%, and 17%, respectively. PAB saw a 16% year-over-year drop in its mobile banking MAU in 2024. CMB's annual report revealed that the CMB Life APP's (CMB's credit card app, excluding the CMB APP) MAU fell by 1,530,900 from 41,975,500 in 2023 to 40,444,600. Two primary factors drive the slowdown in MAU growth for commercial banks' mobile banking apps. Firstly, heightened industry competition, lack of scenario differentiation, and functional similarities make it harder to retain customer loyalty. Secondly, slower income growth among residents, weaker consumption, and reduced credit card spending lead to decreased activity on credit card apps.

Figure 4: Number of Mobile Banking Users

Unit: 100 million

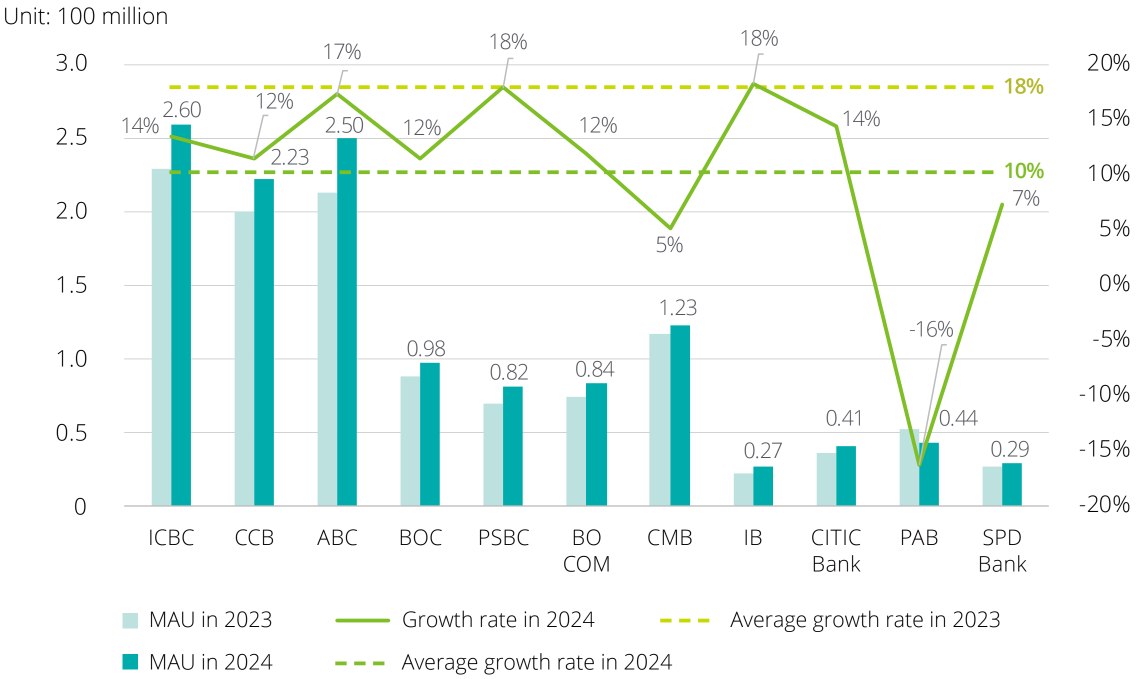


Note 1: The number of mobile banking users shown in the figure was the total number of mobile banking users and card APP users disclosed by the banks.

Note 2: BOCOM and CITIC Bank did not disclose the number of mobile banking users in 2024 and 2023. CMB did not disclose the number of mobile banking users in 2024.

Note 3: ABC's number of mobile banking users was the registered customers of its individual mobile banking; CCB's number was the customers with assets of personal mobile banking; PAB's number was the registered customers of Ping An Pocket Bank APP.

Figure 5: Mobile Banking MAU



Note 1: The MAU of mobile banking users was the total MAU of mobile banking users and card APP users disclosed by the banks. SPD Bank did not disclose its mobile banking MAU, and it showed the MAU of its Mobile Banking app in the figure above.

Note 2: The average MAU disclosed by CCB in 2023 exceeded 200 million. This figure took 200 million for analysis.

Tackled retail banking challenges through integrated online-offline strategies

Financial and operational data indicate that the growth of retail banking services at commercial banks has decelerated. With escalating industry competition, banks face the pivotal tasks of uncovering new business scenarios and identifying fresh growth opportunities. To broaden customer acquisition avenues, banks are proactively cultivating online scenarios, expanding offline channels, bolstering Fintech integration within their operations, and forging a new paradigm of integrated online-offline services. This strategy aims to consistently enhance customer acquisition capabilities and propel further growth in retail banking.

Enhanced online services and cultivated an integrated online-offline service framework

Banks vigorously innovated their product and service offerings, diversified consumption scenarios, and expanded online transaction channels via partnerships with payment institutions. They also pioneered advancements in online financial services and integrating offline channels to cater to users' needs and elevate user activity.

Table 1: Measures and Achievements in Expanding Online Scenarios and Channels

Bank	Measures and achievements
ICBC	• At the end of 2024, ICBC had 588 million personal mobile banking customers, with more than 260 million monthly active mobile users, both leading the industry; and 16.59 million corporate internet banking and corporate mobile banking customers, with 7.07 million monthly active customers, ranking first in the industry in terms of customer base and activity; • ICBC adhered to the integration of online and offline channels. The bank continuously improved the integrated service channels for county and rural areas, including county-level outlets, mobile banking, the ICBC "Xingnongtong" APP, ICBC e Pooling Opening Banking. The number of online rural customers in county areas exceeded 184 million, reaching 87.4% in coverage of outlets in counties.
CCB	• At the end of 2024, CCB had 563 million online personal users, and the MAU of the "Binary Stars" reached 223 million. Customers with assets of personal mobile banking totaled 424 million, an increase of 3.68% over 2023. The number of corporate mobile banking users reached 7,024.8 thousand, up 22.48% over 2023; • CCB intensified its financial support for the private economy and small and micro merchants. Through the "business card" service, it provided financial services to over two million small and micro customers on leading internet platforms. The number of online payment transactions was 63,353 million, with a transaction volume of RMB21.27 trillion. The number of card-linked fast payment users was 471 million, ranking first among its peers in payment institutions such as Alipay, JD.com, Meituan, Douyin, and Pinduoduo.
ABC	• As at the end of 2024, ABC had 561 million registered retail customers of mobile banking, representing an increase of 49.22 million as compared to the end of the previous year; and 8.74 million registered corporate customers of mobile banking, representing an increase of 1.83 million as compared to the end of the previous year; • ABC upgraded Huinong Zone in the rural version of mobile banking, launched featured products such as Huinong installment and agricultural machinery leasing, and optimized consumption scenarios such as high-quality rural stores, continuously extending its financial services to grassroots levels. ABC released featured services, including trade-in of home appliances, green transportation and new urban resident services, stepping up efforts to support the fields related to people's livelihood in County Areas. As at the end of 2024, the bank had over 48 million of MAU of the rural version of mobile banking.
BOC	• In terms of corporate banking, the bank released the brand-new 5.0 version of domestic corporate mobile banking, which introduced cross-border finance and inclusive finance themes and further enriched service functions, with the number of active customers reaching 3,996,100, up by 12.57% year-on-year; • In terms of personal banking, the bank vigorously applied innovative technology to boost the efficiency of domestic personal mobile banking services. The bank's personal mobile banking recorded 97.9315 million monthly active customers, up by 11.59% year-on-year, and RMB46.68 trillion in total transaction volume. The bank promoted the new version of the BOC Mobile Banking app (International Version). As at the end of 2024, the overseas personal mobile banking was available in 31 countries and regions around the world, providing services in 12 languages, staying ahead of Chinese peers.
PSBC	• The number of mobile banking users totaled 378 million. During the reporting period, the MAU reached 81.84 million, a year-on-year increase of 18.07%. Transaction amount stood at RMB17.80 trillion, a year-on-year increase of 11.21%. The bank focused on upgrading diverse services and launched Corporate Mobile Banking 3.0. As at the end of the reporting period, corporate mobile banking had 936 thousand registered customers; • The bank innovated its scenario ecosystem, offering a broader range of vertical life scenarios while continuously developing the "PSBC Green Card, Save as You Shop" consumption brand. As at the end of the reporting period, PSBC Credit Card App had a total of 32,116.3 thousand users, up by 32.01% from the prior year-end; the accumulative number of credit cards linked to the app reached 40,199.4 thousand, up by 38.71%.

Bank	Measures and achievements
BO COM	• The number of MAU for personal mobile banking was 55.4084 million, an increase of 12.84% over the end of the previous year. The cumulative number of registered customers of the APP amounted to 79.5720 million, and the number of MAU was 28.4094 million. The number of contracted customers of corporate mobile banking increased by 11.36% over the end of the previous year, the annual cumulative customers of corporate mobile banking and transaction volume increased by 6.87% on a year-on-year basis. The proportion of online channel business growth of inclusive credit increasing to 80%; • "BoCom Yinongtong" rural revitalization service zone was set up in various channels, such as BoCom Mini Programme and Mobile Banking, to provide comprehensive financial services for "agriculture, rural areas and farmers."
CMB	• The deep integration of technology into operations and services remained a priority. MAU of the CMB APP and the CMB Life APP reached 123 million, while the average monthly active customers on wholesale online channels totaled 1.9494 million; • As of the end of the reporting period, 93.81% of financing business were conducted online, and 77.41% of foreign exchange business were conducted online, representing an increase of 1.53 percentage points and 2.07 percentage points as compared with the end of the previous year respectively.
IB	• The number of active customers of the mobile banking was 62.7885 million, representing an increase of 11.97% over the end of the previous year. Corporate WeChat served 9.68 million customers, with remote services totaling 67.11 million. Remote digital initiatives created 150 marketing scenarios, engaging 69.3875 million customers cumulatively. Retail MAU grew by RMB109.830 billion, with 2.0371 million retail customers ascending to higher tiers; • The bank has positioned the "CIB Inclusive" platform as a pivotal customer acquisition channel in inclusive finance. As of the end of the reporting period, there were 384,500 registered users, representing an increase of 206,300 users or 115.81% from the end of the previous year. Financing requirements of RMB395.502 billion were satisfied since the platform was launched, representing an increase of RMB126.286 billion or 46.91% from the end of the previous year.
CITIC Bank	• China CITIC Bank APP recorded 18.8827 million online MAUs, and the total number of customers granted loans through the Lending Channel reached 1,938.1 thousand. The bank upgraded Mobile Card Space App 11.0, launched two new portals of "Credit Card" and "Discounts." During the reporting period, the Mobile Card Space App recorded 22,469.4 thousand online monthly active accounts, an increase of 13.05% year on year; • As at the end of the reporting period, the bank recorded 1,227.9 thousand customers across corporate online channels, up by 12.20% over the end of last year, and the coverage rate of corporate customers through online channels reached 96.95%. During the reporting period, 227 million transactions were enabled through corporate online channels, up by 5.38% year on year, and the number of transactions hit RMB177.72 trillion, up by 8.76% year on year.
PAB	• The bank upgraded Ping An Pocket Bank APP, promoting online integrated operation, completing APP large print version, voice broadcasting and other barrier-free transformations, continuing to optimize customer experience. At the end of 2024, the number of registered users of Ping An Pocket Bank APP was 174,039.6 thousand, an increase of 4.8% over the end of last year; • The corporate business actively integrated into the modern industrial system. In terms of customer services, the "Digital Pocket" platform integrated corporate financial services to empower micro, small and medium-sized enterprises in digital operations. By the end of 2024, the number of registered business users on the platform had reached 25,097 thousand, up by 32.7% from the end of last year.
SPD Bank	• The Mobile Banking app has pioneered new customer acquisition and engagement strategies, successfully addressing customer needs and swiftly upgrading product offerings. The bank has secured over 87.00 million contracted customers, including 366,300 new online loan customers in the reporting period alone. Online loan disbursements have soared past RMB23.0 billion. The bank has also continually refined the online account opening process, boosting counter efficiency for corporate accounts by 30% year-on-year. Furthermore, its remote intelligent banking center delivered top-tier artificial service quality among joint-stock commercial banks.

Optimized resource allocation and reshaped the value of outlets

While online services flourished, banks actively transformed their physical outlets. They shifted to intelligent outlet operations and optimized their outlet layout to improve efficiency. They also intensified the synergy of online channels and offline outlets to enhance their comprehensive service capabilities.

Table 2: Optimizing Outlet Layout and Building Intelligent Channels

Bank	Optimization of outlet layout	Building of intelligent channels
ICBC	• In 2024, 527 outlets were reorganized, 104 new outlets were set up in county-level township areas, covering 11 counties where there were no ICBC outlets previously. The coverage rate of county-level outlets increased to 87.4%. Outlet resources have been increasingly compatible with regional socio-economic resources. At the end of 2024, the bank had 15,365 outlets, 19,746 self-service banks, 76,185 intelligent devices and 49,659 ATMs. The transaction volume of ATMs reached RMB4,265.2 billion in the year; • The self-service capacity of outlets was enhanced, with the user interface (version 3.0) of intelligent devices brought on stream bank-wide and self-service extended to over 140 items of high-frequency outlet service. The real-time inquiry service for personal and corporate credit reports was launched.	• "Zhi," "Zheng," "Cheng" AI-powered digital employees were integrated into both online and offline channels, including mobile banking, physical outlets, and cloud banking, serving customers over 1,434 million times in the year, making financial services more accessible and convenient by digital means; • ICBC deepened the large-scale application of emerging technologies, such as large language models and optimized the intelligent service systems, including "Gino (Gong Xiao Zhi)" for customer service and "Gina (Gong Xiao Hui)" for in-house service. Customer service agents were equipped with AI assistance throughout pre-event operations, real-time support, and post-event quality inspection. The intelligent outbound calling service continued to empower business operation, leading the industry by intelligent service routing rate and intelligent outbound calling volume. The "Yuan Cheng Ban" online and offline integrated service was promoted to enable remote video-based examination for 30 common outlet services in eight categories, further boosting the intelligent service level.
CCB	• CCB continued to optimize its outlet layout, enhance the effectiveness of its outlet operations and support key resource input in channel construction in regions and counties such as the Beijing-Tianjin-Hebei region, the Yangtze River Delta, and the Guangdong-Hong Kong-Macao Greater Bay Area. It stepped up the withdrawal, merger or relocation of inefficient and concentrated outlets in urban areas and expanded the outlet coverage in new urban planning areas and key counties. In 2024, the bank relocated 240 outlets, and set up 35 new outlets, including 26 new county-level outlets; • The bank intensified financial service support for sci-tech enterprises, with 37 technology sub-branches and 79 sub-branches with technology characteristics.	• The bank optimized the configuration of self-service channel, with 43,036 ATMs and 39,090 smart teller machines in operation, to support business processing comprehensively. Specifically, it set up 13,559 ATMs and 12,226 smart teller machines at county-level outlets; • The bank leveraged intelligence as the key driver to develop a new "human + AI" model. In 2024, it launched the interactive version of ChatBot, a full-featured personal AI assistant for account managers. In 2024, personal AI assistant realized a total of 34.63 million interactions, serving 30 thousand personal account managers throughout the bank.

Bank	Optimization of outlet layout	Building of intelligent channels
ABC	• ABC continued to optimize the layout of outlets in County Areas, extended services to grassroots level and expanded the coverage of outlets in townships. In 2024, over 70% of the new outlets and relocated outlets were placed in County Areas, urban-rural fringe, and townships. As at the end of 2024, the proportion of outlets in County Areas increased to 56.5%; • ABC built the "ABC Elderly Care" service brand and completed the age-friendly renovation for all our outlets. Its customer experience and service efficiency were further improved, with the average waiting time at its outlets shortened by 20%.	• ABC developed digital tools such as Smart Customer Service, Close to Client, and AI Customer Manager Assistant "YiMing," continually optimized online service tools such as intelligent outbound calls and WeCom and upgraded the AI service model for the entire customer journey, achieving intensiveness, precision, and broad coverage of customer services; • ABC applied new technologies such as large models to enhance the service capabilities of customer service robots, thereby improving customer experience.
BOC	• BOC accelerated the construction of featured outlets. Based on local conditions, it built featured outlets focused on technology finance, green finance, inclusive finance, and pension finance. It also refined resource allocation for featured outlets in terms of products and services, business models, and software and hardware; • As at the end of 2024, the bank's commercial banking institutions in the Chinese mainland (including Head Office, tier-1 branches, direct branches, tier-2 branches, and outlets) totaled 10,279. The number of other institutions in the Chinese mainland totaled 685, and the number of its institutions in Hong Kong (China), Macao (China), Taiwan (China), and other countries and regions totaled 543.	• To better serve the people's livelihood, the bank improved the outlets' intelligent services, including the promotion of a smart screen system in lobbies, the provision of more local government services through smart counters, the instant issuance of third-generation social security cards, as well as wider coverage of personal pensions, quick payments, and other services. To improve the bank's payment services, all ATMs now support foreign card cash withdrawals. In addition, small change deposit and withdrawal services have been made available in key locations. The bank also expanded the service scope of its smart counters for overseas visitors to China, enhancing service convenience.
PSBC	• The bank continued to optimize the outlet network layout and enhance brand image. As at the end of the reporting period, it had 39,224 outlets. To improve service quality and efficiency, it relocated and removed densely distributed outlets with limited growth potential, completing optimization adjustments of 70 outlets. The bank established seven new outlets in key counties supported by the state for rural revitalization and regions in Xinjiang and Xizang that are managed with reference to key counties receiving assistance. It opened 40 new outlets in economic development zones, high-tech industrial parks, and the top 1,000 robust towns to better align outlet resources with regional financial service demands; • The bank continued to upgrade outlet image. Since 2022, it has completed image upgrades for over 6,000 outlets and developed 148 flagship brand outlets as model outlets with a new, modernized look.	• The bank continuously expanded self-service channel functions and scenarios, adding or upgrading over 600 features for self-service machines throughout the year. Its Intelligent Teller Machines (ITMs) support more than 650 government services covering social security, healthcare, and housing provident fund transactions, providing convenient access to public services. To enhance financial accessibility for foreign visitors, it has enabled foreign card functionality across 66,000 traditional cash self-service machines, ensuring convenient and efficient cash withdrawal services for foreign visitors. The bank currently operates 131,816 self-service machines, including 50,548 ITMs, which account for 96.72% of non-cash transaction self-service machines, as well as 71,666 mobile business development terminals; • The bank continued to empower outlet operations with intelligent technology. It accelerated the application of "PSBC Assistant," an AI-powered Q&A tool. At the same time, it continuously enriched the content of the intelligent Q&A knowledge library, strengthened the building of the expert team, and reinforced the operational guidance for counter service staff through the combination of "automated response by robot + human response by expert team." During the reporting period, the AI system provided over 800,000 automated responses and experts handled 17.5 thousand inquiries, with an average human response time of six minutes.

Bank	Optimization of outlet layout	Building of intelligent channels
BOCOM	• The bank provides comprehensive financial services for 2.84 million corporate customers and 199 million retail customers through online service channels such as mobile banking and online banking, as well as over 2,800 domestic outlets and 24 overseas branches (subsidiaries) and representative offices; • The bank strengthened the construction of the outlets in county areas, promoted the construction of "BOCOM On-cloud" remote video services, and improved the integrated service capability of online and offline financial channels in county areas.	• BOCOM promoted the large-scale application of "Artificial Intelligence+," leading to the replacement of more than 1000 man-hours throughout the year, accurate identification of risk assets of more than 10 billion, and the voice recognition rate of inbound call center business of intelligent customer service reached 99%.
CMB	• CMB continued to promote the construction and layout optimization of domestic branches and sub-branches. During the reporting period, 13 new outlets were opened and over 100 existing outlets were relocated and optimized. Through scientific enhancement of outlet location and layout and steady progress of outlet establishment, the scope of effective coverage of our outlets was further expanded and more efficient offline financial services were offered to customers.	• Intelligent wealth assistant "Xiao Zhao" has upgraded from a wealth management assistant to a banking assistant that can listen and respond, and large model technology is applied to comprehensively enhance the intelligence of "Xiao Zhao" and improve the self-service capability in high-frequency and complex scenarios; • CMB deepened the application of artificial intelligence technology. The online AI assistant "Zhao Xiao Cai" can accurately identify customer intentions and assist customers in handling complicated operations of corporate financial products, with the response accuracy rate reaching 95%.
IB	• The bank had 2,097 outlets, representing an increase of 12 outlets. There were 1,105 comprehensive sub-branches and 827 community sub-branches, representing an increase of 21 sub-branches and a decrease of nine sub-branches, respectively.	• The bank has achieved phased results in intelligent applications, with over 70 application scenarios for large model assistants. The intelligent customer service served 55.00 million customers throughout 2024, the wealth outbound call quality inspection covered over 5,000 financial advisors, and the intelligent trading robot quadrupled the quotation volume for cash bond transactions.
PAB	• The bank continued to promote the AI-enabled upgrade of its outlets and optimize its branch distribution and physical presence. At the end of 2024, the bank had 110 branches (including Hong Kong Branch) and a total of 1,149 outlets.	• In terms of customer management, the bank deepened the service mode of "AI + T + Offline," expanded the scenario coverage of Artificial Intelligence Generated Content (AIGC), opened up the artificial intelligence customer service, telephony and other service channels to improve marketing service capabilities. It also deepened digital applications such as AI assistant and comprehensive customer reach operation platform to improve the timeliness of remote banking services.

Bank	Optimization of outlet layout	Building of intelligent channels
CITIC Bank	• The bank had 1,470 outlets in 153 medium-sized and large cities in the Chinese mainland; • With its outlets basically covering all medium-sized and large cities in China, the bank shifted its focus of domestic outlet establishment to layout optimization and efficiency improvement. Allocation of resources for outlet construction favored developed cities and regions such as Beijing, Shanghai, Guangzhou, Shenzhen, Hangzhou, and Nanjing.	• The bank continued to upgrade financial equipment and relevant systems at outlets and promoted split-type STMs and all-in-one smart counters, effectively enhancing operational efficiency and customer experience, especially elderly customers; • The bank completed the upgrading of the digital wealth advisor "Xiao Xin," which provides 7x24 real time advisory services for four types of products, namely wealth management, funds, insurance and deposits, as well as asset allocation and diagnosis services. Since its launch, "Xiao Xin" served a total of 4.58 million advisory conversions and had overall satisfaction of more than 95%.
SPD Bank	• The bank set up a tech-finance organizational framework, encompassing a "head office task force, key branches, and a hundred technology-focused sub-branches." By end of the reporting period, 156 technology and technology-focused sub-branches had been rolled out, along with nearly a hundred inclusive finance-specialized sub-branches and micro/individual loan centers to boost microfinance accessibility.	• The bank drove the intelligent service system upgrade, pioneering a digital customer manager system that blends online and offline services. By seamlessly integrating intelligent customer service with an intelligent knowledge base, the bank established a round-the-clock service network, ensuring comprehensive intelligent service coverage for long-tail customers. The bank also optimized its business opportunity management and monitoring systems, forging a closed-loop service model that merges targeted user engagement with efficient conversion in key business areas like account opening and credit services.

Economic transformation unlocked consumer demand, consumer loans reaped development dividends, and rational growth drove virtuous cycle

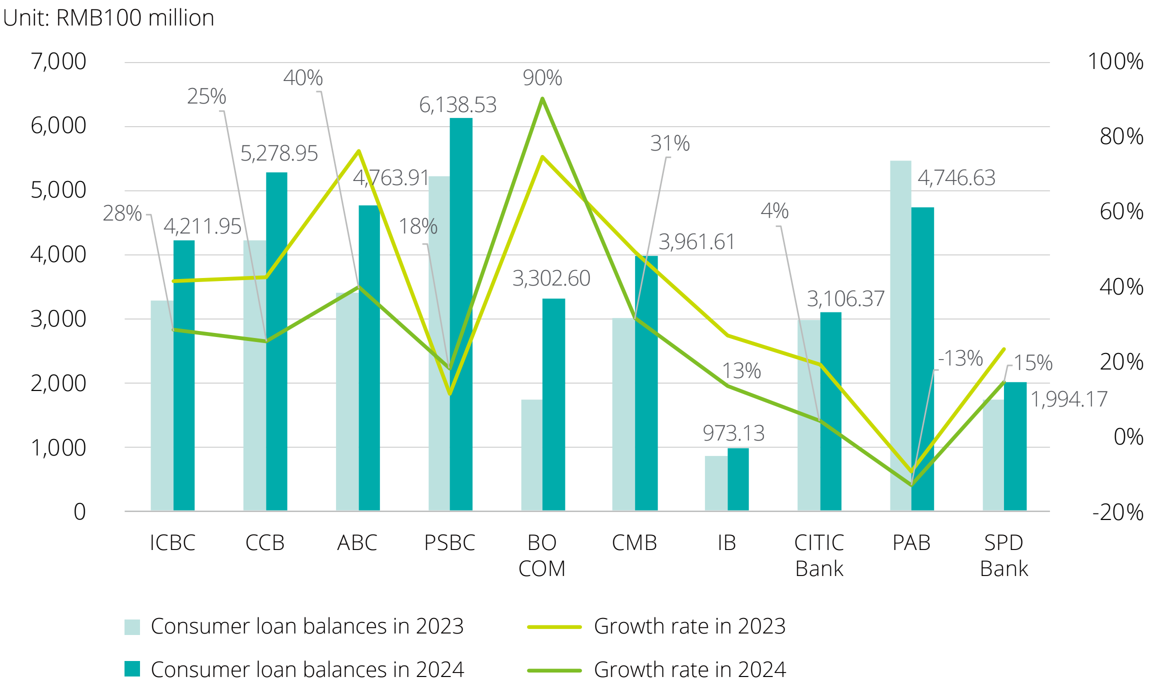
Consumer loan scale rose steadily; growth slowed to focus on high-quality customers

In 2024, following the government's policies to stimulate consumption, commercial banks advanced the national strategy of boosting consumption by expanding their consumer finance offerings. This initiative marks a significant milestone in the banking sector's growth trajectory and aligns with the imperative to enhance service to the real economy. Out of the 11 banks, all except BOC released their consumer loan data separately in their annual reports.

Their consumer loans totaled RMB3,847.785 billion in 2024, an increase of RMB657.405 billion over 2023, or a year-on-year growth rate of 21%. This growth rate, though, has eased from the 25% rise observed in the previous year. Regarding consumer loan balances at the close of 2024, among state-owned banks, PSBC led with a balance of RMB613.853 billion, followed by CCB at RMB527.895 billion. Among joint-stock commercial banks, PAB secured the top spot with a consumer loan balance of RMB474.664 billion, followed by CMB at RMB396.161 billion.

Regarding the growth rate of credit disbursement, the consumer loan sector in 2024 shifted from its prior rapid expansion. Numerous banks have enhanced risk management during customer evaluations and adopted a more prudent approach when extending consumer loans. State-owned major banks reported an average growth rate of 40%, marking a nine-percentage-point drop from the 49% achieved in the previous year. With the exception of BOCOM and PSBC, which witnessed growth rate increases to 90% and 18%, respectively, compared to the prior year, most other banks saw their business scales grow at a slower pace. ABC recorded the steepest decline in growth rate, plummeting from 76% to 40%. Joint-stock commercial banks averaged a 10% growth rate in consumer loan scales, down 12 percentage points from the 22% in the preceding year. PAB, despite holding the largest consumer loan portfolio, scaled back its consumer loan volume for two consecutive years, mainly driven by its initiative to streamline its loan business structure and curb high-risk assets.

Figure 6: Balance of Consumer Loans



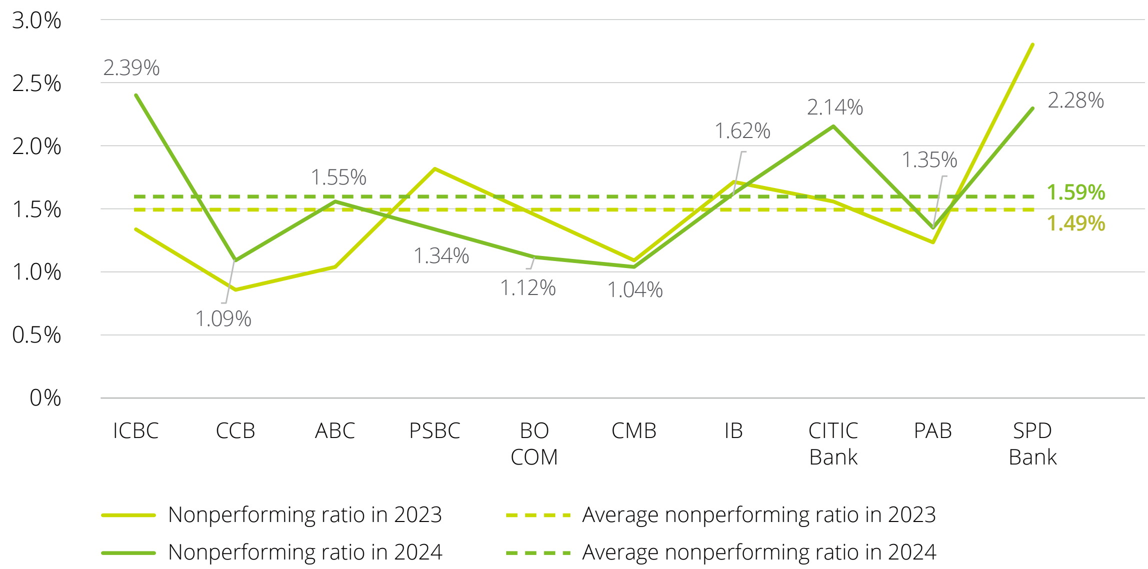
Note: BOC did not separately disclose the data related to consumer loan balance. PSBC's consumer loan balance was the other consumer loans disclosed in its annual report.

Risk and return coexisted in consumer loans; broadening risk disposal channels supported sustainable growth

With interest margins continually narrowing, high-yield consumer loans have become a key driver of profit growth for commercial banks. As more banks enter the highly competitive consumer loan market, the disparity between the expanding loan customer base and banks' ability to accurately price risks could result in widespread risk exposure in retail banking, eating into profits. So, while the consumer loan sector offers growth prospects, it also places greater emphasis on banks' risk management and control skills.

In 2024, the average nonperforming ratio of personal consumer loans across ten commercial banks reached 1.59%, up 0.1 percentage points from the prior year-end. Although the ratio appeared relatively steady, factoring in write-offs and bulk disposals suggests the actual risk profile of consumer loans could be on the rise. The banks' asset quality in the personal consumer loan business has changed variedly. ICBC, ABC, CCB, CITIC Bank, and PAB all saw their nonperforming ratio climb, with ICBC's ratio jumping 1.05 percentage points to 2.39%, and ABC and CITIC Bank each experiencing increases exceeding 0.5 percentage points. BOCOM, PSBC, CMB, IB, and SPD Bank reported lower nonperforming ratios, with SPD Bank and PSBC showing the most significant drops of 0.5 and 0.47 percentage points, respectively.

Figure 7: Nonperforming Ratio of Consumer Loans



Note: BOC did not separately disclose the data related to consumer loan balance. PSBC's consumer loan balance was the other consumer loans disclosed in its annual report.

As consumer loan volumes expand and consumption scenarios evolve, banks consistently allocate resources to build robust risk control systems. They harness Fintech to progressively bolster intelligent risk management and foster an ecosystem conducive to consumer loan growth. At the front-end, banks developed dynamic risk profiles for customer segments, facilitating targeted customer grouping and product redesign. Mid-process, they utilized risk models and external data integration to issue real-time alerts for high-risk customers. At the backend, they investigated diverse approaches to managing nonperforming assets.

In the front-end and mid-process risk control, CMB focused on customers with good credit record and stable income source, provided credit finance properly, and kept alert to any risks of joint debts. ICBC continuously stepped up the front-end eligibility review and approval management of retail customers, introduced the public service data for querying, and enhanced cross-validation of data authenticity. PSBC relied on risk models to dynamically assess the risk status of existing customers, provided timely and accurate early warnings for high-risk customers, supported the building of a dynamic credit management system that includes credit line adjustments, freezing, phasing out, and risk mitigation, and resolved risks of existing customers in a timely manner.

Banks have also been continuously exploring methods for disposing of nonperforming assets at the backend. BOC continuously expanded its nonperforming asset disposal channels, undertook further pilot projects for transferring nonperforming loans, and carried out the securitization of nonperforming bank cards and personal credit assets. CCB gave full play to the positive role of asset securitization in revitalizing existing credit assets and optimizing credit structure and continued to improve the disposal efficiency of nonperforming asset securitization. It issued two nonperforming asset-backed securities of personal consumer loans with an issuance size of RMB261 million and a principal of RMB2,007 million. SPD Bank put forward a proposal to ramp up market-oriented resolution methods, minimize dependence on write-offs, and vigorously seek new avenues for expanding disposal channels. By broadening the range of risk resolution and disposal channels, commercial banks can unlock additional credit resources and foster the healthy and sustainable growth of consumer loan operations.

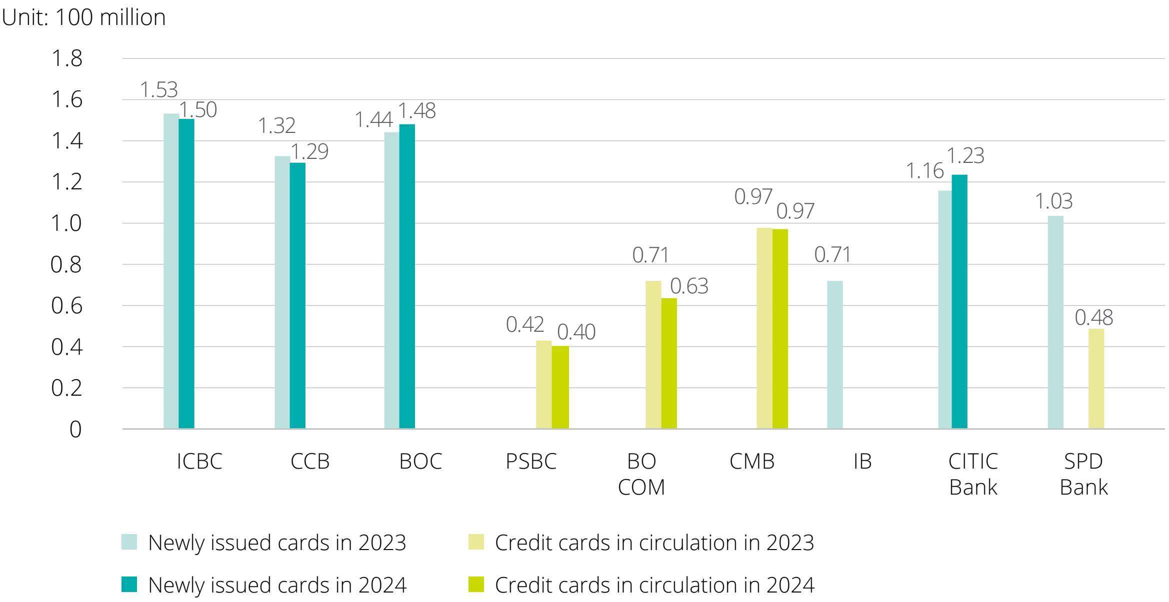
In March 2025, the General Office of the CPC Central Committee and the State Council released the *Special Action Plan for Boosting Consumption*, urging financial institutions to boost personal consumer loan disbursements while maintaining risk control, and to set reasonable loan amounts, terms, and interest rates. This plan acts as a vital response to current economic recovery challenges and a strategic step to promote consumption upgrades and refine the economic structure. In light of the policy incentives, commercial banks should actively adhere to national policies and capitalize on consumer loan growth opportunities, refining their consumer loan processes and aligning them with risk management capabilities, thereby striking a balance between risk and return and sustaining the long-term growth of consumer loan businesses.

Credit card business entered the era of intensive cultivation, seeking breakthroughs through transformation

Following a phase of swift expansion, the credit card market has shifted into a phase of competing for existing customers. Commercial banks are prioritizing high-quality customers over expanding their customer base. Economic instability has weakened residents' spending power, leading numerous banks' credit card divisions to grapple with challenges like reduced card issuance, dwindling transaction amounts, and escalating nonperforming ratios. To navigate this transformative phase, several banks have embarked on strategic overhauls of their credit card operations, such as consolidating or closing credit card sub-centers and returning to branch-centric local management. Through organizational restructuring and resource redistribution, commercial banks should further strengthen scenario-driven development, drive the acquisition of premium customers, and enhance precise operational efficiency to excel in their credit card businesses.

Listed commercial banks presented credit card issuance figures in annual reports through revealing the total cards issued or the cards in circulation at year-end. Regarding cards issued, ICBC led with 150 million cards by the end of 2024. In terms of cards in circulation, CMB topped the list with 97 million, nearly steady from the prior year-end. BOCOM and PSBC experienced drops in their counts of cards in circulation from the previous year-end, by 11.66% and 5.70%, respectively, mainly driven by commercial banks' continuous removal of inactive cards.

Figure 8: Number of Newly Issued Credit Cards and Credit Cards in Circulation

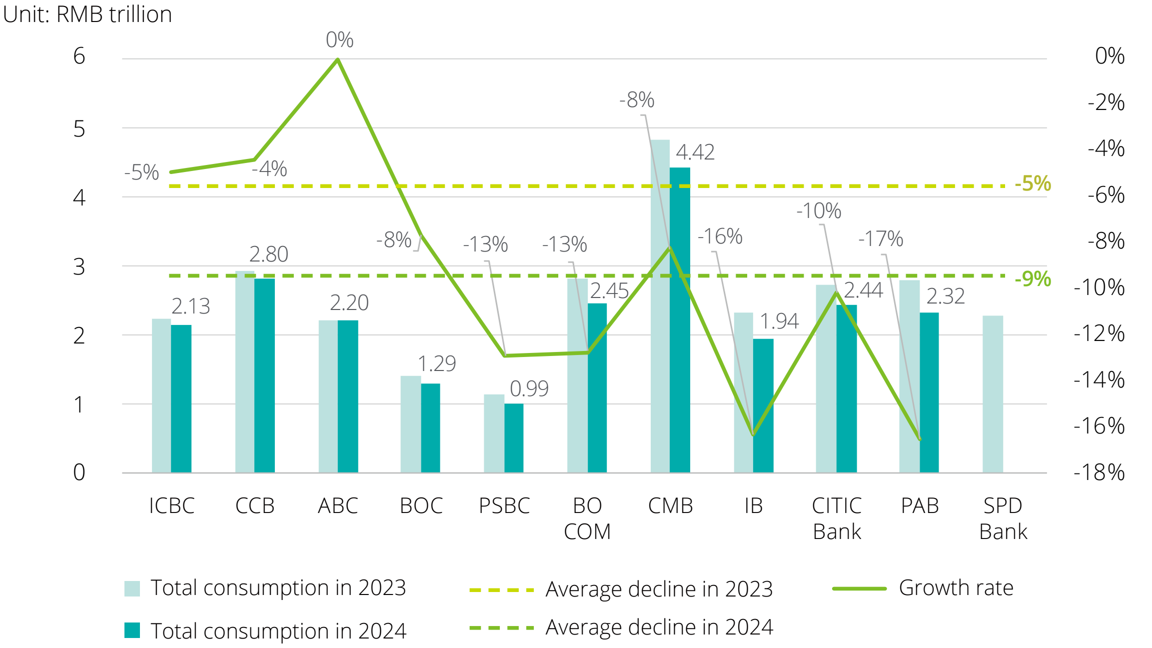


Note 1: ABC and PAB did not disclose the number of credit cards in 2024 and 2023. IB and SPD Bank did not disclose the number of credit cards in 2024.

Note 2: ICBC, BOC, CITIC Bank, and IB disclosed their respective number of credit cards issued; CCB the cumulative number of credit cards issued; BOCOM the number of credit cards registered by domestic banking institutions; PSBC the accumulative number of credit cards linked to the PSBC Credit Card App; CMB the number of aggregate active credit cards; SPD Bank the number of credit cards issued and credit cards in circulation.

All ten listed banks that released their 2024 total credit card consumption figures reported a downturn. CMB's total credit card consumption reached RMB4.42 trillion, retaining first place despite a decrease of 8.23% year-on-year. Among the six state-owned banks, CCB ranked first with credit card consumption totaling RMB2.80 trillion, down 4.44% year-on-year; BOCOM ranked second with RMB2.45 trillion, down 12.81% year-on-year. Among joint-stock banks, PAB and IB recorded a sharp decrease in credit card consumption by 16.57% and 16.36%, respectively.

Figure 9: Total Credit Card Consumption

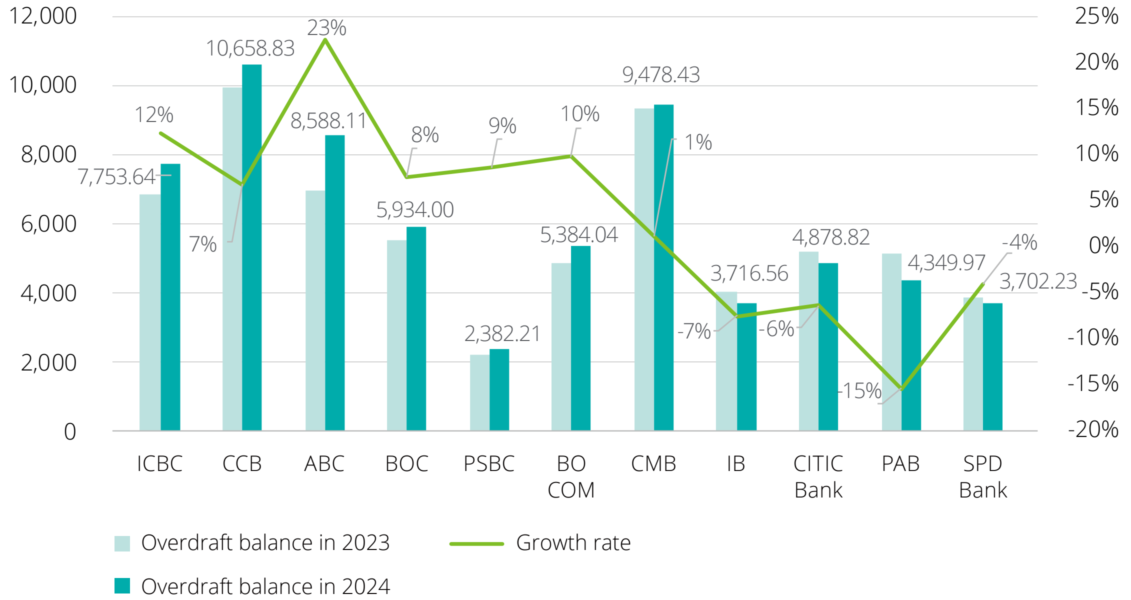


Note: SPD Bank did not disclose its total credit card consumption in 2024.

In terms of credit card overdraft balance, as of 2024, CCB's overdraft balance was RMB1.07 trillion, up 6.89% from the end of 2023, ranking first among state-owned banks; CMB's overdraft balance was RMB947.843 billion, up 1.28%, ranking first among joint-stock banks; ABC and ICBC recorded a significant increase of 22.68% and 12.42%, respectively; IB's, CITIC Bank's, PAB's, and SPD Bank's overdraft balances declined by 7.46%, 6.30%, 15.39%, and 3.99%, respectively. In 2024, numerous banks witnessed a decline in total credit card consumption, while their overdraft balances trended upwards. This shift stems partly from commercial banks' aggressive promotion of consumer installment services, including bill installment plans and auto financing. Meanwhile, the escalating nonperforming rate of credit card overdrafts has strained the asset quality of credit card operations, contributing to a rise in overdraft balances. Together, these factors have fueled the simultaneous trends of decreasing total credit card consumption and increasing credit card overdraft balances.

Figure 10: Credit Card Overdraft Balance

Unit: RMB100 million



AUM kept growing; private banking competed with differentiation

The Third Plenary Session of the 20th CPC Central Committee underscored the importance of enhancing people's living standards and making more tangible progress towards common prosperity. As a core objective of socialism with Chinese characteristics, common prosperity seeks to drive comprehensive social development and substantially boost people's well-being. Wealth management, by advancing inclusive finance, speeding up digital transformation, and innovating financial products and services, can enhance asset allocation efficiency, foster fair income distribution, and bolster risk management, thus playing a pivotal role in achieving this goal. With the constant improvement of residents' financial literacy and the gradual implementation of new asset management regulations and other policies, wealth management has become a priority for commercial banks to upgrade and advance their businesses. Banks actively deploy private banking and other wealth management businesses, intensifying competition in this field. Private banking is moving toward a phase of specialized and differentiated competition. To meet the diverse needs of high-net-worth clients, banks are strategically planning, specializing in niche business areas, and broadening their private banking services.

State-owned banks are in a leading position regarding the asset management scale of retail customers, maintaining a relatively high AUM growth rate. As of 2024, ICBC's retail customer AUM totaled RMB22.84 trillion, maintaining the leading position among its peers; ABC trailed closely behind, with retail customer AUM totaling RMB22.30 trillion. In terms of growth rate, CCB's AUM increased most by 11.35% year-on-year to RMB20.60 trillion, followed by BOC's 10.36%.

Joint-stock banks are actively seeking new drivers for business growth. Wealth management is critical to spurring their retail growth sustainability. In 2024, the five joint-stock banks' wealth management businesses continued to grow. Specifically, CMB's retail customer AUM reached RMB14.93 trillion, maintaining its lead among the joint-stock banks, representing the highest year-on-year growth rate of 12.05%; IB ranked second with the AUM totaling RMB5.11 trillion, representing a year-on-year growth rate of 6.68% (significantly slower than 2023's 42.14%); CITIC Bank's, PAB's, and SPD Bank's AUM reached RMB4.69 trillion, RMB4.19 trillion, and RMB3.88 trillion, respectively, with a year-on-year growth rate of 10.62%, 4.00%, and 5.37%.

The private banking data released in the domestic banks' annual reports reveal a pronounced upward trend. Regarding the AUM scale, ICBC's AUM for private banking customers totaled RMB3.47 trillion, representing a year-on-year growth rate of 13.20%. ABC's and BOC's AUM for private banking customers reached RMB3.15 trillion and RMB3.14 trillion, respectively, with a year-on-year growth rate of 18.87% and 16.73%. Among joint-stock banks, CMB did not disclose the AUM for private banking customers; PAB's private banking AUM grew by 3.10% year-on-year to RMB1.98 trillion, ranking first among the joint-stock banks, albeit at a slower pace than in 2023.

ICBC, ABC, and CCB had 289,000, 256,000 and 231,500 private banking customers, respectively, ranking the top three among state-owned banks. Despite having only 34,200 private banking customers, PSBC achieved the highest growth rate of 27%. Among joint-stock banks, CMB continued to lead with 169,100 customers, representing a year-on-year increase of 13.61% and indicating sustained growth in its private banking business.

As banks' traditional retail business grows slowly, private banking has become crucial for stabilizing commercial banks' medium- and short-term performance and optimizing their customer structure in the long term, thanks to the stability and high added value of high-net-worth customers' assets. Amid narrowing net interest margins and increasing pressure on retail business growth in commercial banks, private banking has demonstrated exceptional resilience. Commercial banks are continuously exploring the value of high-net-worth customers to enhance competitiveness in private banking.

Table 3: Retail Customers and Private Banking Customers

Unit: RMB trillion/10,000 customers

Bank	Retail customer AUM	Retail customer AUM growth	Personal financial AUM (private banking)	YoY growth	Number of private banking customers[Note2]	YoY growth
ICBC	22.84	10.28%	3.47	13.20%	28.90	9.90%
CCB	20.60	11.35%	2.78	10.31%	23.15	8.81%
ABC	22.30	9.91%	3.15	18.87%	25.60	14.29%
BOC	15.77	10.36%	3.14	16.73%	19.89	14.51%
PSBC	16.69	9.59%	Undisclosed[Note1]	-	3.42	Near 27%
BOCOM	5.49	9.79%	1.30	11.07%	9.42	12.71%
CMB	14.93	12.05%	Undisclosed[Note1]	-	16.91	13.61%
IB	5.11	6.68%	0.96	12.40%	7.70	11.36%
CITIC Bank	4.69	10.62%	1.17	14.19%	8.41	13.77%
PAB	4.19	4.00%	1.98	3.10%	9.68	7.30%
SPD Bank	3.88	5.37%	0.69	9.52%	4.90	13.95%

Note 1: PSBC and CMB did not disclose the AUM of private banking customers.

Note 2: CMB's private banking customers referred to retail customers with minimum total daily average assets of RMB10.00 million per month. PAB's standard for private banking customers is the average daily assets in any month of recent three months exceeding RMB6.00 million. SPD Bank's private banking customers referred to retail customers with monthly average daily financial assets of RMB6 million or above. CITIC Bank's private banking customers referred to customers with the monthly average daily balance of AUM totaling RMB6.00 million or above.

In addition to retail customers' asset scale, their number decides banks' retail finance advantages and potential, playing a "cornerstone" role in advancing the wealth management businesses.

Table 4: Number of Retail Customers in 2024 and 2023

Unit: 100 million customers

Bank	Number of retail customers in 2023	Number of retail customers in 2024	Growth rate
ICBC	7.40	7.66	3.51%
CCB	7.57	7.71	1.85%
ABC	8.67	Over 8.8	1.50%
BOC	Over 5.25	Near 5.4	2.75%Note
PSBC	6.60	6.73	1.97%
BOCOM	1.92	1.99	3.65%
CMB	1.97	2.10	6.60%
IB	1.01	1.10	8.77%
CITIC Bank	1.37	1.45	5.84%
PAB	1.25	1.26	0.09%
SPD Bank	1.57	1.57	0.00%

With a solid customer base, state-owned banks' numbers of retail customers remained stable in 2024. Specifically, ABC's retail customers exceeded 880 million, ranking first among its peers; ICBC's retail customers reached 766 million, marking the highest YoY growth rate of 3.51%. All joint-stock banks' retail customers exceeded 100 million. Specifically, CMB recorded the highest number of 210 million; IB had 110 million retail customers, marking the highest year-on-year increase of 8.77%.

In 2024, with the slowly recovering economy, macroeconomic factors such as residents' debt cycles and real estate cycles affected retail assets. Banks' 2024 annual reports revealed that the retail segment's income and profits saw year-on-year drops of varying magnitudes, with their shares in overall bank revenue and profits also declining accordingly. Amid pressures and challenges in advancing commercial banks' retail operations, retail transformation remained a firm strategy for all. To navigate the challenges, banks adjusted their retail architecture and strategies based on development characteristics and leveraged digital transformation to enhance refined operations and intelligent risk control, thus striking a balance between risk and return. They are proactively working to regain confidence in their retail transformation endeavors.

3.3

Policy to practice: commercial banks' credit support facilitates real estate restructuring

Real estate sector underwent in-depth adjustments; policies centered on "stabilizing expectation, preventing risks, and facilitating transformation"

According to data released by the National Bureau of Statistics in January 2025, the total investment in real estate development in 2024 was RMB10.03 trillion, down 10.6% from the previous year. Residential investment totaled RMB7.6 trillion, down 10.5%.

In 2024, the government introduced many real estate policies, including adjustments to property purchase limits, tax incentives, and reduced mortgage rates and down payment ratios, to foster stability and recovery in the real estate market. That same year, the Ministry of Housing and Urban-Rural Development ("MOHURD"), in collaboration with relevant departments and local governments, launched a range of measures aimed at promoting the steady recovery of the real estate market and guiding it towards a more stable development path. Nationally, key actions included lowering down payment ratios for first and second homes, cutting the interest rates on mortgages and housing provident fund loans, providing tax relief and exemptions, acquiring existing housing inventory, renovating one million homes in urban villages and dilapidated housing via monetary compensation, and increasing loan supply to "whitelist" projects. Locally, governments kept easing restrictions on property purchases and lowered interest rate limits on housing loans, alongside other steps.

In early 2025, the "Two Sessions" included "stabilizing the real estate and stock markets" in the general principle for the first time and specifically set "building high-quality houses" as a key focus for real estate transformation. For the first time, a consumption-promoting policy document proposed to foster the stabilization and recovery of the real estate market, aiming to stabilize market expectations. Additionally, it mandated implementing tax incentives and easing housing provident fund policies on both the supply and demand sides to stimulate housing demand.

Key real estate policies introduced in 2024

Central policies

Released by	Time and nature	Content and impact
MOHURD, NFRA	5/1/2024 Expansionary/ supply side	*Notice on Establishing a Coordination Mechanism for Urban Real Estate Financing* Cities at or above the prefecture level should establish a coordination mechanism for urban real estate financing. Support the financing needs of ongoing projects and those encountering temporary difficulties yet maintaining financial viability. Bring the coordination mechanism into effect.
PBC	20/2/2024 Expansionary/ demand side	PBC authorized the National Interbank Funding Center to announce a 25-basis-point reduction in the over-5-year LPR, from 4.2% to 3.95%, the sharpest decline since 2019. The mortgage interest rate approached a record low.
Political Bureau of CPPCC	30/4/2024 Expansionary/ supply side	Formulate integrated policies to address the overhang of existing housing stock and optimize the structure of new housing supply, expedite the establishment of a new real estate development paradigm, and promote high-quality industry development.
PBC, NFRA	17/5/2024 Expansionary/ demand side	For homebuyers financing their first commercial residential property purchases with mortgages, the minimum down payment ratios for individuals' commercial housing mortgages will be lowered to 15% for first-home purchases and 25% for second-home purchases. On this basis, the provincial-level branches of PBC and the local offices of the NFRA shall adopt city-specific approaches. In line with the regulatory requirements of the local governments, they shall determine the floor ratios of minimum down payment for first-home and second-home purchases in cities within their respective jurisdictions.
PBC	17/5/2024 Expansionary/ supply side	PBC announced the establishment of a RMB300 billion relending facility for repurposed affordable housing. The facility offers funding at an interest rate of 1.75% with a term of one year. It can be rolled over four times and will be issued to 21 national banks. Loan issuance will be based on the principle of independent decision-making and risk-taking. PBC will provide relending equivalent to 60% of the loan principal, which can stimulate RMB500 billion in bank loans.
PBC, NFRA	24/9/2024 Expansionary/ demand side, supply side	Guide banks to reduce interest rates on outstanding housing loans. The minimum down payment ratios for commercial personal mortgage loans shall no longer be distinguished between first-home and second-home loans, but rather be set uniformly at no less than 15%. Extend the validity period for two real estate financial policy documents. PBC will increase its funding proportion in the affordable housing relending policy from the original 60% to 100%. Support the acquisition of land inventories from real estate companies.

Released by	Time and nature	Content and impact
MOHURD, NFRA, etc.	17/10/2024 Expansionary/ demand side, supply side	**Four cancellations:** Adjust or lift home purchase restrictions, including purchase quotas, sales restrictions, price caps, and standards for identifying ordinary and non-ordinary housing. **Four decreases:** Slash the interest rate on housing provident fund loans by 0.25 percentage points; cut down payment ratios and uniformly set the minimum down payment ratios for first-home and second-home purchases at 15%; lower interest rates on outstanding hosing loans; ease the tax burden for homeowners selling existing properties to purchase new ones. **Two increases:** Launch the renovation of one million units in urban villages and dilapidated housing through monetized resettlement and other approaches; increase loan supply to RMB4 trillion for "whitelist" projects by the end of 2024.

Local policies

Time	City	Content and impact
March	Beijing	Abolished the policy restricting home purchases within three years of divorce.
	Hangzhou	Removed the eligibility verification requirement of second-hand home buyers; standardized the value-added tax exemption period to two years for all transactions.
April	Zhengzhou, Yantai, Fuzhou, etc.	Announced the phased removal of the interest rate floor for commercial mortgages on first homes, with actual rates determined by commercial banks.
	Changsha, Chengdu	Announced the lifting of purchase restrictions.
May	Hangzhou	Fully abolished home purchase restrictions.
June	Beijing	First-time home purchases: adjusted the down payment ratio to 20% and the minimum mortgage interest rate to LPR minus 45 basis points. Second-home purchases: reduced the down payment ratio of properties outside the Fifth Ring Road to 30%. Second homes are recognized as first-time purchases to support the housing-improving demand of families with multiple children.

Time	City	Content and impact
September	Guangzhou, Shanghai, Shenzhen	Fully optimized purchase restriction and down payment policies.
	Dalian, Hohhot, Shenyang	Supported residents in withdrawing balances from their housing provident fund accounts for down payments, reducing their financial pressure.
	Hefei, Qingdao	Supported state-owned enterprises in acquiring commercial housing for use as affordable housing, alleviating inventory pressure.
October	Tianjin	Removed the purchase restrictions on newly built commodity housing and second-hand housing, standardized the minimum down payment ratio at 15% across all property types, and removed all price ceilings.
	Hangzhou, Chengdu, Xi'an	Optimized sales and price restriction policies.
November	Beijing, Shanghai, Shenzhen	Optimized housing tax policies and abolished the standards on ordinary housing and non-ordinary housing.
	Changsha	Fully lifted the sales restriction on commercial housing, allowing properties to be listed for sale immediately upon issuance of the real property ownership certificate, thereby stimulating the second-hand housing market.

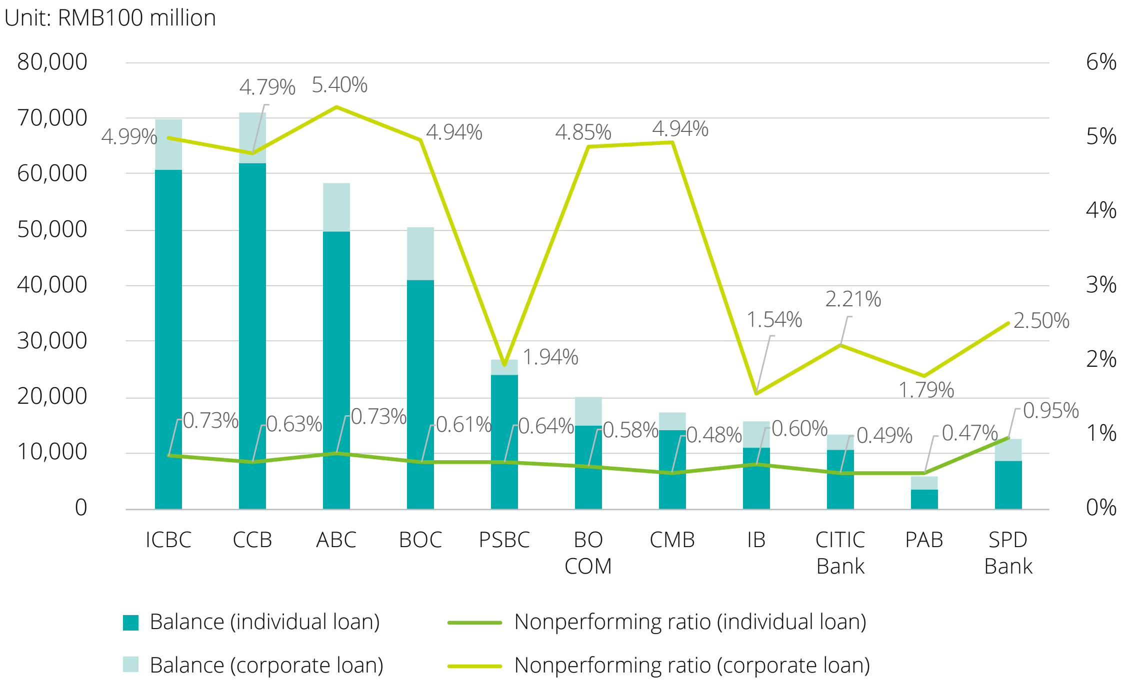
Commercial banks' loan supply became steady; nonperforming loans increased significantly

Commercial banks' real estate loans are mainly composed of three parts: loans to real estate enterprises (corporate business), individual housing loans, and off-balance-sheet businesses (i.e., real estate-related loans of wealth management, entrusted loans, commissioned trusts and funds, and other businesses that do not assume credit risks). Individual housing loans account for a larger proportion; credit risks mainly exist in the corporate business.

Analysis of real estate loan exposure

Generally, commercial banks voluntarily disclose the real estate corporate and individual housing loans from which they assume credit risks. As of the end of 2024, the 11 domestic banks' balances and nonperforming ratios of real estate corporate and individual housing loans are shown in the figure below:

Figure 1: Balance and Nonperforming Ratio of Real Estate Corporate and Individual Housing Loans



Note: The above data are from the banks' 2024 annual reports; the CCB, ABC, and BOC data are consistent with those of their domestic branches. The corporate loan data of ICBC and individual loan data of CITIC Bank are the data of their domestic branches, while the rest are the banks' Group-level data.

As of 31 December 2024, the 11 commercial banks' total balance of real estate loans on their balance sheets reached RMB36.09 trillion, down 0.04% year-on-year. Specifically, individual housing loans accounted for 82.90% and corporate loans accounted for 17.10% of their real estate loans. The balance of individual housing loans was RMB29.92 trillion, down 1.54% year-on-year; the balance of real estate corporate loans was RMB6.17 trillion, up 7.92% year-on-year.

As of 31 December 2024, the 11 commercial banks' average nonperforming ratio of individual housing loans was 0.66%, up 0.19 percentage points from 2023's 0.47%. Falling housing prices in some cities reduced collateral values, increasing credit risks on individual housing loans. The nonperforming ratio of real estate corporate loans was 4.16%, down 0.65 percentage points from 2023's 4.81%.

In addition, CMB, CITIC Bank, and PAB disclosed the real estate loan exposure of businesses bearing no credit risks, such as wealth management and entrusted loans. Detailed data can be found below:

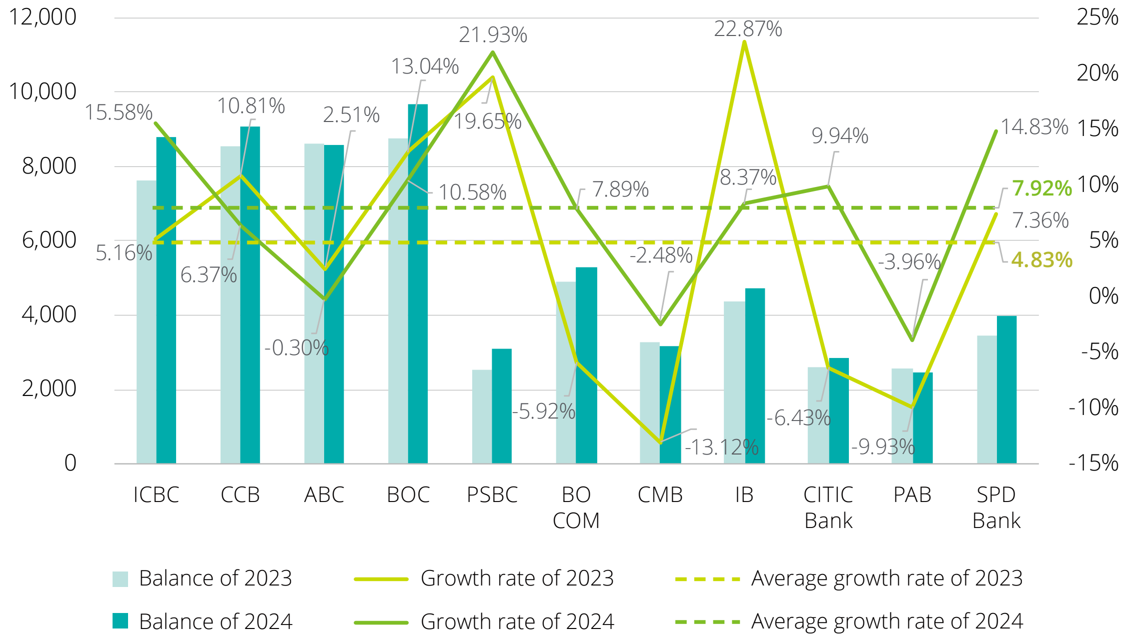
CMB	CITIC Bank	PAB
Real estate-related businesses bearing no credit risks (such as wealth management investment and entrusted loans) totaled RMB222.928 billion, down 10.63% from 2023	The balance of the Group's corporate real estate financing through wealth management product investments, entrusted loans and others that bear no credit risks was RMB57.559 billion, an increase of RMB8.153 billion from 2023	The Group's aggregate balance of non-credit risk-bearing businesses (including wealth management product investments, entrusted loans, and others) amounted to RMB75.879 billion, decreasing RMB4.916 billion as compared with the end of 2023

Supply to real estate corporate loans trended up; policy effects gradually emerged

In 2024 the growth rate of real estate corporate loans rose. The 11 sample domestic banks' growth rate was 7.92%, higher than 2023's 4.83%.

Figure 2: Real Estate Corporate Loans

Unit: RMB100 million



As of 31 December 2024, most commercial banks' growth rate of real estate corporate loans rose. Among them, PSBC ranked first with a growth rate of 21.93%, 2.28% higher than 2023; PSBC's, ICBC's, SPD Bank's, and BOC's real estate corporate loans achieved double-digit growth. CCB's and IB's growth rates fell by 4.43% and 14.50%, respectively, to 6.37% and 8.37%. ABC's loan scale was largely unchanged from the previous year. BOCOM's loan scale stabilized, with a growth rate of 7.89%, up 13.81 percentage points from 2023's -5.92%. CMB's and PAB's loan scales decreased, albeit at a narrowing rate, while CITIC Bank recorded the first positive growth since 2018.

In 2024, the central government leveraged special refinancing bonds and debt swaps to accelerate the resolution of local hidden debts, restoring regional financial stability. Over RMB1 trillion in local hidden debts were resolved, alleviating local governments' reliance on land-related revenues, reducing the crowding-out of real estate enterprises' funding, improving urban investment platforms' credit environment, and releasing banks' credit lines. These measures indirectly increased banks' willingness to lend to real estate enterprises.

In 2024, the coordination mechanism for real estate financing led by MOHURD was implemented nationwide. The mechanism screened compliant projects for financing support through tripartite collaboration among local governments, financial institutions, and real estate enterprises. Additionally, the "whitelist" system transitioned from pilot implementation to normalized practice, with eligibility criteria expanding from "five certifications in place" to "balanced and controllable fund," doubling the number of projects covered compared to 2023.

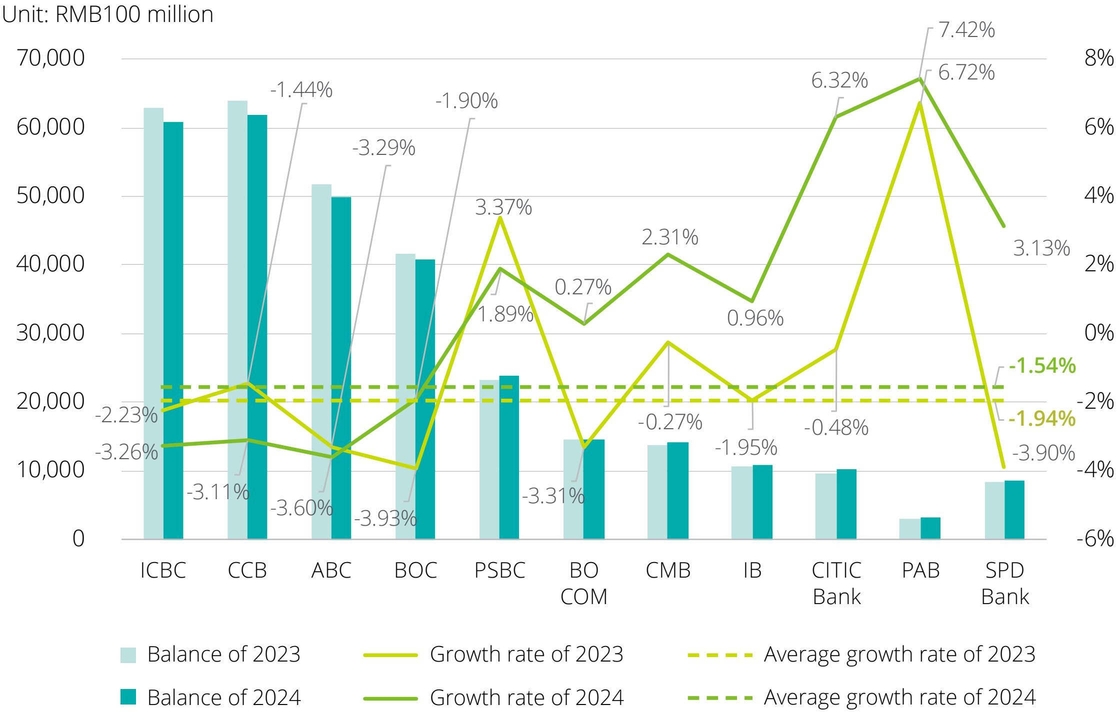
In January 2025, the NFRA announced at its work conference that loans extended to real estate projects under the coordination mechanism for urban real estate financing exceeded RMB5 trillion.

Banks' individual housing loans contracted, while joint-stock banks saw resilient growth

Generally, in 2024, individual housing loans declined.

Figure 3: Individual Housing Loans

Unit: RMB100 million



The adjustment of interest rates of existing housing loans and increase in early repayments continued to press banks' individual housing loan business. By the end of 2024, the 11 domestic banks' balance of individual housing loans shrank by RMB468.6 billion or 1.54%. The four state-owned banks' balances fell by one to four percentage points year-on-year. CCB still had the largest scale of individual housing loans (RMB6.19 trillion), despite a decrease of 3.11% year over year. ICBC's scale shrank most by RMB205.3 billion or 3.26%. PSBC sustained growth momentum. BOCOM remained largely flat year-on-year.

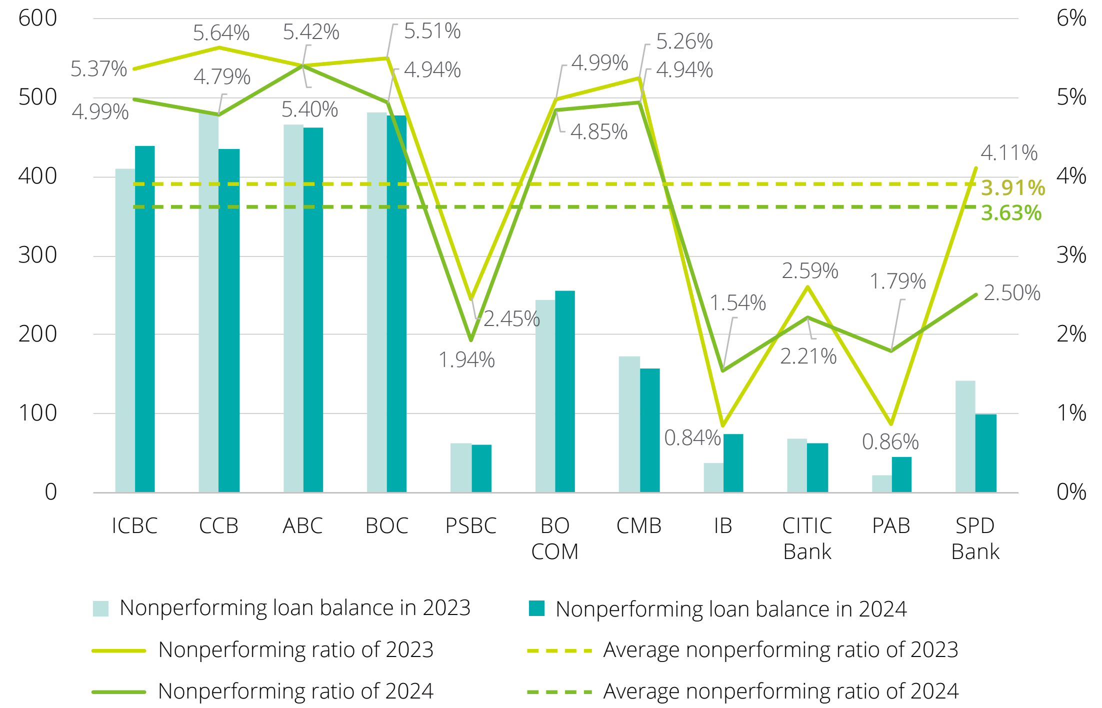
Joint-stock banks' individual housing mortgage loans returned to positive growth. CITIC Bank led in absolute increase of RMB61.4 billion, up 6.32% year-on-year. PAB posted the highest growth rate of 7.42%, representing a RMB22.5 billion rise. This recovery was primarily due to eased property purchase restrictions in core cities (e.g., Hangzhou and Chengdu lifted restrictions in outlying districts) and the introduction of "trade-in" incentives, which significantly stimulated housing-improving demand. In July 2024, the China Index Academy revealed that over 100 cities had introduced relevant policies to facilitate home upgrades, including trade-ins and downsizing-to-upsizing transactions.

Asset quality of real estate corporate loans improved; retail risks gradually emerged

Since 2024, the real estate sector has witnessed a policy pivot from targeted relief to comprehensive assistance, with accelerated implementation of existing policies and a steady introduction of new incentives. These efforts have improved real estate enterprises' operations, stabilized market sentiment, and lowered nonperforming ratios for most banks' real estate-related loans.

Figure 4: Nonperforming Real Estate Corporate Loans

Unit: RMB100 million

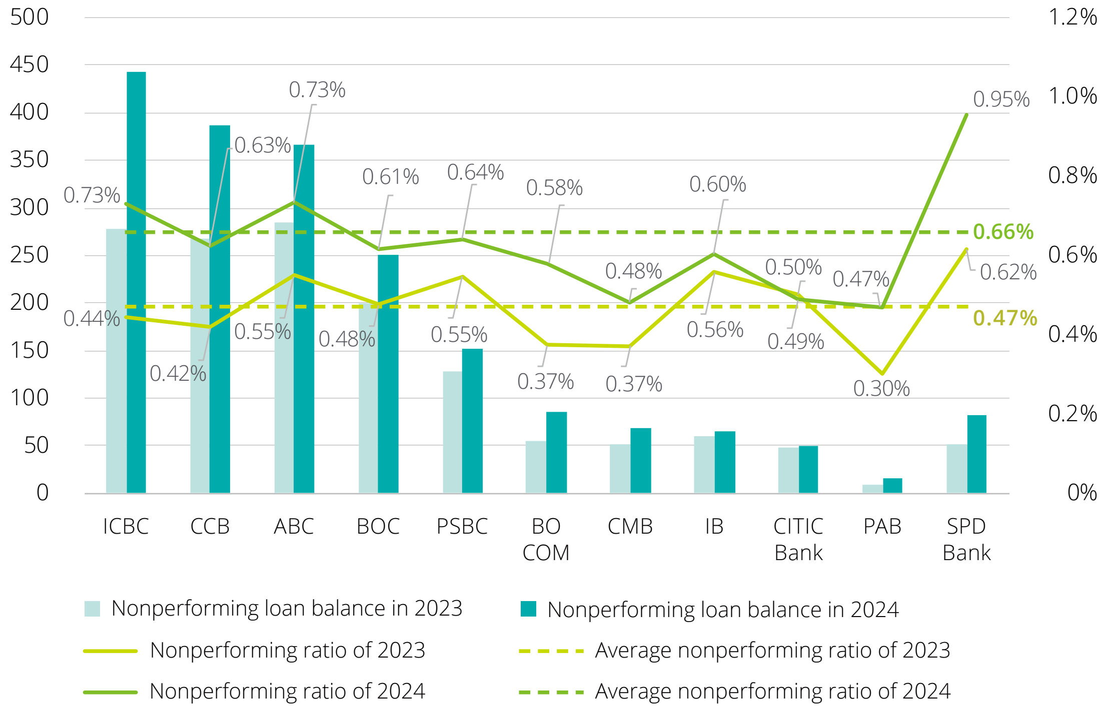


The 11 sample banks' total nonperforming real estate corporate loans reached RMB256.847 billion, with a nonperforming ratio of 4.16%, down 0.36 percentage points from 2023's 4.52%. Specifically, ABC registered the highest nonperforming ratio of 5.40%, down 0.02 percentage points from 2023's 5.42%; IB's and PAB's nonperforming loan balances nearly doubled from the prior year-end, with nonperforming ratio increasing by 0.70 and 0.93 percentage points, respectively. The rest of the nine banks' nonperforming ratios decreased.

In terms of the scale of the nonperforming loan balance, IB's, ICBC's, and PAB's scales expanded by RMB3.613 billion (97.89%), RMB3.007 billion (7.34%), and RMB2.194 billion (99.90%), respectively, while CCB's, SPD Bank's, and CMB's contracted by RMB4.640 billion (9.63%), RMB4.285 billion (30.15%), and RMB1.455 billion (8.47%), respectively.

Figure 5: Nonperforming Individual Housing Loans

Unit: RMB100 million



The 11 sample banks' total nonperforming individual housing loans reached RMB196.752 billion, with a nonperforming ratio of 0.66%, up 0.19 percentage points from 0.47% at the end of 2023. Except for CITIC Bank, which remained stable, the other banks all saw increases in their nonperforming ratios. Specifically, SPD Bank recorded the highest nonperforming ratio of 0.95% and the largest increase of 0.33 percentage points year-on-year.

In terms of nonperforming loan balances, all 11 banks' scale expanded by a total of RMB53.3 billion, up 37.11% year-on-year. The nonperforming loan balances of the six major state-owned banks increased by RMB47.2 billion, accounting for 88.58% of the total increase among the 11 banks, with an average growth rate of 38.86%. Specifically, ICBC's and BOCOM's nonperforming loan balances increased by over 50%. The nonperforming loan balances of the five joint-stock banks increased by RMB6.1 billion, accounting for 11.42% of the total increase, with an average growth rate of 27.48%. Specifically, SPD Bank's nonperforming loan balance was RMB8.246 billion, with a net increase of RMB3.075 billion or 59.47% in 2024. These figures closely approached BOCOM's balance of RMB8.509 billion and net increase of RMB3.047 billion.

Speed up real estate financing coordination to reverse decline and stabilize market

As real estate loan risks exploded and policy intensification sustained, some commercial banks disclosed their progress in high-quality development and risk control measures for the real estate sector in their annual reports and elaborated on such issues in their performance presentations. They will continue to follow policy guidance, prevent credit risks, and maintain a stable loan supply to accommodate the development trends in the real estate sector.

Bank	High-quality development achievements	Risk control measures
ICBC	Loans to the real estate industry increased by RMB118.76 billion or 15.6%, which was mainly attributable to the growth of various types of rental housing loans, loans to whitelisted projects under the urban real estate financing coordination mechanism, and operating property loans. Loans to whitelisted projects exceeded RMB130.0 billion.	Adapted to significant changes in the supply-demand relationship in the real estate industry, met the reasonable financing needs of property developers of different ownership types under the principle of equal treatment, and maintained steady growth in property development loans. Implemented a raft of incremental policies and actively aligned its activity with whitelisted projects under the urban real estate financing coordination mechanism. Reached out to serve the "Three Major Projects," helped build the "market-based + affordable" housing supply system, and supported the creation of a new model for real estate development. Closely monitored changes in the real estate market, stepped up cooperation with high-quality large real estate development enterprises and leading real estate agency companies, and controlled credit risks of residential mortgages from the source. Regarding new types of risks such as multi-source financing, collateral cash-out, and loan fraud, continuously advanced the development of the full-process risk model system for mortgage portfolio loans, and enriched the risk identification strategy set before and during lending.
ABC	ABC promoted the effective implementation of the urban real estate financing coordination mechanisms. ABC fulfilled the responsibilities as a large bank, strengthened organizational promotion, optimized policies and processes, intensified resource guarantees, and ensured both development and security to meet the reasonable financing demands of real estate enterprises of different ownerships. As at the end of 2024, ABC approved over 1,000 "white list" projects and granted loans of more than RMB400.0 billion accumulatively.	Vigorously supported the construction of the "Three Major Projects," including government-subsidized housing, to help foster a new development model for real estate. Fully supported efforts to ensure the timely delivery of housing projects, actively implemented the requirements of the urban real estate financing coordination mechanisms and the scope expansion and efficiency improvement of "Whitelist" projects to meet the reasonable financing needs of real estate projects, facilitated the de-stocking of existing commodity housing, and supported to stem the downturn and restore stability in the real estate market. Enhanced the refined management of real estate projects, strictly prevented and controlled risks, and steadily advanced the mitigation and disposal of real estate risks through "one policy for one household" measures.
BOCOM	At present, BOCOM has a good structure of corporate loans in the real estate industry. Credit assets are concentrated in the Yangtze River Delta, Beijing, Tianjin, Hebei, Guangdong, Hong Kong, Macao, Chengdu, Chongqing, the middle reaches of the Yangtze River, and other urban agglomerations with industrial support and population agglomeration effect, and core cities in the metropolitan area. The business structure is mainly residential.	Firstly, in order to strengthen access control, ABC adhered to the principles of marketization and rule of law, did a good job in project evaluation, and solidly promoted the work of housing guarantee and delivery to achieve results. Secondly, in order to standardize business development, the bank strengthened the closed operation of project funds and the operation and financial status monitoring of real estate enterprises. Thirdly, in order to strengthen risk prevention and control and disposal, the bank improved the effectiveness of risk investigation, achieved early risk identification, early warning, early exposure, and early disposal, and adhered to the "one policy for one household" to promote risk resolution.

Bank	High-quality development achievements	Risk control measures
CMB	As of the end of the reporting period, CMB's balance of loans granted to the real estate industry was RMB286.365 billion, representing a decrease of RMB4.377 billion as compared with the end of the previous year. Over 85% of its balance of loans for real estate development was extended in the urban areas of first-tier and second-tier cities and the regional structure remained sound. Non-performing loan ratio of real estate loans was 4.74%, representing a decrease of 0.27 percentage point as compared with the end of the previous year.	Under the premise of controllable risks, CMB further explored structural opportunities that may arise in various regions and focused on high-quality projects to carry out business. Meanwhile, the bank actively participated in the coordination mechanism of urban real estate financing, promoted the coordination mechanism for real estate to expand the scope of "Whitelist" and increased its effect to meet the reasonable financing needs of real estate projects, thereby facilitating the stable and healthy development of the real estate market. Continued to reasonably differentiate between the risks of project subsidiaries and those of the Group's holding companies, continuously strengthened centralized risk management and post-investment and post-loan management, and strictly enforced the requirements for the closed management of real estate loans, so as to effectively prevent and control project risks.
IB	As of the end of the reporting period, IB's corporate real estate financing balance totaled RMB745.185 billion, up RMB55.039 billion from the prior year-end. This included more than RMB10 billion in financing to ensure the delivery of presold housing projects. For certain real estate projects that are unlikely to meet the criteria for ensuring the delivery of presold housing projects in the short term, IB promptly downgraded their risk classifications, made adequate provisions for impairment losses, and directed operating institutions to accelerate risk disposal. The provision coverage ratio for corporate real estate financing stood at 4.99%, indicating manageable overall risk exposure.	1. Strictly adhered to the requirements of the urban real estate financing coordination mechanisms, provided robust financial services to ensure the delivery of presold housing projects, and accommodated the reasonable financing needs of high-quality real estate enterprises. 2. In line with the overall strategy of "controlling the total volume, adjusting structure, and optimizing stock," IB strengthened project-centric business selection and evaluation, prioritized projects with resource advantages and clear rental/sales prospects, and actively participated in the "three major projects," rental housing, and industrial park finance, and other businesses. 3. Continued to improve the collaborative working mechanism of a mechanism for leaders of the head office to supervise and guide and the risk prevention and control agile team at Industrial Bank Co., Ltd., leveraged the professional capabilities of the real estate risk prevention and control agile team through reasonable authorization and optimization of personnel combination, and applied policy instruments such as the urban real estate financing coordination mechanisms and commodity housing inventory acquisition programs.
SPD Bank	In 2024, SPD Bank capitalized on real estate policies and stepped up efforts to resolve and mitigate real estate risks, resulting in reduced nonperforming loan balances and NPL ratios for corporate real estate businesses. As of the end of the reporting period, SPD Bank approved 170 "Whitelist" projects, with total approved loans amounting to RMB128.220 billion and granted loans reaching RMB90.109 billion. Its rental housing group purchase loans now cover 12 cities, while its affordable housing relending balance ranks first among joint-stock banks.	Implemented a name-list management system for key real estate conglomerates, continuously monitored internal and external risks for these clients, established a coordination mechanism involving the Head Office, branches, and subsidiaries, and formulated "one-household, multiple-policy" plans in accordance with relevant regulations, including the 16 financial support measures and operating property loan guidelines, enhancing large-customer risk resolution effectiveness through collaborative management. Furthermore, established a "four-dimensional" management model covering qualification criteria for real estate developers, project approval standards, city-specific risk assessments and entry thresholds, and closed-loop project fund management. This framework improved the long-term mechanism for real estate risk control.

Commercial banks' real estate business outlook: market stabilization gained momentum; supply-demand collaboration facilitated transformation

In 2025, China's real estate sector will enter a new phase of in-depth adjustments, facing structural opportunities and transformation challenges in an inventory-dominated cycle. As urbanization slows and demographics shift, the market has exhibited significant structural differentiation, highlighting the value of high-quality assets in core urban agglomerations and driving real estate enterprises to strategically focus on high-energy cities. The deepening "dual track" housing system will expand affordable rental housing supply while driving the commercial housing market toward upgraded and technology-based products. Urban renewal and existing asset operation will become new growth points, while inventory reduction in third- and fourth-tier cities and small and medium-sized real estate enterprises' liquidity risks still require targeted policy regulation. The industry is expected to follow a dual-track pattern featuring "policy-backed housing to meet basic needs and market-oriented supply to promote upgrading". Enterprises with asset operation and innovation capabilities are anticipated to gain new competitive advantages during the industry reshuffle.

Development opportunities and trends

- Comprehensively implement the urban real estate financing coordination mechanism, expand the scope and improve the efficiency of "Whitelist" housing projects, include the relevant housing development loan projects into the "Whitelist" by categories in batch, to better meet the reasonable financing needs of the projects and support the battle to ensure the delivery of housing, bringing the sector back to a trajectory of steady growth.

- Provide robust financial services for the construction of the "three major projects" and promote policy-supported businesses like affordable housing acquisition and loans for affordable rental housing, thus facilitating the stable and healthy development of the real estate market.

- Implement differentiated strategies based on segmented market's balanced objectives of price stability, volume optimization, and risk mitigation, while factoring in city tier classifications and real estate enterprises' profiles. Dynamically adjust market entry criteria, credit quotas, and pricing strategies, improve loan geographic allocation, customer segmentation, and risk mitigation structures, and apply business-specific measures.

- Continuously strengthen centralized risk management and post-investment and post-loan management, and strictly enforce the requirements for the closed management of real estate loans. Closely monitor changes in the real estate market, step up cooperation with high-quality large real estate development enterprises and leading real estate agency companies, and control credit risks of residential mortgages from the source.

Challenges

- Constant market adjustments and a slowed growth rate of resident income weakened individuals' risk-resistance ability. Fluctuations in collateral value triggered foreclosures, while early loan repayments deteriorated customer quality. As a result, the asset quality of individual housing loans is expected to experience continuous pressures.

- Structural challenges in the real estate market emerged, exacerbating city tier differentiation. Shrinking demand and lowered market expectations in non-core cities led to increased inventory pressures, intensifying real estate enterprises' capital chain risks.

- In 2025, real estate enterprises will face a peak in domestic and international bond repayments. With persistent refinancing challenges, the sector remains vulnerable to accelerated credit risk exposure should relief fund disbursements lag or demand-side stimulus underperform expectations.

Supported by favorable policies, commercial banks will continually improve their credit structures to promote a virtuous cycle, strengthen risk management to consolidate financial security, and strike a balance between stability and progress, thus accelerating the construction of a new development model.

3.4

Net value-based transformation promotes high-quality development of wealth management subsidiaries

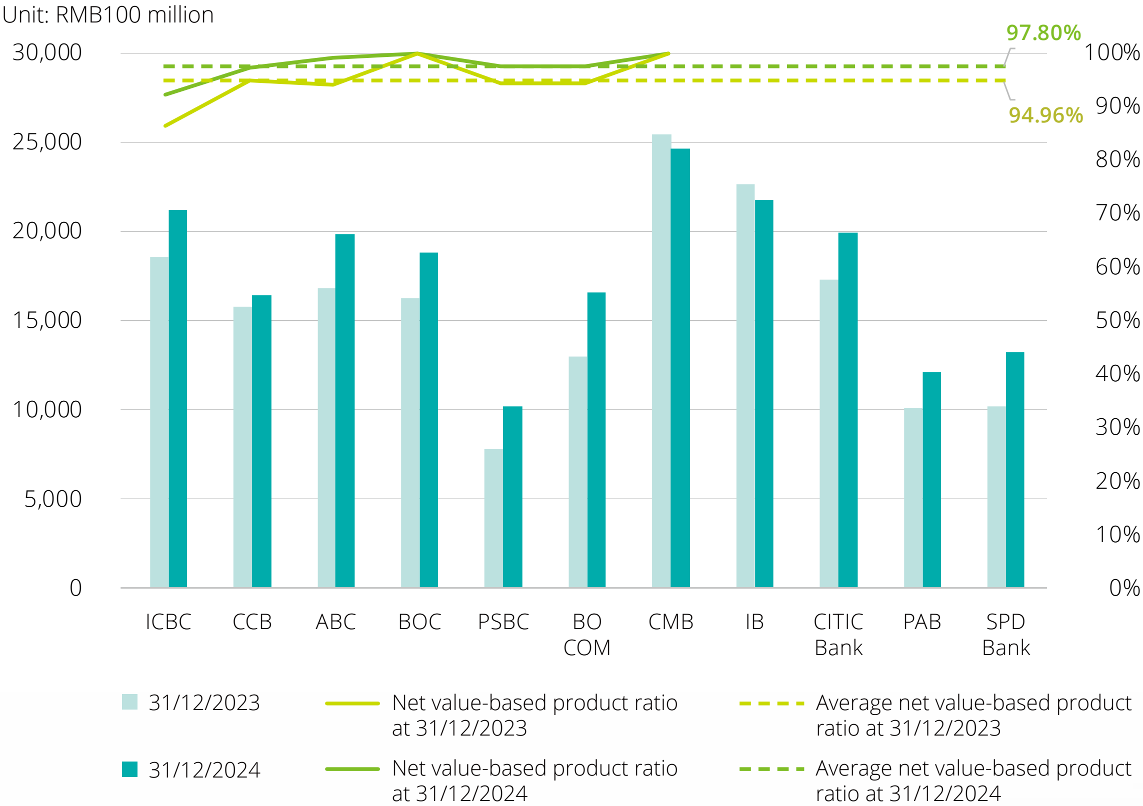
In 2024, the wealth management market was characterized by "scale adjustment, structural transformation, increased concentration, and declined risks." Regulatory policies drove the industry to prioritize quality over scale. Market participants should adapt to new rules, and investors should improve their risk identification abilities to jointly promote high-quality development in the industry. Banks strictly implemented regulatory requirements in their wealth management sector, enhanced the political and people-oriented nature of financial work, and focused on "the five major tasks" to support residents' wealth growth and serve the high-quality development of the real economy.

Net-value transformation nearly completed; industry entered a new phase of net-value based wealth management

According to the *Annual Report on China Banking Wealth Management Market (2024)* released by the China Banking Wealth Management Registration & Custody Center, by the end of 2024, the scale of existing banking wealth management products was RMB29.95 trillion, up 11.75% from the beginning of the year. Specifically, the scale of net value-based wealth management products reached RMB29.50 trillion, accounting for 98.50%, up 1.57 percentage points from the beginning of the year.

In 2024, the 11 domestic commercial banks' scale of existing wealth management products was RMB19.49 trillion, up 11.99% year-on-year. IB, CITIC Bank, PAB, and SPD Bank did not disclose the data of net value-based products, while the rest of the domestic banks' net value-based products, on average, accounted for 97.80%, continually increasing from 2023's 94.96%. CMB and BOC had 100% net value-based products.

Figure 1: Wealth Management Product Scale and Net Value-based Product Ratio at the End of 2024 and 2023



Note: The financial data were sourced from the banks' 2024 and 2023 annual reports. IB, CITIC Bank, PAB, and SPD Bank did not disclose the data of net value-based products.

CMB, IB, and ICBC took the top three places in terms of wealth management scale, totaling RMB2.47 trillion, RMB2.18 trillion, and RMB2.12 trillion, respectively. Among the 11 banks, IB's and CMB's wealth management scale contracted slightly, but the others' expanded remarkably. Among the state-owned banks, PSBC's, SPD Bank's, and BOCOM's scales increased by RMB246.0 billion or 31.68%, RMB299.6 billion or 29.58%, and RMB360.2 billion or 27.66%, respectively. BOC, ICBC, and ABC each recorded growth of more than 14% in their wealth management scale. Among joint-stock banks, CITIC Bank's and PAB's wealth management scale grew by 15.29% and 19.85%, respectively.

Table 1: Changes in AUM, Off-Balance Sheet Wealth Management Scale, and Wealth Management Product Ratio in AUM Recorded at the End of 2024

Unit: RMB trillion

Bank	Wealth management scale	Change in wealth management scale	AUM scale	Change in AUM scale	Proportion of off-sheet wealth management in AUM	Change in proportion of off-sheet wealth management in AUM
ICBC	2.12	14.22%	30.49	-13.81%	6.96%	-13.81%
CCB	1.64	3.95%	30.35	3.84%	5.41%	3.84%
ABC	1.99	17.81%	32.29	5.58%	6.15%	5.58%
BOC	1.88	15.51%	26.09	6.31%	7.22%	6.31%
PSBC	1.02	31.68%	16.31	10.71%	6.27%	10.71%
BO COM	1.66	27.66%	10.46	6.18%	15.89%	6.18%
CMB	2.47	-3.08%	11.67	8.12%	21.18%	8.12%
IB	2.18	-3.82%	7.81	4.37%	27.89%	4.37%
CITIC Bank	1.99	15.29%	7.86	9.18%	25.36%	9.18%
PAB	1.21	19.85%	4.81	7.49%	25.26%	7.49%
SPD Bank	1.32	29.58%	6.55	7.73%	20.15%	7.73%
Total/ average	**19.49**	**11.98%**	**184.69**	**2.41%**	**15.25%**	**5.06%**

At the end of 2024, the 11 banks' AUM averaged RMB16.97 trillion, and most of their growth rates remained stable. ICBC saw a decline of 13.81%, while the rest of the banks' average growth rate was 6.95%. Regarding the AUM structure, state-owned banks' average deposit and wealth management proportions were 92.02% and 7.98%, respectively. Generally, state-owned banks' wealth management scale was small. On average, the five joint-stock banks' wealth management accounted for 23.97% of their AUM. IB recorded the highest wealth management proportion of 27.89%. As the wealth management concept becomes increasingly popular, banks' wealth management business will be critical to driving the AUM. Therefore, banks are vigorously increasing the proportion of wealth management business in the AUM.

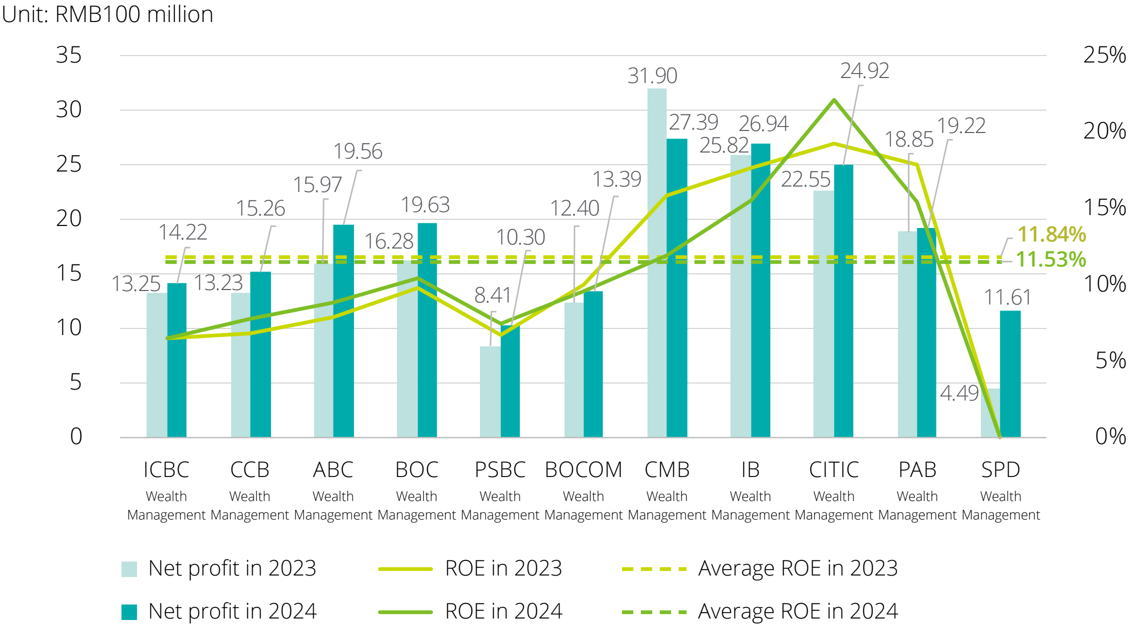
Banks' wealth management subsidiaries offered stable product allocation to support residents' wealth growth

In 2024, there was no newly established wealth management companies. By the end of 2024, 32 wealth management companies were founded, of which six were established by state-owned banks, 12 by joint-stock banks, eight by city commercial banks, one by rural commercial bank, and five were joint ventures. According to the *Annual Report on China Banking Wealth Management Market (2024)*, by the end of 2024, wealth management companies' product scale reached RMB26.31 trillion, up 17.09% year-on-year, accounting for 87.85% of the total wealth management market scale.

In 2024, the bond market yielded impressive results. The stock market also recovered substantially after the September meeting of the Political Bureau of the CPC Central Committee. The ratio of financial products with net value falling below RMB1 in total financial products remained low, heralding an increase in wealth management scale. Most wealth management companies' net profits rose due to the recovering bond and stock markets. In 2024, the net profits of the 11 domestic banks' wealth management subsidiaries increased by 10.53% year-on-year. Specifically, CMB Wealth Management still recorded the highest net profits (RMB2.739 billion), despite a year-on-year decline of 14.14%. IB Wealth Management's net profits reached RMB2.582 billion, narrowing the gap between the first and second place. SPD Wealth Management did not disclose its ROE, while the ROEs of the other ten wealth management companies averaged 11.53%, almost the same as the previous year. Among joint-stock banks, CITIC Wealth Management, IB Wealth Management, and PAB Wealth Management recorded the top three ROEs of 22.04%, 15.56%, and 15.37%, respectively. Among state-owned banks, the ROEs of BOC Wealth Management and BOCOM Wealth Management were 10.41% and 9.53%, respectively.

In 2024, the average wealth management product yield was 2.65%. According to the Annual Report on China Banking Wealth Management Market (2024), the wealth management market cumulatively generated RMB709.9 billion of revenue for investors in 2024, up 1.69% from 2023's RMB698.1 billion. Specifically, banking institutions contributed RMB140.7 billion of investors' revenue, down 19.09% year-on-year, and wealth management companies contributed RMB569.2 billion, up 8.58% year-on-year.

Figure 2: Wealth Management Subsidiaries' Net Profit and ROE Ratio in 2024 and 2023

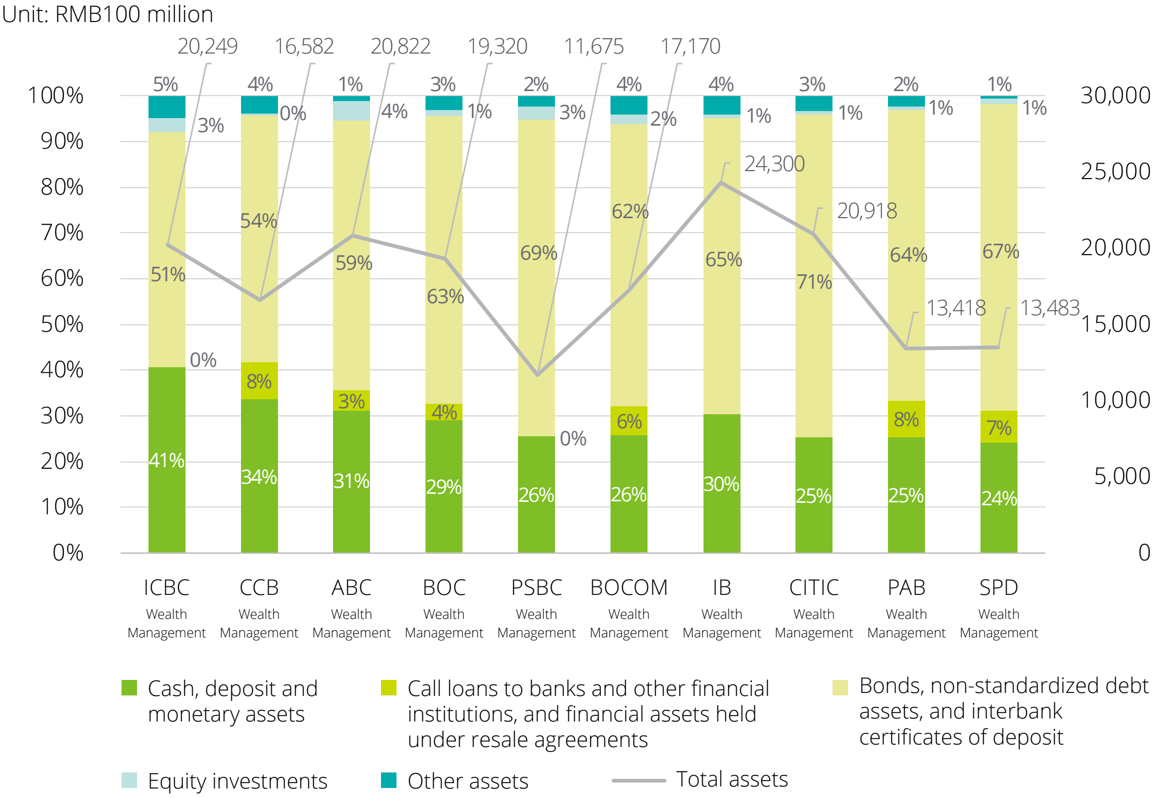


Note: The financial data were sourced from the banks' 2023 and 2024 annual reports. SPD Wealth Management did not disclose its ROE.

As wealth management companies emphasized net value-based wealth management, market competition entered a new stage. Improving investment management capabilities to satisfy investors' diverse preferences will be the key to maintaining profitability and ROE growth. Banking wealth management's investments are generally conservative due to the conventional banking asset management culture and weakened investors' risk appetites.

According to ten wealth management subsidiaries' business performance reports, their investments still concentrated on low-risk cash and debt assets, with debt assets accounting for the highest proportion. The ten wealth management subsidiaries' debt asset investments accounted for 62.49% on average, slightly higher than 2023's; their average proportion of cash asset investments was 29.09%. Specifically, ICBC Wealth Management and CCB Wealth Management's proportions stood at 41% and 34%, respectively, the highest among the ten banks. This reflects wealth management companies' and investors' preference for stable revenue since the 2022 net asset value downturn in the banking wealth management market. In 2024, equity asset investments accounted for 1.69% on average, down from 2023's 2.00%. The ten wealth management subsidiaries maintained low proportions of equity asset investments, primarily due to investors' continued risk aversion and heightened capital market volatility, which drive demand for low-volatility products such as cash and debt assets aligning with customer expectations. However, the low-risk nature of wealth management products was enhanced, constraining the sustainable development of banking wealth management.

Figure 3: Balance of Wealth Management Products by Investment Categories (under the Penetrating Principle)



Note: The financial data were sourced from the wealth management subsidiaries' performance reports for the second half of 2024. CMB Wealth Management did not release such a report.

In the low-interest-rate environment, issues such as declining wealth management yields and imbalanced business structures are becoming increasingly pronounced, threatening the sustainability of wealth management business models. Having involved form the 1.0 stage of "compliance-driven transformation" to the 2.0 stage of "market adaptation," the wealth management sector now urgently needs to enter the 3.0 stage of "long-term vision and diverse allocation." In 2024, during a press conference, the State Council Information Office detailed financial measures to support high-quality economic growth. The NFRA pledged to actively guide banks, insurance, and asset management institutions in maintaining capital market stability and supporting its sustained and steady development.

2024 marked a pivotal year for diverse asset allocation, with wealth management companies actively expanding their product offerings in related fields. This presents both opportunities and challenges, particularly for banking wealth management subsidiaries. To support a high-quality transformation toward a diversified portfolio, these subsidiaries should continuously strengthen their investment research, risk control, technological, and service capabilities. By doing so, they can achieve differentiated operations and value creation, laying a foundation for sustainable development.

Net-value based transformation spurs stricter regulation, prioritizing quality over scale

In 2024, banking wealth management regulations focused on implementing the "true net-value based transformation." This involved restricting channel business, halting yield-smoothing tools, and strengthening categorized supervision, aiming at shifting the industry's priority from scale to quality. Meanwhile, small and medium-sized banks accelerated their market exit, competition among leading wealth management companies intensified, and product offerings increasingly shifted toward multi-asset and multi-strategy solutions.

In February 2024, in response to the widespread practice of banks channeling insurance asset management plans through insurance asset management products to invest in negotiated deposits, term deposits, or large-denomination certificates of deposit, thereby artificially inflating product yields, a local Financial Regulatory Bureau issued the *Notice on Reporting Standards for Insurance Asset Management Company Deposits* to banks within its jurisdiction. The notice mandated that funds raised by insurance asset management companies through the issuance of wealth management products should be recorded under the "Interbank Deposits" category in statistical reporting, rather than as general deposits. This measure aimed to restrict banks from using insurance asset management channels for deposit allocation and ultimately reduce their debt costs.

In April 2024, the self-regulatory mechanism of interest rate pricing issued the Initiative on Prohibiting the Cultivation of *Deposit Market Competition Order through Manual Interest Replenishment and High Interest Rate*, banning practices that circumvented the deposit rate ceiling through regulatory arbitrage, thereby restricting wealth management products' access to high-yield deposits and intensifying pressure on low-volatility asset allocation.

In May 2024, regulators released a consultation paper on the rating methods for banking wealth management institutions, stipulating that AUM would no longer be a scoring criterion. This marked a regulatory shift from scale-based evaluation to quality-centric assessment, significantly de-emphasizing quantitative growth metrics.

In June 2024, a local financial regulatory bureau issued the *Notice on Further Strengthening Compliance Management in Cooperative Business Between Trust Companies and Wealth Management Companies* to trust companies within its jurisdiction. The notice mandated a review of the following practices: trust companies assisting wealth management companies in adjusting product yields via smoothing mechanisms, facilitating transfers of risk assets among different wealth management products, providing channels for cash management products to illegally invest in low-rated bonds and engage in nested deposit transactions, and allowing the improper use of valuation methods in wealth management products. The notice required trust companies to formulate rectification plans and implement corrections.

Meanwhile, some regional regulators issued risk warnings to commercial banks without wealth management subsidiaries, mandating relevant city and rural commercial banks fully wind down their legacy wealth management business by the end of 2026. In contrast to the policy measures to scale back small and medium-sized banks' wealth management operations in 2021, the new guideline reinforced exit requirements while specifying specific timelines and compliance criteria, signaling strengthened regulatory oversight. This move is expected to redirect regional banks without wealth management licenses to their core businesses and expedite strategic transformations. Small and medium-sized banks without wealth management licenses are anticipated to leverage their regional advantages, forging a second growth engine through deeper wealth management engagement.

In August 2024, the NFRA responded to Proposal No. 04805 (Fiscal and Financial Category 294) tabled at the second session of the 14th National Committee of the Chinese People's Political Consultative Conference (CPPCC). The NFRA is drafting the *Measures for Regulatory Rating and Classified Supervision of Wealth Management Companies*, which will incorporate old-age wealth management products and other pension finance businesses as critical criteria in the regulatory rating framework for wealth management companies. These regulatory ratings will serve as the basis for implementing classified supervision of wealth management companies. Top-rated companies will be supported in conducting comprehensive and innovative pilot programs, while those with lower ratings may face more extensive restrictions on business scope and geographic operations.

In October 2024, the Securities Association of China issued the *Management Measures for the Issuance of Securities Income Certificate*, prohibiting wealth management companies without derivatives transaction qualifications from conducting nested investments through income certificates, thus promoting standardized operation of structural products. The implementation of this regulation will reduce returns on wealth management products invested in securities income certificates, diminishing their market attractiveness. In the long run, the new regulation will highlight the competitive edge of top institutions that possess both derivatives transaction qualifications and investment research capabilities.

According to statistics, as of December 31, 2024, 17 out of 31 operational wealth management companies have obtained derivatives transaction qualifications, marking the entry of wealth management institutions into a new phase of competition in the structural products market.

In November 2024, the self-regulatory mechanism of interest rate pricing issued the *Initiative on Optimizing Self-Regulatory Management of Non-Bank Interbank Deposit Interest Rates*, aiming to further reduce interbank deposit rates. Given that cash wealth management products have a substantial portion of interbank deposits in their portfolios, their returns will decline notably as the interest rates on interbank demand deposits decrease.

In December 2024, regulators required wealth management companies using self-built valuation models to submit rectification reports within one month. This move will ensure strict adherence to the principle of fair value measurement and protection of investors' legitimate rights and interests.

The scale and quality of private pension wealth management products rose in 2024. According to the *Annual Report on China Banking Wealth Management Market (2024)*, by the end of the reporting period, the industry's platforms had supported six wealth management companies in launching 30 private pension products, amassing sales of over RMB9.0 billion. Nineteen sales banks opened over 980,000 private pension accounts for investors. In 2024, commercial banks' wealth management subsidiaries focused on pension finance market demands and continued to enhance their innovation capabilities. As a second-batch pilot institution for pension wealth management, PSBC Wealth Management issued six pension-themed wealth management products, addressing diverse investment needs through optimized product terms and risk levels. IB Wealth Management focused on building a distinctive brand in old-age wealth management by innovating an inclusive rate structure and providing tailored services for pension customers and the elderly, thereby bolstering China's multi-level old-age security system.

Strict regulation has propelled banks to intensify compliance management of wealth management. This is conducive to solidifying the concept of "putting internal controls first and adhering to the compliance orientation" in the wealth management industry, forming an excellent industrial ecosystem, and promoting healthy competition and high-quality development. Policies will continually drive the stable development of the private pension wealth management business, creating a sound ecosystem and market environment to promote high-quality development of the old-age insurance system and bring more satisfactory financial services.

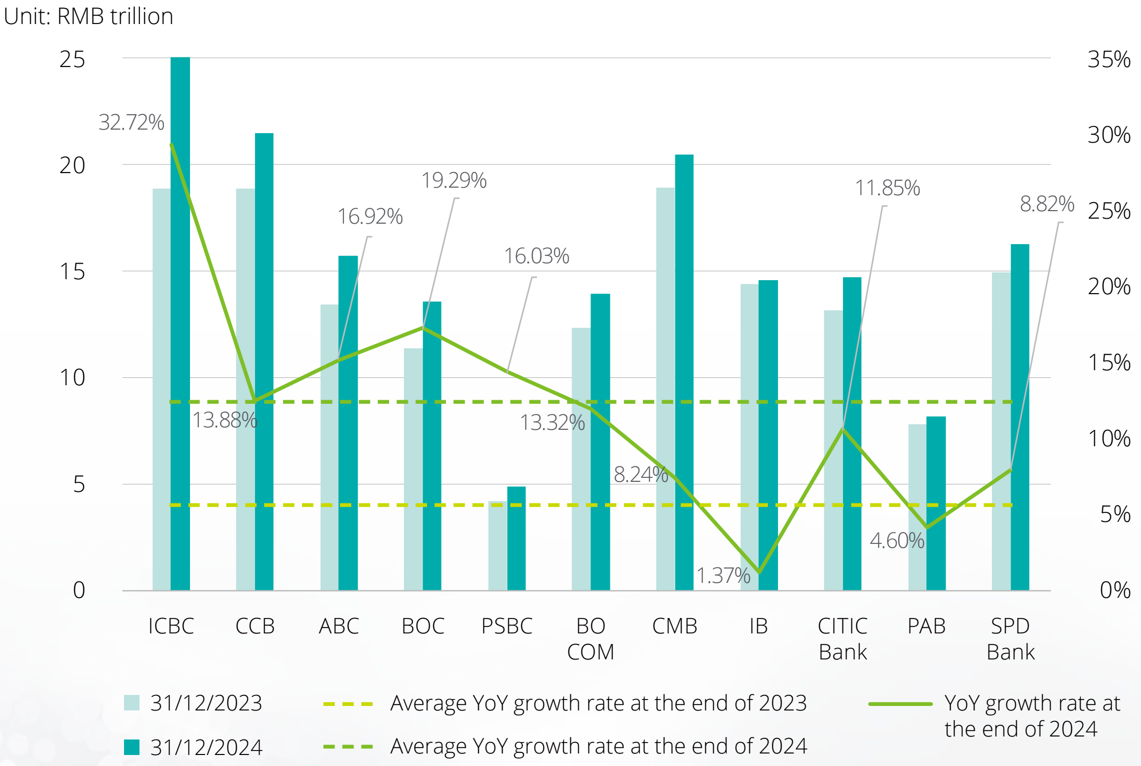
Custody service may expand towards high-speed and high-quality operations

Benefiting from the rapid development of asset management businesses, banks' assets under custody (AUC) maintained rapid growth. As part of the wealth management value chain, custody services have become the key driver for commercial banks' light banking-oriented transformation.

As of the end of 2024, the 11 banks' AUC totaled RMB188.37 trillion, an increase of RMB22.95 trillion from 2023. Their average growth rate was 13.87%, doubled from 2023's 6.25% and 6.41 percentage points higher than the total AUC's average growth rate of 7.46%. The six state-owned banks' AUC totaled RMB105.60 trillion, accounting for 56.06% and representing a growth rate of 19.70%. The five joint-stock banks' AUC totaled RMB82.77 trillion, accounting for 43.94% and representing a growth rate of 7.22%.

The top three domestic banks in terms of AUC scale were ICBC, CCB, and CMB, with AUC totaling RMB2.795 billion, RMB2.395 billion, and RMB2.286 billion, respectively. Regarding the development speed of custody services, the top three banks were ICBC, BOC, and ABC, with growth rates of 32.72%, 19.29%, and 16.92%, respectively.

Figure 4: Scale of AUC at the End of 2024 and 2023



Note: The data were sourced from the banks' 2024 and 2023 reports.

Support the "five major tasks" to implement the political and people-oriented nature of financial work

2024 marks a crucial year for achieving the objectives and tasks laid down in the 14th Five-Year Plan. The wealth management sector strictly implemented regulatory requirements, enhanced the political and people-oriented nature of financial work, and focused on "the five major tasks" to support residents' wealth growth and serve the high-quality development of the real economy. According to the *Annual Report on China Banking Wealth Management Market (2024)*, as of the end of 2024, the banking wealth management market size reached RMB29.95 trillion, with 30,800 new wealth management products issued, raising total funds of RMB67.31 trillion and generating a total income of RMB709.9 billion for investors.

Since 2024, the NFRA has been resolutely implementing the decisions and arrangements of the CPC Central Committee and the State Council, earnestly implemented the guiding principles of the Central Financial Work Conference and the Third Plenary Sessions of the 20th CPC Central Committee. It has coordinated risk prevention, strong supervision and development, guiding banking and insurance institutions to increase financial supply and reduce financing costs, thereby providing solid support for the steady growth of the real economy.

Table 2: Banks' Asset and Wealth Management Viewpoints

Bank	Focus and development direction
ICBC	The bank embraced new opportunities and missions of the asset management industry against the backdrop of pursuing high-quality financial development, and provided more adaptive, competitive, and inclusive financial supplies to support high-quality economic development and the growing demand for wealth management. On the product side, the bank remained customer-centric, improved the professionalism of financial services such as wealth management, mutual fund, insurance, pension fund, etc. and developed the "ICBC Asset Management" brand to satisfy customers' demands for wealth preservation and appreciation.
CCB	The Group fully leveraged its license advantages to achieve balanced development in terms of size, efficiency, and quality of asset management business. It continued to enrich diversified wealth management product shelf and improve the quality and efficiency of asset management business in serving the real economy, so as to meet the comprehensive investment and financing needs of customers. It continued to improve risk compliance management capability, and strengthened risk prevention and mitigation for key institutions, fields, customers, and types of risk, so as to promote high-quality development of asset management business. Focusing on value creation and risk management, the Group actively integrated its treasury and asset management business into the comprehensive service landscape for corporate and individual clients, strengthened graded, tiered and categorized operation for financial institution customers, created a competitive product system, and comprehensively improved market competitiveness and value creativity, achieving effective synergy and steady growth.
ABC	The bank developed broad wealth management based on the concept of platformization, professionalization, comprehensiveness and inclusiveness, striving to become a family financial planner trusted by customers. It leveraged its platform advantages to enrich the wealth management ecosystem. Upholding the development concept of opening-up, the bank established extensive collaboration with institutions both inside and outside the Group. It provided asset allocation services based on customers' households and offered sustainable wealth growth solutions of "deposits + wealth management + other products/services" to increase comprehensive income.

Bank	Focus and development direction
BOC	The bank seized market opportunities occurring with the residents' wealth growing and the medium- and long-term funds injecting into the market. With the execution of overall management and top level design to the asset management sector conducted by the Asset Management Business Committee, it continuously optimized product system, consolidated channel construction, and enhanced investment research capabilities, promoting the high-quality development of the asset management business. In line with the strategic aim of "common prosperity," the bank contributed to increasing residents' non-salary income and advanced high-quality development of wealth management business.
PSBC	With the goal of accelerating the development into a first-class bank-owned asset management company, PSBC Wealth Management followed the pathway of digital, intelligent, refined, and integrated development, and implemented the business philosophy of "maintaining steady growth, adjusting structure, strengthening marketing efforts, preventing risks, and advancing transformation to achieve high-standard and high-quality development." The bank actively responded to customers' increasing demand for liquidity management, asset preservation and appreciation, and personalized financing and credit services and continuously enriched its product offerings. Leveraging technologies such as artificial intelligence and big data, it developed a corporate wealth service system and offered personalized corporate wealth management reports.
BOCOM	With a focus on improving customers' sense of gain, happiness, and security in respect of investment, the bank optimized its product review mechanism and dynamic on- and off-shelf adjustment mechanism, improved its ability to select wealth products, and continued to build the "OTO Best Choice" product brand. It improved its product system, added stable low volatility products and index products that meet the needs of customers, and took the lead among state-owned banks in introducing commercial pension insurance and family trust services.
CMB	The bank continued to promote the development of extensive wealth management business, and deepen the services for all customer bases, all products, and all channels. In terms of product layout, catering to customer needs, it developed fixed-income brands including "Three Treasures for Short-term Bonds" and "Wen An Bao," established the eight rights-attached strategy systems under the "Quan+Fu" brand framework, and insisted on creating long-term and stable financial returns for customers. To cater to the diversified allocation needs of investors, it introduced and continuously enriched innovative models, including "Wealth Management Night Market," wealth management regular investment, and "Target Profit Investment," thereby effectively enhancing investors' sense of satisfaction.
IB	The bank continued to improve the professional capacities of wealth management, fund, and trust subsidiaries and promoted the transformation and development of asset management business to meet customers' increasing demand for asset allocation. Focusing on value creation for customers, IB consistently strengthened its core capacities, particularly by increasing investment in investment research and risk control. It accelerated the development of an integrated and platform-oriented investment research system, enhanced its comprehensive risk management system covering assets, products, and customers, and built professional capabilities aligned with its wealth management scale.

Bank	Focus and development direction
CITIC Bank	The bank, insisting on market-based, platform-supported, digital, and globalized development, established "Investment + Advisory" in-depth integrated "advisory" service model, and strengthened the "integration and co-establishment" in asset management and wealth management, so as to enhance the "big value circulation chain" of wealth management, asset management, and comprehensive financing. Upholding the customer-centric business philosophy, CITIC Wealth Management established a "6+2" product system encompassing six major tracks namely money, money+, fixed income, fixed income+, hybrid, equity, along with two new tracks of projects and stock rights. Meanwhile, it actively explored scenario-based businesses such as pension finance, wealth inheritance, and discretionary trust, to build a full lifecycle wealth management service system.
PAB	Ping An Wealth Management built channels, investments and products in an orderly fashion, while adhering to the bottom line of risk compliance. Adhering to the customer-centric principle, the bank established a wealth management service system covering all customer groups. While meeting customer needs for deposits, the bank continuously enriched product categories including wealth management and funds, and upgraded the operation and services model of "AI + T + Offline" (AI bank + Remote bank + Offline bank), to provide multi-product and multi-contact asset allocation suggestions and accompanying services for customers.
SPD Bank	The bank leveraged wealth and asset management finance to deepen the integration of wealth management and asset management. Through group collaboration, digital empowerment, business line integration, ecosystem connectivity, digital operation, and corporate wealth management, it positioned itself as a preferred wealth management bank for customers, fostering a closer link between residents' wealth and emerging productivity.

China's financial market is evolving towards a new landscape, and the wealth management market is transitioning into a phase of stable, high-quality development. In 2024, substantial progress was made in the scale, structure, and compliance of the banking wealth management business. In 2025, the sector will deepen its transformation in equity layout, technological empowerment, and investor education, while addressing market volatility and stricter regulations.

3.5

Integration of business and technology creates digital financial service ecosystems

In the digital era, Fintech has become a key driver reshaping the banking sector. As AI technologies advance, the Fintech layouts outlined in banks' annual reports remain a focal point of attention. Following years of intense technological competition, banks still prioritize digital transformation, though the pace of technology investment growth has moderated. This shift reflects a broader industry trend toward cost reduction and efficiency improvement, signaling a transition into a more mature and stable development. Looking ahead, banks are expected to place greater emphasis on efficiency and strategic planning in their technology investments. In 2024, they achieved progress and breakthroughs in integrating digital technologies with financial services, leveraging artificial intelligence to strengthen their competitiveness.

Fintech input slowed; resource allocation improved

Figure 1: Fintech Input and Growth Rate

Unit: RMB100 million

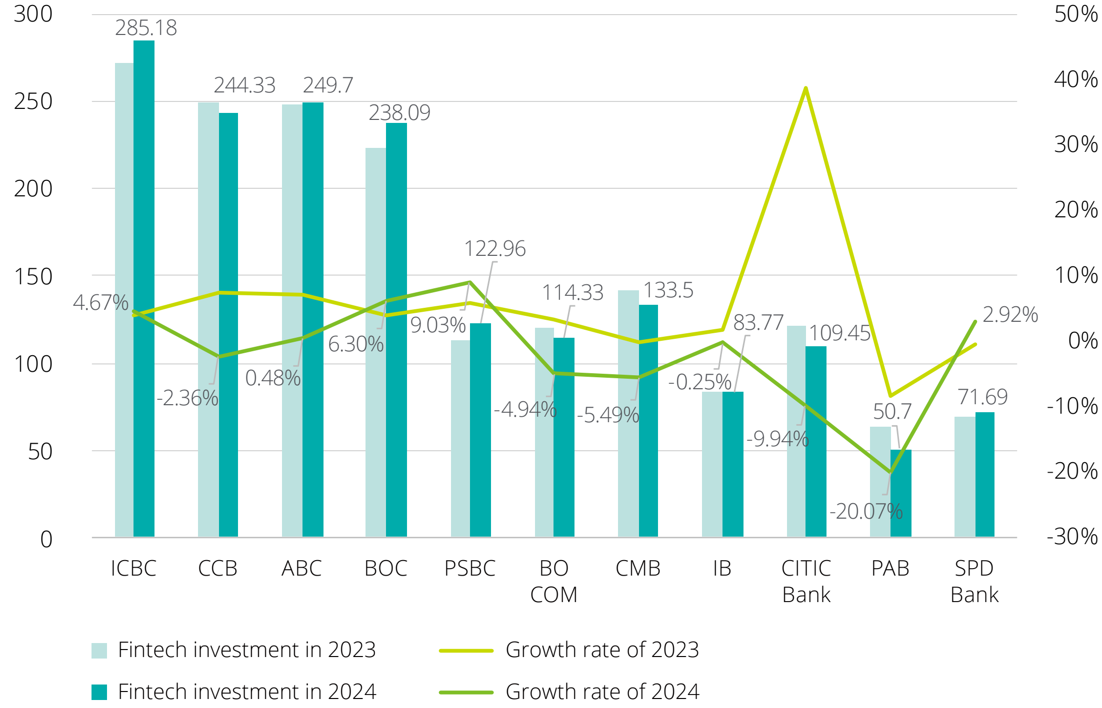
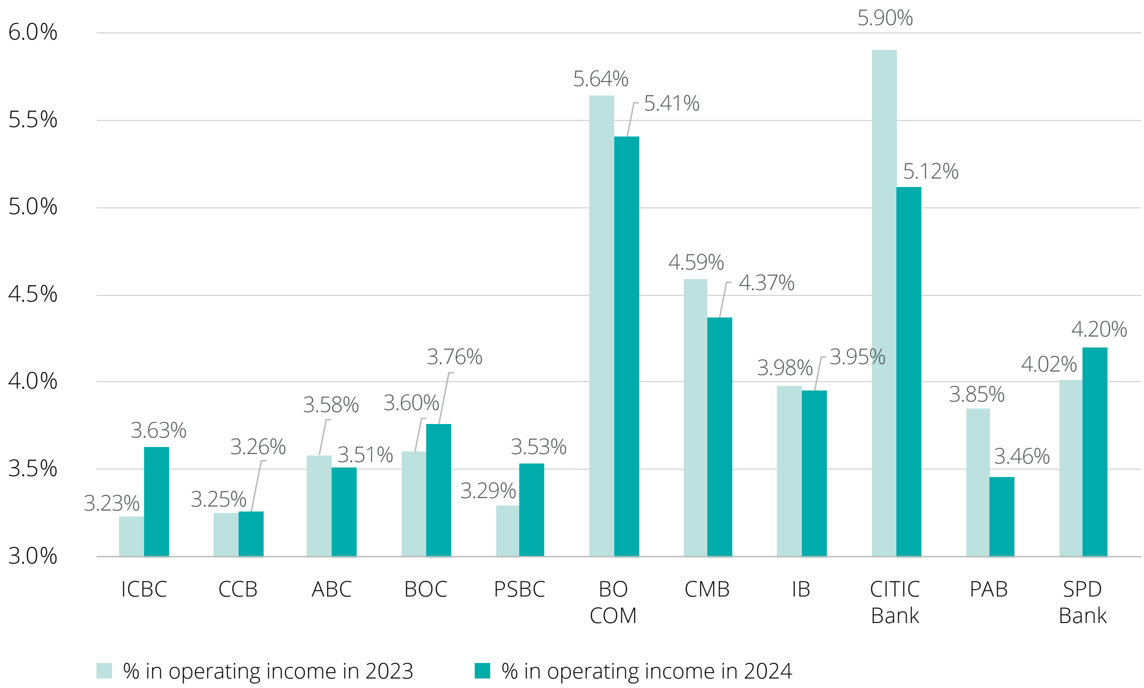


Figure 2: % of Fintech Input in Operating Income



According to the data disclosed in the 11 banks' 2024 annual reports, Fintech investment averaged 4.02% of their operating income, down 0.06 percentage points from 2023's 4.08%. The average growth rate of Fintech investment slowed from 2023's 5.73% to -1.79%, with many banks experiencing significant declines. State-owned banks were the backbone of Fintech investment. The four major state-owned banks' Fintech investments each exceeded RMB20.0 billion. BOCOM's, PSBC's, CMB's, and CITIC Bank's investments exceeded RMB10 billion. Growth rates in Fintech investment across the banking sector reflected divergent strategic priorities. In 2024, PSBC continued to expand its investment, achieving the highest growth rate among the 11 banks at 9.03%. In contrast, PAB, CITIC Bank, CCB, BOCOM, CMB, and IB reduced their investments, with PAB and CITIC Bank implementing the sharpest cuts of 20.07% and 9.94%, respectively. In terms of technology investment as a share of operating income, ICBC, BOC, CCB, PSBC, and SPD Bank registered increases, while all other banks saw declines. Specifically, CITIC Bank and PAB posted the largest declines of 0.78 and 0.39 percentage points, respectively. The slowdown in commercial banks' technology investment growth stems from the initial completion of digital infrastructure and the resource reallocation amid industry-wide initiatives to cut costs and improve efficiency.

In 2024, as Generative AI advanced rapidly, banks further expanded their technical personnel reserve and strengthened the integration of business and technology. ICBC maintained its industry-leading position with 36,000 Fintech personnel. The technical personnel of ICBC, BOCOM, CMB, IB, and CITIC Bank accounted for more than 8% of their total employees. Banks have recently advanced business-technology integration through cultivating cross-disciplinary talent pools and reengineering team governance frameworks. This transformation has repositioned technology from a traditional middle/back-office support function to a front-line value multiplier that drives business monetization.

Figure 1: Fintech Personnel

Bank	Fintech personnel
ICBC	36,000 Fintech personnel, accounting for 8.6% of the bank's total employees
CCB	16,365 Fintech personnel, accounting for 4.34% of the bank's total employees
ABC	27,561 technology and digital operation management personnel, accounting for 6.1% of the bank's total employees
BOC	14,940 employees in the IT line, accounting for 4.78% of the total employees
PSBC	IT headcount at the Head Office increased to 5,440, and that figure exceeded 7,200 across the bank
BOCOM	9,041 Fintech employees, up 15.70% from the end of the previous year, accounting for 9.44% of the bank's total employees, up 1.15 percentage points
CMB	10,900 R&D personnel, accounting for 9.30% of the bank's total employees
IB	7,840 scientific and technological talents, up 0.15% from the end of the previous year, accounting for 13.51% of the bank's total employees
CITIC Bank	5,832 technical personnel, up 3.66% from the end of the previous year, accounting for 8.91% of the bank's total employees
PAB	Undisclosed
SPD Bank	Over 6,000 versatile technical personnel

Note: PAB did not disclose its Fintech personnel data.

Structural adjustment accelerated business-technology integration, reshaping digital transformation blueprint

In addition to strengthening their talent teams, banks also adjusted their technological architectures to solidify the top-level structure of Fintech development. The sector's technological competition extended beyond mere technology—it's a comprehensive contest involving strategy, talent, and management. To meet the demands of the digital economy era, banks optimized their technology investments and restructured their technological architectures.

Table 2: Examples of Banks' Technological Architecture Adjustments

Bank	Technical structure adjustment
ICBC	The technology governance framework was improved. The bank implemented supporting mechanisms, gave play to the review mechanism of the Digital Finance Committee, the Fintech Promotion and Review Committee, and the Fintech Architecture Review Committee, established planning arrangements, strengthened control at the source and boosted the level and quality of scientific decision-making on major matters.
CCB	The bank reinforced integrated technology management, served its main responsibilities and main businesses, improved the safety production guarantee system, set up network security operation teams, coordinated the Group's R&D resources, improved the R&D organization model and process, established business demand R&D centers, enhanced enterprise-level demand coordination, and established a sound information technology system.
PSBC	The bank restructured and upgraded its governance framework. It restructured its technical workforce and strengthened centralized management and cross-departmental coordination.
BOCOM	The bank deepened the reform of the digital financial system and mechanisms, completed the optimization and adjustment of the financial technology structure and functions at the head office, integrating the Digital Finance Committee from former FinTech and Product Innovation Committee and Digital Governance Management Committee (Financial Statistics Standardization) under the senior management to strengthen decision-making and organizational coordination for major digital finance initiatives.
IB	Through organizational changes, the bank has initially formed a framework for digital operations. It optimized the setting and supporting management mechanism of the Digital Transformation Committee, formed an organization structure and operation system of "one committee, three departments, one division, one institute, and one center," and strengthened the overall management and unified dispatch of science and technology.
CITIC Bank	To further speed up Fintech transformation and empower business development, the bank established CITIC Bank Digital and Intelligent (Shenzhen) Information Technology Co., Ltd, and commenced operations in early 2025.
SPD Bank	The bank strengthened top level design and organizational leadership, developed a blueprint for digital infrastructure, and formulated a construction plan guided by digital intelligence strategy and business value creation, with enterprise-level architecture as the top level design and information and innovation as the theme. It defined objectives and implementation pathways for key projects such as financial cloud, digital intelligence platform, core distributed reconstruction, and credit card distributed reconstruction.

Integration of business and technology improved management efficiency and service capabilities

Amid digital transformation, with technological innovation at their core and refined management as an important measure, banks continued to leverage digital technologies to enhance the quality and efficiency in serving the "five major tasks" of the financial sector and inject new momentum into their high-quality development. As Fintech continues to evolve, banks have made progress and breakthroughs in promoting the deep integration of digital technologies and financial services. Regarding intelligent services, operations, and risk control, banks achieved more flexible operation and management, injecting vitality into their front-office businesses as well as middle- and back-office work.

Intelligent services

Commercial banks have progressively integrated intelligence into all business lines and products. Fintech has empowered many service scenarios, such as payment & settlement, credit application, and investment & wealth management. Banks continuously innovated their financial service models, providing customers with more secure, convenient, timely, efficient, and comprehensive financial services, while improving operation efficiency.

Table 3: Cases—Fintech Empowering Intelligent Services

Bank	Intelligent service
ICBC	• ICBC optimized the intelligent service systems, including "Gino (Gong Xiao Zhi)" for customer service and "Gina (Gong Xiao Hui)" for in-house service. Customer service agents were equipped with AI assistance throughout pre-event operations, real-time support, and post-event quality inspection. The intelligent outbound calling service continued to empower business operation, leading the industry by intelligent service routing rate and intelligent outbound calling volume. The "Yuan Cheng Ban" online and offline integrated service was promoted to enable remote video-based examination for 30 common outlet services in eight categories. • Based on the "Zhike" platform, a digital hub for operating strategies was created so as to apply strategies specific to the tiers, groups, categories, and circles of customers. Six 100 million-level customer-reaching platforms were made in place, including mobile banking, intelligent outbound calling, SMS outbound dialing, WeChat official account, applet and web portal. "Zhi," "Zheng," "Cheng" AI-powered digital employees were integrated into both online and offline channels, including mobile banking, physical outlets, and cloud banking, serving customers over 1,434 million times.
CCB	• CCB innovatively launched dozens of functions such as WeChat mini program interactive zone and created interaction models like video-enabled customer service, "Smart View" functions that embedded telephone services into WeChat multimedia information interaction, and enterprise WeChat three-party group chat, enriching scenarios such as the "One-stop Offerings" supermarket shelves and digital customer service and building a new media matrix of "CCB Customer Service." In 2024, the bank provided all-channel services to 495 million customers, with the satisfaction rate of customer service hotline reaching 99.78%. The number of subscription users of WeChat official account "CCB Customer Service" exceeded 45.00 million.
ABC	• ABC streamlined the self-service processes of Internet Quick Loan, developing a new service model that is online, automated, and smart. It launched Asset Daily Record where users can obtain whole period and multi-dimensional asset data in real time. It launched Transfer Partner, making the transfer service more convenient. It developed the Pension Zone, providing tailored pension finance products and one-stop pension finance services for elderly customers as well as customers preparing for elderly life.
BOC	• BOC pressed ahead with the construction of open banking, enriched the services embedded in "BOC Corporate E-link", and successively launched financial service solutions for six scenarios, including "cloud accounting," "cloud finance," "cloud payroll," "cloud direct remittance," "cloud E-loan," and "cloud supervision," serving the digital transformation of industries. It built the "BOC Corporate e-Manager", a corporate digital service platform for human resources, finance, and operations, to support "cloud migration and intelligence empowerment" for SMEs and create the "non-financial and financial" integrated services for key scenarios, including agency payroll payment and financial cost control.

Bank	Intelligent service
PSBC	• PSBC enhanced its credit card hotline service through developing digital intelligence. It upgraded the service hall, online customer service, and digital employee service scenarios and progressively deployed intelligent robots and video-based transaction processing to establish a new smart service model. A total of 3.91 million interactions were handled through its 24/7 digital and intelligent services. • By leveraging big data models, PSBC conducted real-time online intelligent risk assessments for corporate customers applying for the "Inclusive Finance Discount." By doing so, it met the needs of MSEs for obtaining credit lines and completing bill discounting without leaving their premises. The processing time was shortened from 2-3 days to T + 0 at the fastest.
BOCOM	• BOCOM continuously promoted its "BOCOM On-cloud" brand and pursued innovation in the application of audio and video technologies. By offering screen-to-screen online services, it enabled the development of online institutions, employees, services, and products, breaking through the physical and temporal barriers of traditional banking business. The bank developed an innovative model for new banking services and improved the availability of and satisfaction offered by financial services. During the reporting period, the BOCOM On-cloud remote video outlet provided 1.98 million services, reflecting growth of 2.3 times from the previous year.
CMB	• CMB upgraded the intelligent service "Xiao Zhao" by utilizing large model technology, enabling it to evolve from a wealth management assistant with "pre-set service routine" to a "listening and responding" banking assistant. By integrating professional knowledge, data and frontline service experience, "Xiao Zhao" provides intelligent services such as asset changes, income and expenditure inquiries, and retirement planning to meet customers' needs in "deposit, loan, and remittance," and improves problem-solving ability for customers through more flexible conversational interaction method.
IB	• Leveraging mobile banking and five online platforms, IB adopted a data-driven strategy to explore intelligent and efficient online operations. During the reporting period, the number of active customers of the mobile banking was 62.7885 million, representing an increase of 11.97% over the end of the previous year. Its corporate WeChat served 9.68 million customers and handled 67.11 million remote services. IB built 150 marketing scenarios with remote digital operations, cumulatively reaching 69.3875 million customers, and generating a retail AUM increase of RMB109.830 billion.
CITIC Bank	• Relying on digital and intelligent technologies, CITIC Bank's corporate business developed the "Smart Online Banking 5.0" platform, launched the industry-leading, independently developed "Tianyuan Treasury" system (Standard Version 2.0) and the new version of the popular product "Easy Salary," and built the product service ecosystem featuring "trading + settlement," "financing + intelligence." • CITIC Bank built a customer-centric digital customer insight system for retail business, set up the retail expense management platform and "one horizontal" platform for unified operation strategies. The average monthly customer contact volume exceeded 300 million person times.
PAB	• In terms of customer management, PAB deepened the service mode of "AI + T + Offline", expanded the scenario coverage of Artificial Intelligence Generated Content (AIGC), opened up the artificial intelligence customer service, telephony, and other service channels to improve marketing service capabilities. It also deepened digital applications such as AI assistant and comprehensive customer reach operation platform to improve the timeliness of remote banking services. At the end of 2024, more than 6.30 million public customers are provided with 24/7 "accompanying" services.
SPD Bank	• SPD Bank upgraded the "SPD Flash Loan" product, the bank's first digital revolving credit line for customers. Leveraging multidimensional bid data, it enables one-click loan applications via the mobile banking app. With features such as online self-verification, real-time integration with dozens of risk data sources, and intelligent approval via anti-fraud and risk decision-making engines, it can approve loans within seconds. Customers can draw funds and make repayments as needed, further lowering the barrier to accessing high-quality financial services.

Intelligent operations and risk control

In addition to empowering front-office businesses, Fintech significantly enhanced banks' middle- and back-office operation efficiency through automated data collection and processing. This reduced manual work and shortened the data processing cycle, further enhancing data timeliness and accuracy, thereby safeguarding banks' operations and rick control.

Table 4: Achievements in Intelligent Operations and Risk Control

Bank	Intelligent operations	Intelligent risk control
ICBC	• Internal service platforms were improved. "ICBC Counter Express" launched the Intelligent Terminal 3.0, with more than 60.00 million customers scheduled banking services appointment. "Marketing Express" was upgraded. For personal customers, the wealth management, remote maintenance, customer groups, and management platforms were improved. For corporate customers, the customer maintenance management view and managed account view were developed to strengthen the hierarchical maintenance of the broadest customer base. ICBC e Office Version 6.0 was launched to realize the enterprise-level intelligent coworking model.	• Relying on digital technologies including big data and artificial intelligence, the internet finance risk management became more targeted and effective. ICBC enhanced the dynamic management of electronic banking payment limits, promoted facial recognition in risk control of corporate internet banking and corporate mobile banking, dynamically optimized the intelligent risk identification, prevention and control mechanism for online transactions.
CCB	• In 2024, CCB launched 168 Financial large model application scenarios, totaling 193 and covering about half of the bank's employees. Specifically enhanced by FLM, the credit approval is equipped with financial analysis function to shorten the time for customer financial analysis from several hours or even longer to minute-level. • CCB leveraged intelligence as the key driver to develop a new "human + AI" model. In 2024, it launched the interactive version of ChatBot, a full-featured personal AI assistant for account managers, providing strong support for retail business development and customer operation.	• It built multi-in-one graph analysis capabilities such as 100 billion-level batch graph analysis, online graph query, and streaming graph calculation, supporting multi-scenario business applications such as credit fund takeover, fund flow analysis, customer multidimensional relationship analysis, anti-gambling and anti-fraud, and enabled chain-based exploration of industrial chain and supply chain, precise marketing and customer expansion, dynamic capture of abnormal suspicious transactions and intelligent early warnings.
ABC	• ABC optimized the processes of account opening. For retail accounts, it streamlined the procedures of signing, reviewing, and inputting passwords, so that the business handling time was shortened. For corporate accounts, it integrated the application entrance for account opening, and enabled automatic display of account opening information, so that the efficiency of opening corporate accounts was improved. • ABC improved the efficiency of loan applications. It enabled smart handling with "ID card + electronic signature" for retail loans and innovated "onsite + remote" handling for rural household loans. ABC simplified operations for customer managers and customers, greatly improving operation efficiency and customer experience.	• ABC improved the new model for digital risk control, enhanced the level of intensified and intelligent risk control, explored the application of advanced technologies including big data and AI in multiple scenarios, improved the risk identification models and the early warning indicators system targeting different types of customers, and strengthened the whole chain management of "identification, early warning, verification, and disposal" of risks. It consolidated the advantage of centralized risk operations, and expanded the coverage, increased quantity, and improved quality of centralized operations such as the collection of overdue loans, post-loan follow-up visits, and disposal preparation, to reduce burden, control risks, and improve the efficiency of the credit business.
BOC	• BOC expedited the application of new technology, with AI and other new technology application scenarios increasing by over 900. • BOC continued to upgrade and optimize digital confirmation services and launched the "BOC Digital Confirmation 3.0" version, to support automatic sending and receiving of confirmation letters, automatic rule verification, automatic information capturing, and automatic document generation and stamp management. As a result, the whole service process became intelligent, automated, and unmanned, with the average response time reduced to within 15 hours and the business efficiency boosted by over 80%.	• Leveraging cutting-edge technologies such as AI and privacy computing, and based on the classification of 16 primary industries and 28 industrial clusters, BOC's "Quantum System" conducts comprehensive assessment of the enterprises in terms of technological competitiveness, funding resources and policy alignment, to first identify enterprises that stand out in terms of quality and to provide comprehensive financial services for early-stage and small-scale tech enterprises with competitive technology products and high growth potential, across industrial chains and throughout the whole life cycle.

Bank	Intelligent operations	Intelligent risk control
PSBC	• PSBC continued to empower outlet operations with intelligent technology. It accelerated the application of "PSBC Assistant," an AI-powered Q&A tool. At the same time, it continuously enriched the content of the intelligent Q&A knowledge library, strengthened the building of the expert team, and reinforced the operational guidance for counter service staff through the combination of "automated response by robot + human response by expert team." During the reporting period, the AI system provided over 800,000 automated responses and experts handled 17.5 thousand inquiries, with an average human response time of six minutes, promptly and efficiently resolving business issues for outlet employees and significantly enhancing operational service capabilities.	• In the field of retail risk control, relying on risk models to dynamically assess the risk status of existing customers, PSBC provided timely and accurate early warnings for high-risk customers, supported the building of a dynamic credit management system that includes credit line adjustments, freezing, phasing out, and risk mitigation, and resolved risks of existing customers in a timely manner. • In the field of non-retail risk control, PSBC developed the Big Data Risk Forecast Model 2.0, based on an expandable model architecture adaptable to multi-scenario, full-process applications, and used cutting-edge machine learning technologies to significantly expand the input variables, notably improving the precision of high-risk predictions and enhancing the efficiency of customer segmentation for risk management.
BOCOM	• BOCOM promoted the large-scale application of "Artificial Intelligence+," leading to the replacement of more than 1000 man-hours throughout the year, accurate identification of risk assets of more than RMB10 billion, and the voice recognition rate of inbound call center business of intelligent customer service reached 99%.	• BOCOM's digital risk control project, which applied AI technologies to build a Group-wide integrated comprehensive risk management system, was awarded the First Prize in the 2023 People's Bank of China FinTech Development Award.
CMB	• With the further popularization and application of intelligent technology in CMB's customer service, management, risk control, operation, office and other fields, CMB realized the replacement of more than 26.00 million man-hours by intelligent applications and eight million man-hours by Conch RPA+ (Robot Process Automation). • The open operation service platform "Kaiyang Portal" had completed the intelligent transformation of more than 730 operation processes and expanded its application, and the efficiency of key business processes such as RMB settlement account opening and letter of inquiry increased by 58.32% as compared with the end of the previous year.	• CMB built a comprehensive risk monitoring platform to digitally monitor risks in key business areas, drove intelligent management decisions with data, and applied the intelligent early warning function to on- and off-balance sheet businesses. During the reporting period, the online risk control platform continued to be upgraded, with new corporate loans amounting to RMB402.541 billion, a year-on-year increase of 32.61%. CMB strengthened the combination of large language models and risk management scenarios, and fully utilized AI technology to enhance the efficiency of the credit process and risk management capability.
IB	• By implementing organizational changes, IB established a preliminary architecture for its digital operation system. Based on the head office's centralized digital operation capabilities, the bank developed a middle-office digital marketing platform. Leveraging mobile banking and five online platforms, IB adopted a data-driven strategy to explore a remote operations model, achieving intelligent and efficient online operations.	• IB upgraded its digital risk control system, enabling full process business processing from due diligence to special asset operation, significantly improving employee efficiency and risk management quality.

Bank	Intelligent operations	Intelligent risk control
CITIC Bank	• CITIC Bank focused on improving retail customer experience, reducing workload of frontline corporate business, marketing of financial market products and other areas, implemented the digital transformation program named "Hundred Rivers Initiative," re-engineered the workflow of the Mobile Processing Platform (MPP) on mobile business platform, and developed the innovative program of "Thousand Enterprises, Thousand Faces" smart marketing reports. The overall efficiency of the first batch of key business procedures increased by more than 100%. • CITIC Bank vigorously forged AI marketing channels, created the "Benefit Marketing" platform for business opportunities, and promoted digital marketing tools such as "Inclusive AI Business Manager," reducing manual operation and boosting service efficiency.	• CITIC Bank established and improved the intelligent risk control system characterized by "promoting robust development and effective risk control." The bank dynamically refined the risk compliance management strategy, and improved the institutional system for risk compliance that consists of more than 60 policies, to strengthen credit policy guidance. It upgraded the intelligent risk control platform, and continuously enhanced post-lending first inspection, automatic regular inspection and integrated post-lending and early warning capabilities. It maintained risk tolerance and refined the rules for exempting those who fulfilled duties from accountability. It improved the loan renewal policy and stepped up efforts in loan renewal in the principle of "granting renewed loans wherever relevant criteria is met."
PAB	• In terms of digital finance, PAB upgraded the "Cai Zhi Tong" platform to realize online reimbursement process, improving the efficiency of financial functions. The automation rate for the whole standard expense process reached approximately 90%, resulting in a carbon emission reduction of over 967 tons. • In terms of customer services, at the end of 2024, PAB used the Virtual Digital Human to increase the operation audit automation rate to 55%, an increase of 10 percentage points over the end of prior year. In terms of business delivery, through intelligent character recognition (ICR), cross-system direct connection and other digital means, PAB promoted the automation of operation, and the digital intelligence rate of centralized operation centers increased to 92.5% at the end of 2024.	• PAB promoted the construction of digital and intelligent integration of risk management system, and comprehensively improved the digital and intelligent capabilities of credit risk strategy analysis, strategy verification, strategy monitoring, and other stages by using big data, machine learning, and other technologies. • In terms of intelligent audit, relying on the "Ping An Smart Eye," PAB built a scenario-based risk monitoring system, and built a "Hui Xiao Miao" audit model in an innovative manner, enabling professional Q&As, problem diagnosis and report writing, improving the quality and efficiency of audit supervision and discipline inspection and supervision.
SPD Bank	• The intelligent trade background review agent, "Smart Bills," enabled high-precision analysis and comparison of invoices and contracts, facilitating the automation of the bill trade background review process. In pilot scenarios, the digital and intelligent AI application for inclusive finance, "Intelligent Generation of Credit Due Diligence Reports for Small and Micro Enterprises," saved an average of 0.25 person-days per report and improved the due diligence efficiency for inclusive customers by at least 50%.	• SPD Bank enriched its digital intelligent monitoring system for retail credit businesses, establishing full process risk monitoring and management. By analyzing characteristics of high-risk customer groups and integrating these insights with regional channels, it developed differentiated control strategies, thereby improving risk control accuracy.

Opportunities and challenges for Fintech

As commercial banks increasingly adopt technologies like AI, big data, and cloud computing, they have achieved significant improvements in operational efficiency, customer service quality, and innovation capabilities. Fintech development will focus more on the deep integration of technology and business, demonstrating broad application potential in areas such as business value management, integrated R&D and operation, and generative large model.

Technology is a double-edged sword. AI is rapidly evolving, presenting significant opportunities alongside new challenges that demand joint efforts from the financial sector and society. As a data- and technology-intensive industry, the financial sector has been at the forefront of embracing technological innovation since the information revolution, with each major advancement profoundly impacting the sector. Today, it must continue to lead among industries in the transition toward digitization and intelligence.

1. Data-wise: Digitization is a prerequisite for intelligence, and banks should lay a robust foundation for digital transformation, including data governance, data standardization compliance, and system construction. Meanwhile, AI innovation demands significant volumes of high-value external public data, necessitating reforms in public data management mechanisms to support AI advancement.

2. Technology-wise: AI inherently presents issues such as model hallucinations, leading to low transparency and limited interpretability. This technology provides criminals with a low-cost tool to rapidly generate adversarial samples and attack financial institutions' traditional risk control systems. Consequently, banking financial institutions should establish a red-blue confrontation mechanism, and strengthen collaboration with relevant market entities to effectively uphold financial security.

3. System-wise: AI requires timely iteration and optimization based on user feedback gathered from actual business scenarios. Therefore, banks should implement institutional reforms to effectively integrate R&D and operation.

4. Market-wise: The high aggregation of data information and the extensive application of large models may intensify the homogenization of financial decision-making and behavior. Consequently, banks should organically combine unique scenarios, private data, and large model technologies to gain a distinctive competitive edge.

5. Society-wise: As AI replaces a significant portion of the workforce, banks should rethink their human resource strategies and foster a culture that encourages innovation and tolerates failure, so that employees can keep pace with technological advancements.

Facing both opportunities and challenges, banks should continuously explore the integration of technology and business and strike a balance between risk management and innovative development. In doing so, Fintech can provide better financial services for customers, thus facilitating high-quality development throughout the banking sector.

Authors

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

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

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

July Dai
Manager, Audit & Assurance FSI
Deloitte China
Tel: +86 21 2312 7274
Email: juldai@deloittecn.com.cn

Data collection and collation: Leah Han, Zora Fan

Hot topics

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4.1 Technological singularity to resilient growth: GenAI in banking during the rise of DeepSeek: "different paths," "same destination"

Zhongbin You
Deloitte Consulting FSI
Integrated Solutions Leader
Deloitte China AI Institute
Co-Managing Partner
+86 21 2316 6172
zhyou@deloittecn.com.cn

Bingrun Feng
Senior Manager,
Deloitte China Consulting
+86 21 2312 7252
binfeng@deloittecn.com.cn

Cheney Lu
Senior Consultant,
Deloitte China Consulting
+86 10 8512 5492
chenelu@deloittecn.com.cn

Technological singularity driving innovation: GenAI exploration and revolution

When DeepSeek[1] topped the charts in both Chinese and American app stores and dominated the hot searches on Weibo on 27 January 2025, everyone exclaimed at the unexpected rise of this Chinese AI rising star. But few people were aware that this technological transformation kicked off as early as 2023.

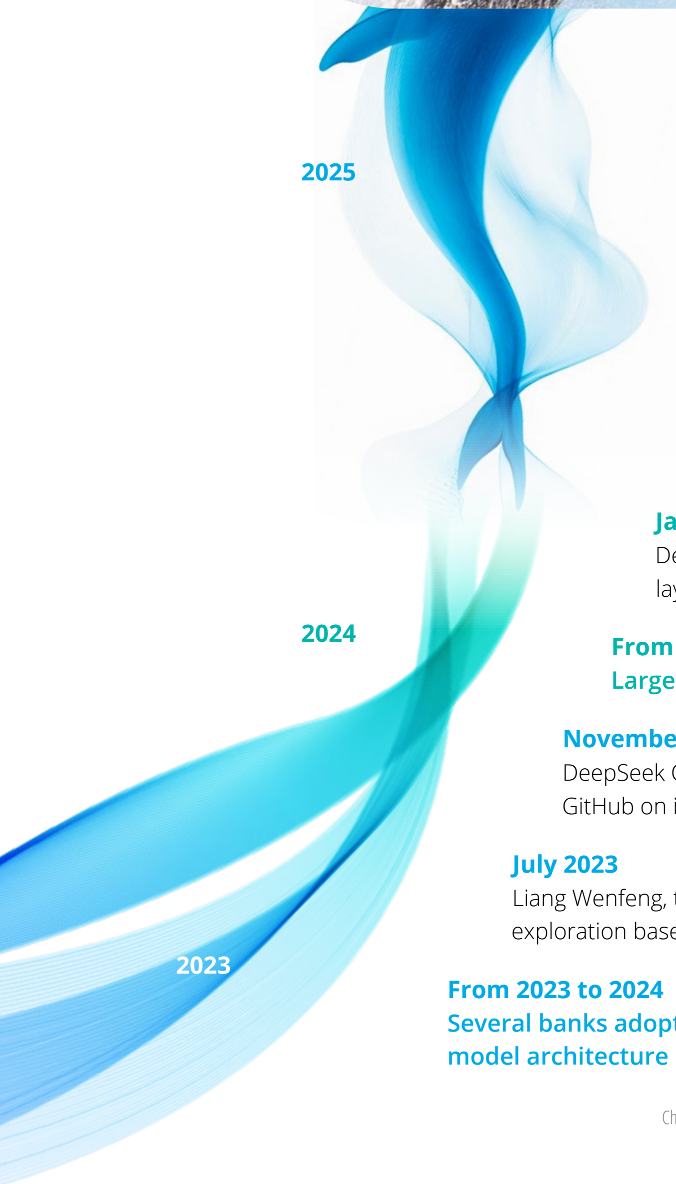
DeepSeek was founded in July 2023. In November of the same year, its first code generation large model built on engineering optimization—DeepSeek Coder—set a record for the single-day increase in GitHub (an open source community) stars. With merely 10 billion parameters, it rivaled GPT-3.5 in code generation quality. This achievement validated the technical route of "low cost, high performance." Entering 2024, DeepSeek continued to delve into technological innovation. It released DeepSeek LLM, a 67-billion-parameter general language model, at the beginning of the year, laying the foundation for its subsequent development of the MoE (Mixture of Experts) architecture. DeepSeek-V3, with 671 billion parameters, was unveiled in December. This model was trained on 14.8 trillion tokens and cost merely USD5.57 million, yet it surpassed GPT-4 Turbo in multiple capabilities, setting a new benchmark for open-source large models. Building on extensive technological accumulation and development experience, the well-known DeepSeek-R1 was released in January 2025. This reasoning model made great strides in performance and effectiveness.

[1] "DeepSeek" mentioned in this report generally refers to the series of large models and related applications released by the company DeepSeek

While technology companies like DeepSeek are endeavoring to achieve technological iterations and breakthroughs through an engineering approach, the domestic banking sector is also actively exploring the "DeepSeek technology route," such as applying mixed architectures, and knowledge distillation. Some banks even piloted DeepSeek R1 before its official launch. For example, ICBC applied the MoE architecture to its development of a large model system, "ICBC Zhiyong," over the 2023-2024 period; it can activate and utilize the capabilities of large, medium and small models through a model regulation engine. Concurrently, other banks including CCB and BOB adopted the "large model + small model" pattern to develop their large model architecture. Entering 2024, large banks, by drawing on technology application cases, all got down to large model fine-tuning based on open-source models and abundant self-owned data, while they were exploring the application of knowledge distillation in the financial sector. Even before DeepSeek surged in popularity, i.e. December 2024, BOB and other banks had attempted to collaborate with hardware manufacturers to explore the application of DeepSeek early versions in the financial sector. After the release of DeepSeek R1, they proceeded with further deployment and optimization based on domestically innovated servers and engines.

The "limited computing power + algorithm innovation" new phase

will drive diversification and structural reshaping in China's banking sector and even the global AI ecosystem



January 2025
DeepSeek-R1 made great strides in performance and reasoning effectiveness

Before the release of DeepSeek, i.e. December 2024
BOB collaborated with Huawei in exploring the application of DeepSeek early versions in the financial sector

December 2024
DeepSeek-V3, with 671 billion parameters, was unveiled, setting a new benchmark for open-source large models

August 2024
WeBank, headquartered in Qianhai, Shenzhen, applied for patents related to the application of knowledge distillation in the financial sector

January 2024
DeepSeek LLM, a 67-billion-parameter general language model, was released, laying the foundation for the subsequent MoE development

From 2024 onwards
Large banks all began to conduct fine-tuning based on open-source models

November 2023
DeepSeek Coder, DeepSeek's first code generation large model, broke the record on GitHub on its first day of opening source

July 2023
Liang Wenfeng, the founder of High-Flyer Quant, founded DeepSeek, embarking on disruptive exploration based on "engineering optimization"

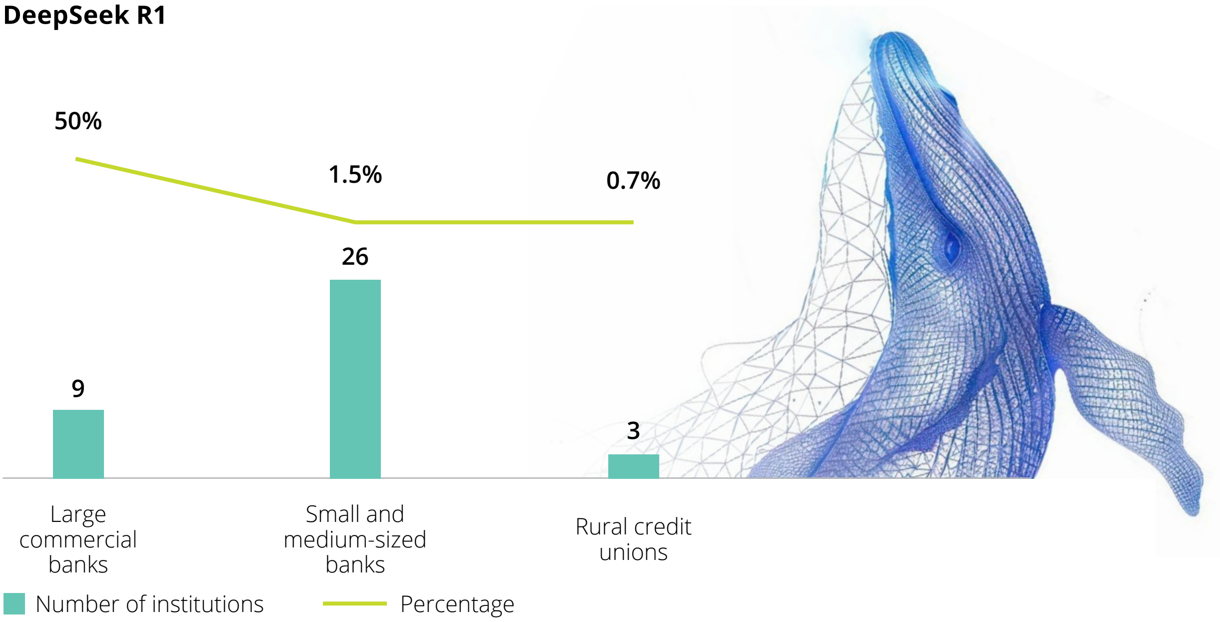
From 2023 to 2024
Several banks adopted the "large model + small model" pattern to develop their large model architecture

Resilient growth in demand: deployment of GenAI in the banking sector

DeepSeek is reshaping the deployment of GenAI in the banking sector. Large banks[2], small and medium-sized banks[3], and rural credit unions all are vigorously exploring lightweight scenarios and promoting in-depth application in vertical fields. From a holistic perspective, however, the deployment of GenAI in banking is far from satisfactory completion.

The release of DeepSeek R1 further catalyzes the "democratization" of GenAI in China's banking sector. Within just 60 days after the release, nearly 40 banks announced the completion of the deployment of DeepSeek R1 and other related models. Small and medium-sized banks and rural credit unions acted more quickly, representing 76% (29) of the total. Meanwhile, DeepSeek's cost efficiency and open source features enable banks to fine-tune large models at a low cost and proceed with development and optimization tailored for "long tail scenarios." GenAI bidding information indicates that after the release of DeepSeek R1, GenAI deployment is demanded for multi-level and diversified purposes. Large banks, with resource superiority, apply DeepSeek to more specific scenarios and continuously achieve technological integration and breakthroughs in vertical scenarios. For instance, CITIC Bank carried out an AI-based enterprise-level data dictionary development project, exploring the application of GenAI in data governance. Small and medium-sized banks and rural credit unions mainly focus on practical application scenarios. For example, Bank of Chengdu followed state-owned banks to optimize its intelligent credit loan process, elevating its rate of identifying credit loan documents to above 85% and shortening its report generation time from several days to within one hour.

Figure 1: DeepSeek Deployment in Chinese Banks within 60 Days after the Release of DeepSeek R1



[2] Large banks refer to the six state-owned banks (including PSBC) and 13 national joint-stock commercial banks
[3] Small and medium-sized banks include city commercial banks, rural commercial banks, and privately-owned banks

From a holistic perspective, despite increased demand for GenAI deployment among small and medium-sized banks and rural credit unions, more than 98% of these institutions have yet to introduce DeepSeek for application development and innovative exploration. The penetration at the grassroots level is still in the initial stage. The widespread application lag not only reveals possible technical compatibility issues, but also exposes the bottlenecks in transforming new technologies from proof of concept to large-scale application. Banking institutions, especially small and medium-sized banks and rural credit unions, still have a growing demand for GenAI deployment, with compatibility issues remaining unresolved.

Endowment-based different paths: differentiated deployment of GenAI in Banking

The key dimensions that define GenAI value transformation are scenario, knowledge and platform[4]. Considering the difference in resource endowment among large commercial banks, small and medium-sized banks and rural credit unions, the deployment of GenAI in banking is bound to show differentiation.

Dimension 1—scenario: Scenario selection is backed by precise alignment with business requirements, i.e. the concrete practice or demands for GenAI to address specific issues or improve effectiveness in actual business.

Dimension 2—knowledge: Knowledge plays a pivotal role in supporting the training and reasoning of large models, minimizing hallucinations in large models, and enhancing application effect.

Dimension 3—platform: Platform serves as a vehicle for implementing GenAI technology. It integrates large model life-cycle management capabilities and security compliance frameworks, facilitating technology value transformation.

1 Large banks: knowledge-centered

By leveraging capital and technical advantages, large banks have built technical architectures featuring "basic model + capability mid-platform" in the early stage of GenAI development. They have also integrated large models with traditional systems, tapping into digital applications covering all financial business domains. Based on this, large banks have accomplished DeepSeek deployment and further application exploration in a short time. However, although data mid-platforms have actualized the physical integration of data across departments and institutions, it is still difficult to realize the organic integration of knowledge. Resultingly, large banks are often constrained by "common issues facing large enterprises," such as organizational structure barriers. Massive "expert knowledge" remains in department-level document libraries or business personnel's minds. The situation where "data-rich mines" and "knowledge wastelands" coexist leads to a reliance on "original data" input during large model training and reasoning. This has become the core contradiction point currently restricting the large-scale application of GenAI in large commercial banks.

[4] Namely, large model integrated management platform, encompassing platform architecture, computational foundation, large model and security compliance frameworks

The knowledge system is regarded as a value amplifier for GenAI applications. Large banks need to establish a "business-technology" synergy mechanism under the guidance of an all-encompassing knowledge strategy, thus facilitating the construction of an enterprise-level knowledge system. To be specific, they should achieve deep coupling between business scenarios and knowledge management through top-level design, unearth the "true knowledge" hidden beneath the data and processes along the business chain, and organically integrate internal and external knowledge with scenario-specific knowledge based on a unified knowledge framework. In daily operations, knowledge administrators need to coordinate with scenario users and administrators to continuously update, correct and maintain the knowledge base in order to achieve a positive cycle of "knowledge enrichment and application improvement." Through knowledge reinforcement, rather than merely relying on data scale or technical input, large-scale commercial banks can build barriers to competition that act as their moat. This will further enable them to shift from simple technology application to ecosystem empowerment, thus setting the course for the banking sector to reshape value composition in the era of digital finance through "independent innovation + open cooperation."

2 Small and medium-sized banks: scenario-oriented

Often entailing tens of millions of yuan worth of investment in computing power and a large team of scientists, the deployment and application of GenAI seem to have become an "exclusive resource" for large banks only. Fortunately, technological innovations brought by DeepSeek can significantly lower the threshold for further digital transformation among small and medium-sized financial institutions. From the perspective of knowledge, small and medium-sized banks tend to focus on regional industries, and their business and data have gradually formed local advantages. Nevertheless, narrowing digital divide and location-specific knowledge advantages have not enabled them to clear obstacles to large-scale GenAI application. They are confronted with dual constraints of "resources and cognition." Their business divisions often lack trust in the output of AI, especially GenAI, due to inadequate experience in AI application and shortages of digital talent. Moreover, the management are inclined to play catch-up and blindly purchase computing platforms without getting the organization and talent prepared.

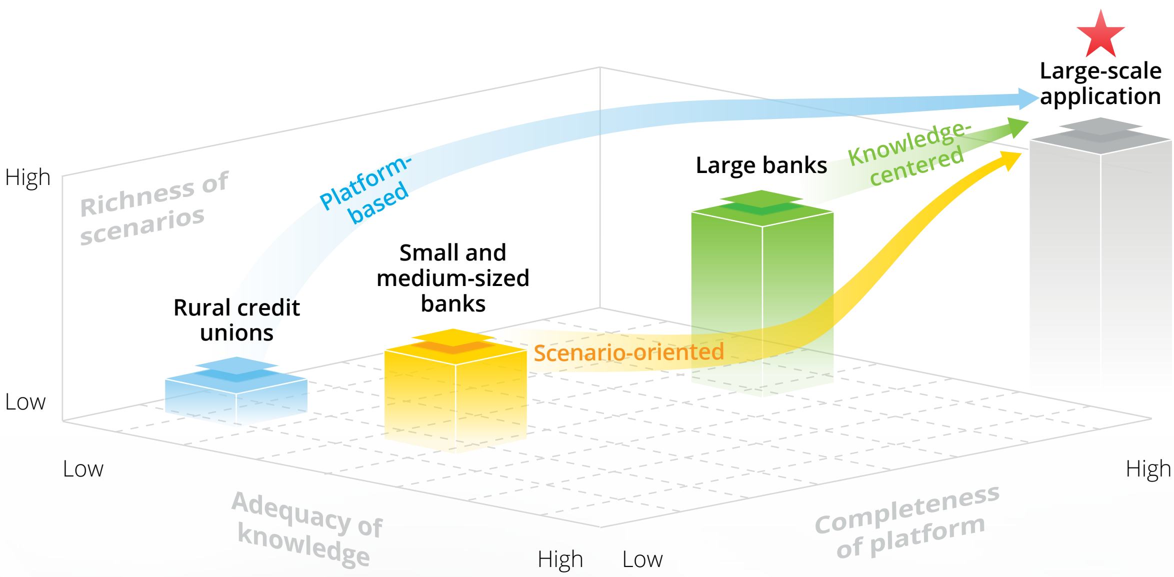
When exploring GenAI application scenarios, small and medium-sized banks should avert overinvestment resulting from blindly purchasing large models in the initial stage, or overexpectation caused by unrealistic fantasies about the application effects of GenAI. They need to explore application scenarios from a small entry point, at the minimum up-front cost. Through pilot work, they can validate the value of these scenarios and their alignment with business requirements, thus strengthening confidence among business divisions and the leadership. On this basis, they can further delve into local application innovation through lightweight technologies by drawing on large banks' mature application scenarios, thereby forming a virtuous circle. This practice approach features scenario value orientation and location-specific characteristics. It not only meets the demands for large-scale GenAI application among small and medium-sized banks under the resource constraint, but also provides targeted financial technology support for regional economic development.

3 Rural credit unions: platform-based

Rural credit unions serve as a vital pillar of county-level finance. Their organizational hierarchy and autonomy at the grassroots level cause them to vary widely in GenAI deployment. From the perspective of knowledge, their data assets are severely fragmented and generally are manual entries, leading to problems such as scatter storage and uneven quality. Therefore, it is difficult for them to build a complete enterprise-level knowledge system in a short term. Meanwhile, grassroots-level rural credit unions have a relatively high degree of discretion in system selection and technical investment. This leads to severe system decentralization and difficulties in realizing large-scale GenAI application through traditional technical approaches.

At the technology deployment level, rural credit unions may choose to build a distributed technology system with a hybrid architecture. This move can help strike a balance between "unity and flexibility," and further contributes to developing specific applications and a supporting knowledge system. More precisely, they can build a unified provincial-level computing platform and allow grassroots-level institutions to use their discretion in connecting to the unified platform. By providing out-of-the-box "lightweight + domain-adapted" pre-trained models, overlapping investment will be avoided. In terms of functional adaptation, the headquarters may open the permission for large model training to support tech-savvy and capable grassroots institutions to customize fine-tuning and adapt business processes based on the characteristics of regional industries. This pattern integrates "unified technical foundation + differentiated innovation path." It ensures security in adopting GenAI by each institution, while endowing grassroots-level institutions with market-based innovation capabilities, providing a new paradigm for the digital transformation of rural finance.

Figure 2: Different Paths for Large Banks, Small and Medium-sized Banks, and Rural Credit Unions



Different paths leading to the same destination: pursuit of convergent large-scale application

Large banks, small and medium-sized banks, and rural credit unions all should pursue resource input sustainability and convergence on their respective path to large-scale GenAI application.

In the context of innovation driven by GenAI technological singularity and explosive growth in demand, although various banks have chosen a path that suits their own resource endowments, they still face the problem of "how to achieve large-scale application and generate benefits". If banks adopt a "one-size-fits-all" strategy for various application demands, it will inevitably lead to a decline in the effect of specific scenarios; but if they implement highly customized solutions, they will not only incur a financial black hole with hundredfold investment but also get trapped in vendor lock-in and technology migration costs. This is exactly the plight of the banking sector on its path to large-scale GenAI application: How to distill truly useful things from hundreds or even thousands of complex demands and ensure that investment does not turn into repetitive expenses?

The key to achieving sustainable convergence is to find contents for shared use, enhance internal capabilities, and realize convergent large-scale application. To this end, large banks, small and medium-sized banks, and rural credit unions all need to establish a three-dimensional evaluation system covering the return on investment (ROI), the product reuse rate and the hardware margin ratio. This system will be used to assess the ROI in ongoing GenAI deployment to ensure that each investment can continuously generate the "compound interest effect" in the future.

$$\text{Return on investment} = \frac{\text{Efficiency value + Experience value + Competency value}}{\text{One-off investment expenditure + Operational expenditure}}$$

Value engineering
Conduct in-depth value analysis and continuous operational optimization for each application scenario

$$\text{Product reuse rate} = \frac{\text{Number of GenAI application scenarios}}{\text{Number of GenAI products (Basic products designed for GenAI scenarios)}}$$

Modular design
Adopt modular design when exploring application scenarios and pay attention to the reusability across scenarios

$$\text{Hardware margin ratio} = \frac{\text{Application scenario increase rate}}{\text{Hardware resource growth rate (Especially GPU computing)}}$$

Operation and governance
Regarding effective resource planning, dynamically balance the increase in application scenarios with the demand for computing resources

4.2 Improving quality, reducing costs and increasing efficiency—Commercial banks' post-pandemic strategies

Jane Luan
Northern Region FSI Leader
Deloitte China
+86 10 8512 5831
yluan@deloittecn.com.cn

Youyou Hu
Director, EAD FSI
Deloitte Consulting
+86 10 8520 7288
yohu@deloittecn.com.cn

Challenges and opportunities in the post-pandemic era

Economic growth continues to slow in the post-pandemic era. In this context, commercial banks are grappling with increasing challenges, both from the market and from technologies. Weak consumer confidence, consumption downgrade and enterprises' lack of growth momentum have intensified competition among financial institutions, leading to narrowed profit margins and subdued income growth. Additionally, the emergence of cutting-edge technologies, such as the well-known debut of DeepSeek in early 2025, has sparked excitement and concern among business leaders. Although these technologies are expected to reduce costs and improve efficiency, they have also raised concerns about over-reliance on technology and potential information traps.

While AI is good at performing tasks based on established patterns, true innovation and effective cost reduction strategies require human judgment and decision-making. How should banks make wise choices by leveraging AI in the era of information overload? According to DeepSeek, AI can bring three major advantages:

1. Operational efficiency: Automate repetitive tasks through AI and big data analysis and minimize human errors to the greatest extent.

2. Risk management: Proactively identify potential risks and provide predictive insights by leveraging real-time monitoring and intelligent algorithms.

3. Client experience: Create accurate client profiles through in-depth data analysis and provide personalized financial services.

Michael E. Porter, the world's leading expert on competitive strategy, once famously said, "The essence of strategy is choosing what not to do." For banks, they need to adopt a people-oriented approach to optimize marketing, branch operations, personnel expenditures, and hardware and IT investments to address the issue of persistently high costs. The success of transformation depends on experienced strategic decision-makers, especially in driving organizational transformation, including adjusting the salary structure, stabilizing employee morale and reallocating marketing resources. Their ability to strike a balance between strategic wisdom and implementation skills plays a decisive role.

The rules for improving quality, reducing costs and increasing efficiency

Identify opportunities to reduce costs

It is imperative to rise to the current challenges. The Deloitte analysis highlights commercial banks' six major cost components (Figure 1), each of which has huge potential for optimization:

1. **Manpower resource cost:** This type of cost usually accounts for about **30%** of the total cost of a commercial bank;

2. **Marketing expenses:** The aggregated expenses of corporate and retail lines usually account for about **30%** of a bank's total cost;

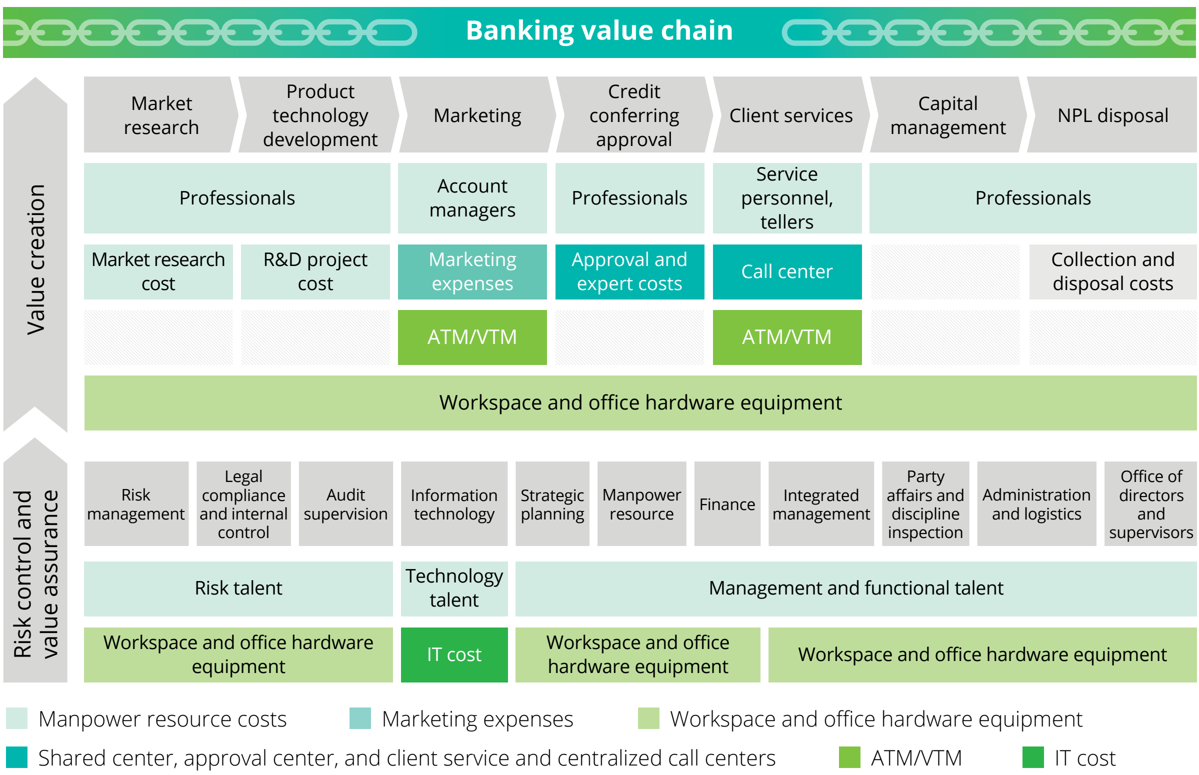
3. **ATM/VTM (virtual teller machine):** This type of cost accounts for approximately **3%-5%** of the total cost;

4. **The shared center, the approval center, and the client service and centralized call centers:** Their combined costs usually account for about **7%-10%** of the total cost, excluding staff salaries;

5. **Workspace and office hardware equipment:** This type of cost accounts for approximately **1%-3%**;

6. **IT cost:** The IT investment of a domestic commercial bank valued at over one trillion yuan can reach **10%** of its total cost, including hardware accounting for over **40%** and software accounting for **15%**.

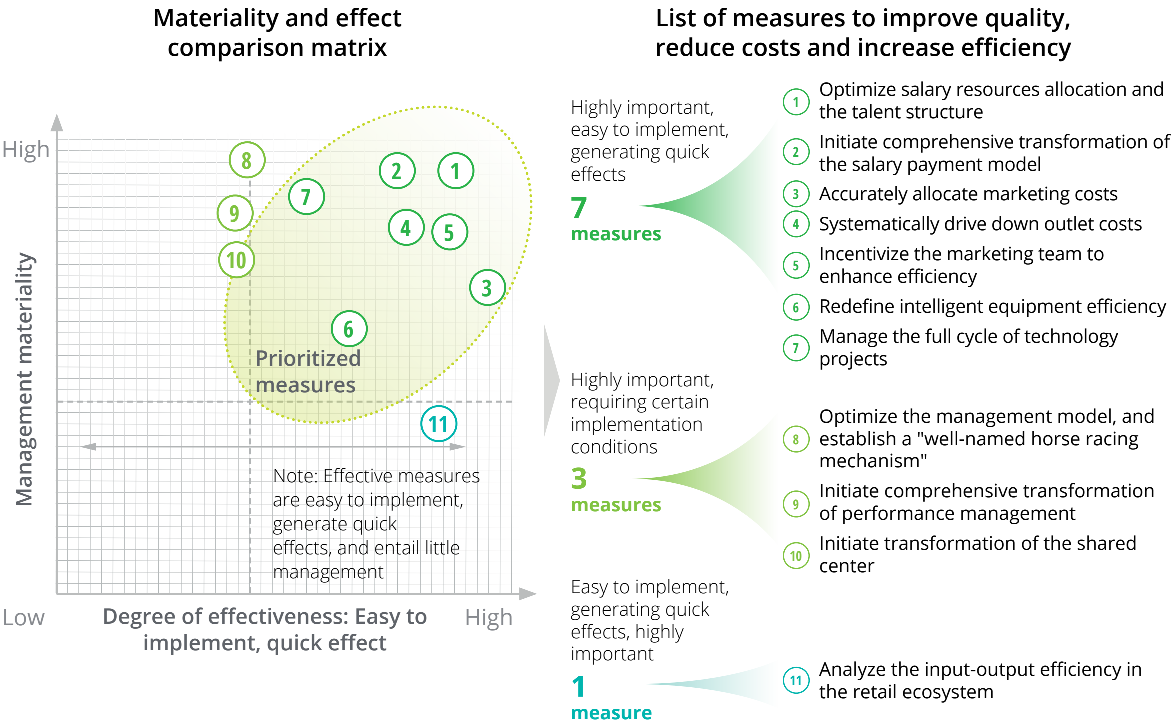
Figure 1: Commercial Banks' Cost Components



Strategically reduce costs

Most enterprises, by considering management materiality and implementation effects, prioritize the implementation of quality improvement and cost reduction measures that are of high significance and generate effects in a short term. Based on practical cases in the past two years, Deloitte concluded that prioritizing the implementation of 11 core measures (hereinafter referred to as the "11 tricks") can help banks enhance their cost-output ratio.

Figure 2: List of Measures to Improve Quality, Reduce Costs and Increase Efficiency



Optimization strategies and implementation paths

Trick 1 Optimize salary resources allocation and the talent structure

The head office of a commercial bank faces the problem of mismatching or irrelevance between the bank's overall performance and each department's actual performance. Most notably, its middle and back offices are hardly affected by the bank's overall performance. Consequently, front-office staff all want to transfer to middle and back offices as their job ensures stable income, leading to poor morale across the bank. Meanwhile, its branches pay more attention to competitions than EVA (economic value added) assessment. The root cause behind all these problems is unreasonable standards for performance resources allocation.

Deloitte recommendations for optimization

1. **Adjust the bonus package mechanism by department category:** The head office's front, middle and back offices and business division shall follow different bonus package assessment principles. The front office's performance should be directly linked to the department's overall bonus package; middle and back offices are entitled to a floating bonus package; the business division is linearly correlated with the department's total bonus.

2. **Motivate departments to control manpower budget independently:** After the head office determines the initial staffing size of each department, each department's performance bonus package will not change with the increase or decrease in staff. Meanwhile, department heads shall have a say in staffing and staff appraisal and are encouraged to equip a capable, high-caliber, elite team, without expanding the team for administrative purposes. These efforts will improve workforce capabilities and help build a shrewd and powerful head office.

3. **Optimize branches' performance resources planning and lean towards EVA value enhancement:** It is necessary to analyze the effectiveness of competitions, special-purpose bonus and other incentives and make corresponding adjustments according to branches' actual business structures. Incentive resources shall lean towards EVA assessment to reduce short-term activities and optimize performance, product and client management.

Trick 2 Initiate comprehensive transformation of the salary payment model

A leading city commercial bank was once troubled by the fact that the difference in job value cannot be reflected due to its consistent salary standards for different positions. Moreover, there was insufficient connection between the performance of branches' leadership and their incentives, leading to a lack of work motivation among this core group. The original daily performance assessment was superficial and year-end assessment scores had little impact on the actual salary received by the management, although core business performance indicators carried considerable weight. As a result, branches varied widely in goal completion but marginally in performance reward, and thus the management lacked motivation.

Deloitte recommendations for optimization

1. **Reflect job value and precisely allocate salary resources.** Weigh and rate the value of the head office's job positions from the dimensions of management and professionalism: Factors such as department positioning and the complexity of job duties shall be considered; the same goes for branches' leadership, with full consideration given to factors such as the management complexity, contribution, amount, and value of the office/field work within their respective remit. All job classification results will be applied to the performance pay base, facilitating more precise allocation of salary resources. Furthermore, it is necessary to develop channels and supporting mechanisms for employees to apply for high-value positions, which can significantly enhance their subjective initiative in performing their duties.

2. **Conduct differentiated assessment to ensure the connection between performance and bonuses.** It is necessary to implement a mechanism that closely links the performance bonus of the branch president with business growth and transformation-driven indicators. Regarding differentiated assessment indicators, based on the established mechanism of making up for the deficit with surplus, the branch president's assessment results should be linearly linked to their year-end bonus. This approach can fully reflect that every bit of growth has value, and thus managers can truly comprehend the concept "the more you do, the more you can earn," thereby effectively increasing the input-output ratio of salary resources.

Figure 3: Example of Setting Differentiated Assessment Indicators for Branch Leadership

Branch president

- Overall profit assessment before allocating provisions
- Profit assessment before allocating provisions for retail banking
- Average daily increase in cumulative deposits
- Increase in inclusive loans
- Reduction in non-standard finance products
- Non-performing loan ratio
- Cash collection for non-performing loans
- Increase in the number of active clients
- Increase in the number of target clients in retail banking
- ... ...

Vice president A

- Profit assessment before allocating provisions for retail banking
- Net income from retail intermediary business
- Average daily increase in cumulative domestic and foreign currency deposits
- Non-performing loan ratio
- Increase in the number of target clients in retail banking
- Increase in inclusive personal loans
- Increase in the number of new credit card accounts
- The overall average daily RMB loan-to-deposit ratio
- ... ...

Vice president B

- Profit assessment before allocating provisions for the financial market
- Revenue from custody business
- The number of effectively managed accounts
- The number of accounts with effective interbank credit extension
- The number of accounts with effective interbank liabilities
- Increase in the number of accounts with interbank credit extension
- The overall average daily RMB loan-to-deposit ratio
- ... ...

Trick 3 Accurately allocate marketing costs

The key to accurate allocation lies in "taking client needs as the start point and data verification as the end point." Dynamic optimization of resources allocation can turn marketing costs into sustainable growth in client value. A joint-stock bank faces the problem of scattered expense input and has difficulty in quantifying the effect in retail client marketing. The traditional marketing model relies on client manager incentives and offline activities, resulting in high costs but low conversion rates. For example, movie ticket users that various banks are competing for, after data analysis, have been found to largely overlap with the bank's meal voucher users. That is to say, it is difficult to quantify whether the input of corresponding marketing resources has been exploited by customers or has actually increased customer stickiness and simultaneously driven an increase in revenue and profit. Additionally, without a data monitoring mechanism, it is impossible to respond quickly to evolving customer preferences, causing marketing campaigns to fall into the trap of "casting a wide net."

Deloitte recommendations for optimization

1. **Data-driven marketing input optimization:** Deloitte built a data model for different marketing channels (offline activities, social media, etc.) targeting different customer groups and comprehensively analyzed customer lifetime value, including monthly active users (MAU), non-financial services purchased by customers, bank financial products purchased by customers, asset under management (AUM), the operating income brought by customers, and the actual profits generated from customers. Deloitte recommends that the bank adopt a data-driven approach to generate data analysis results daily/monthly based on the actual situation, and then identify inefficient marketing scenarios or delve into the correlation among marketing scenarios, channels and products, thus achieving the goal of improving quality, reducing costs and increasing efficiency.

Trick 4 Systematically drive down outlet costs

A large state-owned bank has over ten thousand outlets and their management is highly complex. There are only a few people in the head office's finance department, who are in charge of the entire bank's budgeting work. To reduce total score competition, create value through a data-driven approach and reflect refined cost management, the bank initiated zero-based budgeting. This move greatly enhanced management efficiency and reduced management costs.

Deloitte recommendations for optimization

1. **Zero-based budgeting remodeling:** Eliminate historical data dependence, build a "zero-based" budget model, sort out all the expense items, and analyze the relation between business activities and expenses incurred: Shift the majority of expenses to the management mode that is driven by business elements and linked to business indicators, including but not limited to personnel cost, venue cost, machinery cost, IT cost, business expansion expenses, marketing expenses, and office expenses; exclude only a few expenses that are not closely related to the business or are difficult to forecast.

2. **Systematic management:** Develop a comprehensive budget management system, sort out the existing contracts for house leasing, vehicles, outsourcing, IT equipment and so on, and input the relevant information into the system. The comprehensive budget management system can automatically capture data such as outlet house leasing contracts and equipment purchasing lists, which further serves as the basis for budgeting, thus showcasing transparent resources. The bank's branches only need to prepare budgets for new business in accordance with the business development plan, and new business expenses are linked to the increase in business volume, operating income and EVA, thereby greatly reducing total score competition.

3. **Dynamic cost benchmarking:** Deloitte recommend that each year the bank use the average expense amount of the previous year as a benchmark to reduce costs and motivate lagging branches to learn from advanced branches, thereby reducing fixed costs and enhancing management efficiency.

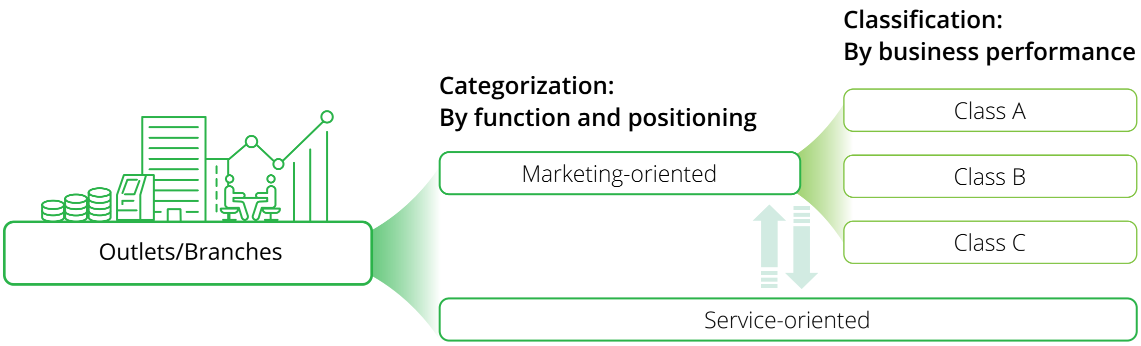
Trick 5 Incentivize the marketing team to enhance efficiency

A reasonable marketing personnel structure and an incentive mechanism play a key role in the efficient development of commercial banks. Deloitte provided talent team analysis services for a listed city commercial bank and discovered that some of its branches had a "top-heavy" personnel structure. While management personnel accounted for as high as 35%, front-line marketing staff were in shortage, causing EVA per capita to be far below the bank's average.

Deloitte recommendations for optimization

1. **Branch-specific hierarchical structure:** Deloitte categorized the bank's branches into marketing-oriented and service-oriented ones by function and positioning, and further classified marketing-oriented branches based on economic profits, per capita performance, deposits, loans, and other performance and risk control indicators. The categorization and classification results were used as the standards for post setting and staffing. For example, Class A marketing-oriented branches can be staffed with two deputies and dedicated account managers; Class C marketing-oriented branches can be staffed with one assistant at most and account managers need to hold other posts concurrently.

Figure 4: Categorized and Classified Management of Branches/ Outlets (Example)



2. **Branch staff efficiency management:** Set up corporate, small and micro business, and consumer account managers based on local human resources (HR) efficiency indicators, including per capita deposit and loan scale, the number of managed accounts, and loans granted.

3. **Team motivation:** Motivate the team to surpass the local HR efficiency, set up an institutional efficiency enhancement award in addition to regular profit performance awards, and thus encourage each branch to improve performance without increasing staff on the premise of holding the bottom line; set up an excess profit award for specific teams to spur marketing staff's performance improvement, thus achieving the goal of motivating the team to increase efficiency.

Trick 6 Redefine intelligent equipment efficiency

In the business system of commercial banks, physical outlets and intelligent devices are the key touchpoints for serving clients. Deloitte served a joint-stock bank and detected obvious defects in its equipment layout and operational status: ATMs at certain outlets cost as high as RMB150 thousand for yearly maintenance, but their average daily transactions were less than 20, indicating serious resource waste.

Deloitte recommendations for optimization

1. **Equipment efficiency portrait:** Deloitte established a "cost-efficiency" two-dimensional analysis model, incorporating daily transaction volume, single machine maintenance cost, service life and other core indicators.

2. **Dynamic adjustment strategy:** Based on the actual input-output ratio of each intelligent device in each location, optimize the layout strategy, phase out undercapacities, save financial resources, and thus create greater value.

Trick 7 Manage the full cycle of technology projects

With increasing investment in IT projects, how to effectively manage these investments and achieve the expected value has been an ongoing challenge for financial institutions. A top 500 financial holding group was faced with significant challenges in technology investment during its digital transformation. The group invests billions of yuan in the IT field every year, covering multiple sectors including banking, insurance, and asset management. But it was exposed to the following long-standing issues. First, the classification standards for IT projects were not consistent, with blur boundaries for hardware, software, personnel, and venue costs. Second, measurable business goals were absent in the project initiation phase; some projects resulted in resource waste due to unclear requirements. Third, the lack of effect evaluation after commissioning made it difficult to determine the actual contribution of technology investment to the business. For example, as a data mart project failed to respond at an expected speed, the business division still relied on manual reports. To address these issues, Deloitte helped the group comprehend IT project inputs and outputs through classified management and quantitative analysis, and then shut down a number of projects with poor input-output ratios to optimize the allocation of resources, enabling it to improve IT cost management efficiency and the ROI.

Deloitte recommendations for optimization

1. **Unify IT cost classification standards:** Establish an IT project classification system from an input-output perspective, divide costs into fixed costs (machine room, hardware) and variable costs (development, operation and maintenance), and conduct cross classification by business scenario (client service, risk management, etc.) and technology type (AI, big data).

2. **Quantify output standards and optimize project initiation approval:** Form a business evaluation indicator library and formulate project classification standards for reference in project initiation. Set quantitative indicators, such as client activity and asset scale growth, for projects with variable cost (such as robo-advisor, and "good start" project development). Integrate project goals closely with business value and reduce the discrepancy between business requirements and system implementation.

3. **Monitor and optimize the full cycle:** Deloitte built a technology project monitoring platform for the group, integrating data such as project progress, cost expenditure, and business indicators. It also established a post-evaluation and exit mechanism for persistently inefficient projects (such as those with extremely low client activity or where the revenue generated from clients cannot cover system operation and maintenance expenses).

Trick 8 Optimize the management model, and establish a "well-named horse racing mechanism"

Financial enterprises generally set up multiple business divisions or business teams, aiming to promote internal competition. However, improper management may lead to ineffective competition and failure in performance growth. For instance, these teams have similar business focuses and personnel capabilities, but assume independent risks, administrative, financial and HR functions, resulting in management overlap and high costs. Additionally, the absence of an exit mechanism for underperforming teams leads to resource consumption by inefficient teams and the enterprise has to make internal adjustments to balance costs. This may result in the bad driving out the good.

Deloitte recommendations for optimization

Under the guidance of Deloitte, a commercial bank established an incubation mechanism to distinguish between innovative business and mature business for newly established teams, ensuring the effectiveness of "horse racing." Major measures include:

1. **Matrix-based benchmark testing:** Determine whether the newly established team belongs to mature business or innovative business according to the "matrix-based benchmarking" management principles, and then set differentiated business goals and requirements for implementation in stages.

2. **Exit mechanism:** Establish an incentive phase-out mechanism for the management team and thus ensure effective competition on an equal basis, boosting substantial growth doubling within two years.

Table 1: Benchmarking Matrix for New Team Setup Standards

	Mature business	Innovative business
Benchmark	Teams with similar business/ milestones and headcount	The current HR efficiency
New departments (primary/ secondary) or business teams	• Target milestones: Align with business planning and industry conditions • HR efficiency: Adjust to the target level within two years	• Target milestones: Refer to the enterprise's established goals or industry conditions • HR efficiency: Adjust to the target level within two years

Trick 9 Initiate comprehensive transformation of performance management

Regarding commercial banks' operational management, the performance appraisal system plays a guiding role in resources allocation and business development. Traditional expense management focuses on accounts, making it difficult for financial personnel to ascertain business compliance and expenditure rationality. Taking a medium-sized commercial bank as an example, this bank faced difficulties in expense management and business collaboration. To be specific, expense accounts were mixed up for reimbursement in some marketing campaigns, making it impossible to discern the essence of business activities. Thus, it was difficult to get financial approval, effectively control costs, or accurately measure business performance. To cope with these challenges, the bank must initiate comprehensive transformation of its performance appraisal system so as to reduce costs and increase efficiency.

Deloitte recommendations for optimization

1. **Itemize and classify expenses:** Deloitte assisted the bank in establishing an item-centered expense classification system. Through an in-depth analysis of business activities, they were divided into several categories such as account operation and brand management, and further subdivided into numerous items.

2. **Build a business-finance integrated platform:** Deloitte assisted the bank in building a business-finance integrated platform to achieve deep integration of business and finance. When performing business activities, business divisions will record the relevant information through the platform, including activity purpose, participants, and expected outputs. Based on the information, the finance department will automatically calculate and classify expenses according to preset rules. Meanwhile, by monitoring the entire process of business activities, the platform enables the bank to get real-time updates on expense usage and business progress, and promptly identify and solve problems.

3. **Link performance with incentives:** Establish an incentive mechanism that links cost management with performance appraisal. The performance of each department and employee is assessed based on the input-output ratio of their business activities. Rewards will be given to those who have effectively controlled costs and achieved outstanding results; punishment will be imposed on those who overspend or have poor performance. This move will prompt employees to actively pay attention to expenditure rationality and business performance.

Trick 10 Initiate transformation of the shared center

The efficient operation of an operating center is the key to reducing costs, increasing efficiency, and enhancing competitiveness. Deloitte provided services to a large insurance group and found that it encountered multiple challenges in operation and management. These challenges seriously hindered its development and cost-effectiveness improvement. First, problems such as "invisibility" and "inaccurate calculation" existed in the group's cost management. Its middle-office personnel faced complex tasks and unclear division of work, making it difficult to allocate resources and implement refined management. By leveraging extensive project experience in the financial sector, Deloitte conducted an in-depth analysis of its business model and operational status, and tailored a comprehensive transformation plan for its operation center.

Deloitte recommendations for optimization

1. **Define management goals and data requirements:** Increase the efficiency of the middle office based on efficiency indicators, with a focus on per capita efficiency, such as working hours, effective man-hour utilization rate, and per capita productivity saturation.

2. **Establish a data-driven, systematic cost management system:** Introduce a scientific and reasonable activity-based costing management model. The system can integrate over 30 business systems based on the activity list of each post in the operating center, including but not limited to underwriting and claims settlement, enterprise WeChat, call center system, and working hour statistics. The operating personnel's working hours, amount of work, and other information related to their job each day can be obtained directly from the system and used to calculate the task saturation of each team, post and individual, with a dashboard generated for use by the leadership. After a thorough review of workload, working hours, and the relevant data standards, Deloitte assisted the shared center in building a comprehensive quantitative management system. Its leadership can mobilize resources every day in accordance with business progress. This can effectively guarantee coordination among different teams during the "good start" period and avoid large-scale recruitment during the peak period and large-scale idleness during the trough period. Manpower resources saved for the year reached 20%, effectively enhancing HR efficiency.

3. **Introduce AI empowerment to further optimize processes, aiming to increase both customer satisfaction and efficiency**
   Deloitte assisted a Fortune Global 500 company in improving operational efficiency. Through AI empowerment, the company searched for the most common customer questions every day and redesigned the question classification method for its call center accordingly. Most customer service centers guide customers to categorize and pinpoint questions according to fixed and logical templates. The advantage is a high level of standardization. However, customers often have to take many steps to pinpoint their questions, which wastes time and reduces customer satisfaction. Deloitte's AI-driven solution can sort and classify customers' questions based on their frequency. By combining algorithms with AI, this solution enables customers to pinpoint questions more quickly, with less waiting time. Moreover, AI can screen out verbal tricks with high customer satisfaction and less communication time and push them to call center personnel as templates. Through the full-process knowledge management system featuring standardized knowledge storage, sharing and application, the company improved its customer service capability and achieved the dual goal of reducing service time and increasing customer satisfaction.

Trick 11 Analyze the input-output efficiency in the retail ecosystem

As a key management tool, analyzing the input-output efficiency in the retail ecosystem matters a lot to commercial banks. Through this analysis, banks can precisely identify the key areas for resource input, rationally allocate limited resources, avoid ineffective input, effectively control costs, and thus enhance profitability and market competitiveness.

A large joint-stock bank is actively innovating in its retail business and has carried out a variety of marketing activities to cover scenarios like meal vouchers, movie tickets, and travel payment. It has also launched various co-branded cards and joint marketing projects. However, as the bank expands its business, it is facing numerous challenges. The finance department has difficulty ascertaining the relationship between marketing costs and revenues, and therefore cannot accurately determine whether the marketing activities have achieved the expected results. Meanwhile, the ambiguity of customer acquisition costs for different marketing channels and scenarios leads to a lack of scientific basis for allocating marketing resources, thus affecting the efficiency of the bank's retail business. Regarding resource input, financial approval is confronted with great challenges: How many resources are actually needed for a single card, a single customer, and VIP customers? Is the customer acquisition cost a fair market price? Can such customer acquisition costs generate reasonable returns in subsequent business operations? All these questions are troubling.

Deloitte recommendations for optimization

1. **In-depth analysis of costs and scenarios:** Deloitte conducted a specific analysis of the bank's marketing expenses, sorted out eight major marketing channels and core scenarios, and ascertained the composition of various costs, including user rights, card-making fees, advertising rebates, and offline publicity costs. The detailed research on different channels and scenarios laid a foundation for subsequent precise analysis.

2. **Data measurement and strategic adjustment:** Deloitte used actual data to calculate customer acquisition costs for different channels, customer groups and scenarios. The results enabled the finance department to optimize quantitative templates for financial approval and provided quantitative basis for subsequent marketing expense input. Deloitte also founded huge differences in customer acquisition costs among different channels. With the assistance of Deloitte, the bank optimized the allocation of financial resources, thereby enhancing the input-output efficiency and prompting business divisions to reduce waste.

Conclusion

Looking into the future, the post-pandemic era and the wave of digital transformation will bring opportunities and challenges for commercial Banks. To maximize the value of AI, commercial banks must accelerate the establishment of a powerful data infrastructure and a well-defined cost-efficiency mechanism and make continuous optimization. They ought also to cultivate digital and innovative talent who can tap into AI potential.

4.3 AI governance system and capacity building in the banking sector

Since the beginning of 2025, AI technologies with deep reasoning and cross-modal capabilities have experienced vigorous development and are reshaping the overall environment for the banking sector. China's 2025 Government Work Report presented at the two sessions proposed "continuously advancing the 'AI+' action," highlighted the deep integration of digital technology with manufacturing advantages and market demands, and advocated the wide application of large models in the industrial sector. The banking sector is undergoing unprecedented changes. As the specific development strategies for "building a financial powerhouse" and "boosting five major sectors" play out, the application of AI technology has become a key driving force for the banking sector to lead the market over the next three to five years. Artificial intelligence is expected to become a new channel for the banking sector to accelerate performance improvement and achieve value amplification.

AI+ finance ushering in a new phase

As AIGC matures and advances, AI has inevitably become a key force driving digital transformation in banking. Banks are endeavoring to upgrade their existing technological infrastructure and enhance their capabilities in cloud computing, data analysis and AI large models. According to banks' annual reports, the banking sector has been continuously increasing investment in fintech. Some institutions have already deployed AI applications in areas such as smart marketing, intelligent risk control, intelligent investment research, and intelligent operation. They have achieved initial results, including improving customer satisfaction and accelerating business processing, injecting new quality productive forces into their digital development.

Ye Fang
Banking and Capital Markets Consulting Leader (Chinese Mainland)
Deloitte China
+86 21 6141 1569
yefang@deloittecn.com.cn

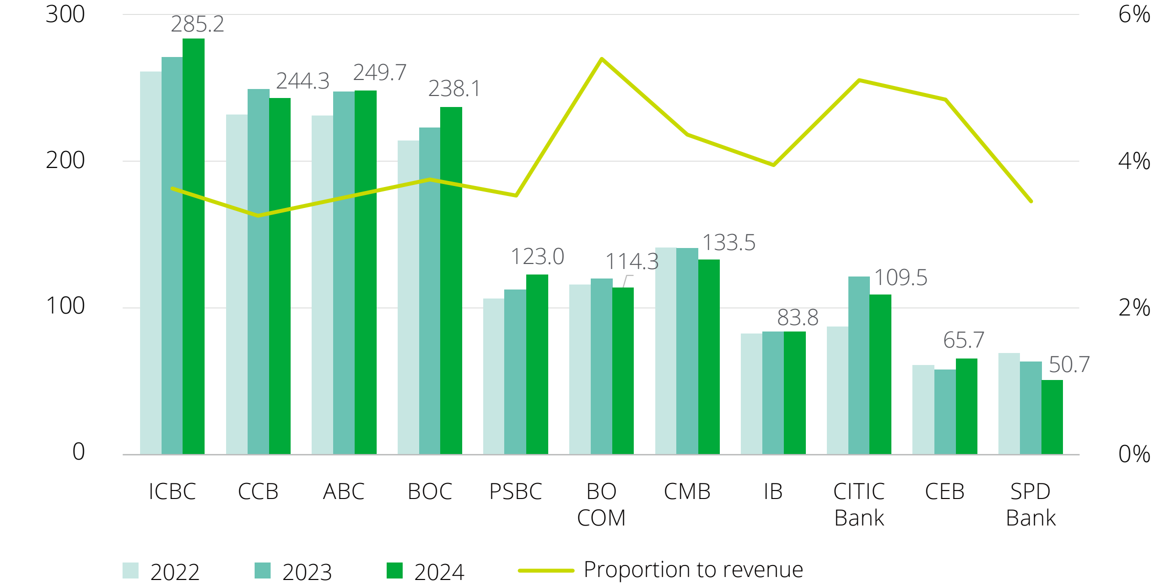
Henry Cao
Data Risk Management Leader, FSI
RegTech Leader
Deloitte China
+86 21 2312 7154
hencao@deloittecn.com.cn

Cynthia Cai
Partner, Data Risk Management, FSI
Deloitte China
+86 21 2316 6368
cycai@deloittecn.com.cn

Jenny Huang
Partner, Strategy, Risk & Transactions
Deloitte China
+852 2852 1999
jennyjyhuang@deloitte.com.hk

Figure 1: Major Listed Commercial Banks' Investment in Information Technology

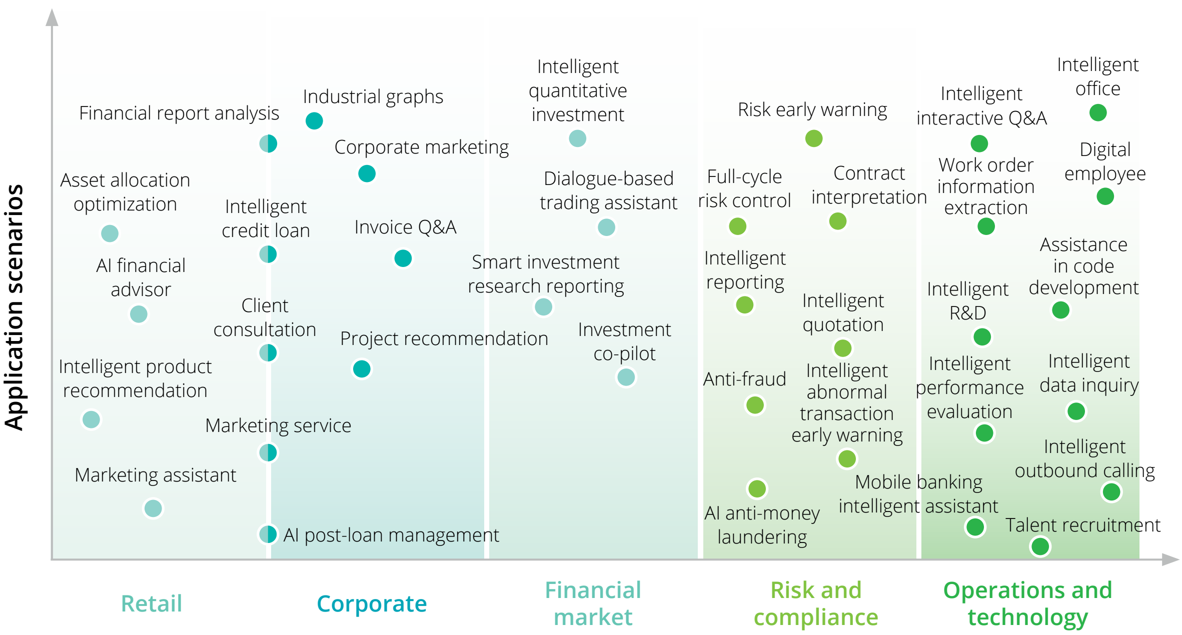
Unit: RMB100 million



Source: Annual reports, Deloitte analysis

In 2024, the banking sector actively explored AI application scenarios and accelerated digital development, aiming to offer more efficient, convenient and secure financial services. By fully leveraging their resource and technological advantages, banks applied AI to their intelligent risk control system to precisely prevent financial risks. AI-driven personalized financial services enabled banks to deeply explore customer needs, optimize business processes, improve customer service experience, and increase operational efficiency. The launch of DeepSeek made a big splash in the AI and technology communities. By integrating large-scale pre-trained models, real-time knowledge graphs and interpretable deep learning algorithms, banks can conduct in-depth exploration and causal inference of market fluctuations, customer demands and risk dynamics.

Figure 2: AI Applications of Some Banks



Source: Banks' annual reports, Deloitte analysis

In the context of continuous evolution and rapid development of large models, the financial sector has been at the forefront of industry applications due to its rich scenarios. Banks are accelerating DeepSeek deployment. Its low-cost and high-performance AI models enable banks to unleash potential to effect changes and lower the threshold for AI and finance integration. The open-source ecosystem will facilitate shared development and drive intelligent upgrade. Meanwhile, as intelligent agents apply and integrate the knowledge of the financial sector, they are upgrading from auxiliary tools to decision-making references. They help banks expand their service scope and offer personalized service experience, accelerating transformation in financial operation services.

Challenges and compliance issues in AI comprehensive application

1 Challenges facing the banking sector

Although the banking sector has seen opportunities for technological innovation and business optimization driven by AIGC development, it still faces many challenges in governance. First, there's a long way to go before AI technology can be deeply integrated with banking services; strategic transformation is constrained by the high difficulty in technology implementation and the low efficiency of cross-departmental collaboration. Second, AIGC's dependency on high-quality data has significantly increased the complexity of data governance; issues such as data standardization, privacy protection and cross-system data integration demand prompt solution. Additionally, AI+ finance application scenarios are superficial and cannot fully release technology potential. Furthermore, the ongoing shortages of AI talent limit technology R&D capabilities and hinder innovation and breakthroughs in the industry.

According to a report released by Deloitte AI Institute[1] Deloitte AI governance maturity index analysis indicates that the maturity level of AI governance in the banking sector is higher than that in other industries. Due to a growing demand for financial services, especially among tech-savvy young consumers, the future of this industry cannot be divorced from excellent AI governance. As AI application deepens, compliance with laws and regulations and protection of customer data will become key issues in the banking sector.

Figure 3: Major Challenges in AI Application in the Banking Sector

Major Challenges

1. Insufficient AI strategic transformation
2. Lack of guidance for AI blueprint design
3. Improperly defined AI team responsibilities
4. Superficial AI application scenarios
5. Integration of scenarios and technology
6. Improper AI application value orientation
7. Discrepancy in the integration of multi-source heterogeneous data
8. Data quality and annotation challenges
9. Inadequate model interpretability
10. Algorithmic bias and insufficient fairness
11. Data privacy and user authorization requirements
12. Deficiency in basic security guarantee
13. Contradiction between agile iteration and stability
14. Barriers to cross-departmental collaboration
15. AI talent shortages

[1] *AI at a Crossroads: Building Trust as the Path to Scale* Deloitte AI Institute

2 Basic requirements for regulatory compliance

In the Asia-Pacific region, the Monetary Authority of Singapore (MAS) was the first to issue regulatory standards for promoting fairness, ethics, accountability and transparency (FEAT) in AI and data analysis in the financial services industry. Then in 2021, MAS conducted a special review on selected banks and insurance companies. Other regulators in the Asia-Pacific region, including Hong Kong Monetary Authority (HKMA) and South Korea Financial Services Commission (FSC), have also issued guidelines in recent years to assist banks in understanding, assessing and mitigating the increasing risks associated with AI applications. Moreover, Australia and Japan have issued AI-related ethical guidelines in the form of joint releases by governments or interdepartmental regulators.

In the Chinese mainland, the People's Bank of China take the lead in introducing the "regulatory sandbox" mechanism in December 2019, aiming to integrate financial technology innovation with risk prevention and control. This mechanism provides an experimental regulatory testing ground for AIGC implementation in the financial sector: Banks must complete the verification of key links, such as verifying the interpretability of model algorithms, conducting the stress test for data privacy protection capabilities, and assessing the risk contagion isolation mechanism, within the sandbox, thus ensuring reliability and security in technology application. Currently, regulators have established a three-tier regulatory system consisting of "laws and regulations + industry norms + technical standards." In response to possible issues related to AIGC, such as data compliance governance, data security, data quality and risk management, they have rolled out targeted policies and guidelines to ensure a compliant and secure framework for AI application. These policies and guidelines include *Data Security Law, Guidelines on Data Governance for Financial Institutions in the Banking Sector, Guidelines on Comprehensive Risk Management for Financial Institutions in the Banking Sector*, and *Administrative Measures of the People's Bank of China for Data Security in the Business Domain (Draft for Comment)*. They will further guide the banking sector to standardized, compliant, high-quality development in data governance.

In 2023, China's seven ministries including the Cyberspace Administration of China jointly released the *Interim Measures for the Management of Generative Artificial Intelligence Services*. It is China's first normative policy for the GenAI industry. It encourages innovative application of GenAI in various industries and fields and provides basic management requirements for the standardized development of China's GenAI industry.

Figure 4: Overview of AI-related Regulatory Policies

2025

Measures for Labeling AI-Generated and Synthesized Content
Focus on issues such as "Which are generated contents?", "Who generated these contents?", and "Where were they generated from?", promote security management throughout the full process from generation to dissemination, and strive to develop reliable AI technology

Action Plan for Promoting High-quality Development of Digital Finance
Rationally lay out the digital ecosystem, build a digital ecosystem operation system; promote the digital transformation of regional equity markets, accelerate the integration and application of data resources; promote the standardized development of internet insurance, strengthen the capacity for online underwriting and claims settlement

2024

AI Security Governance Framework (Version 1.0)
Put forward specific requirements for governance principles, governance framework, risk classification, technical response measures, comprehensive governance measures, and guidelines for development and application, among others

Basic Security Requirements for Generative Artificial Intelligence Services
Innovatively propose a governance practice approach oriented towards the full life cycle of artificial intelligence, provide methodological guidance for enterprises to activate the value of data

2023

Practical Guide to Cybersecurity Standards – Methods for Labeling Content in Generative Artificial Intelligence Services

Provide methods for identifying four types of generated content: text, image, audio, and video; give guidance for GenAI service providers to elevate their security management levels

Interim Measures for the Management of Generative Artificial Intelligence Services

Set forth explicit requirements for the legality of data sources, personal information security, data annotation and quality assessment, and exemptions in training data processing activities, and require users to provide reasonable explanations of training data sources, scale, types, annotation rules, and algorithm mechanism

White Paper on Artificial Intelligence Security Standardization

Propose security standards for the full life cycle of AI systems, covering development, testing, and deployment

Administrative Measures of the People's Bank of China for Data Security in the Business Domain (Draft for Comment)

Specify requirements for financial data security, put forward stipulations on data classification and grading systems, provide data security management measures, set requirements for full-lifecycle protection of artificial intelligence data

2022

Measures for Science and Technology Ethics Reviews (Trial)

Conduct ethical reviews on high-risk AI applications (such as financial risk control and medical diagnosis), necessitate the establishment of an AI ethics committee, review issues such as data bias and algorithmic discrimination

Administrative Provisions on Recommendation Algorithms in Internet-based Information Services

Require GenAI service providers to establish a user rights protection mechanism, prohibit algorithms from discriminatorily pushing or generating content

Financial Technology Development Plan (2022-2025)

Adopt a people-oriented approach to comprehensively promote the in-depth application of intelligent technologies in the financial sector, strengthen the governance of science and technology ethics, strive to create a new form of smart finance featuring scenario perception, human-machine collaboration and cross-border integration, achieve full-lifecycle intelligence in financial services

2021

Data Security Law of the People's Republic of China

Specify requirements for artificial intelligence data security protection

2018

Guiding Opinions on Regulating the Asset Management Business of Financial Institutions

Specify requirements for the subject of liability and risk response to the application of artificial intelligence in the asset management business of financial institutions

Guidelines on Data Governance for Financial Institutions in the Banking Sector

Following the principle of "adopting data-driven approaches, and exploiting the value of data," apply artificial intelligence technology to accurately understand customer needs, provide targeted products and services, and drive innovation in business, products and services; reduce management redundancy based on the quantitative analysis of business processes

2017

Circular on the New Generation Artificial Intelligence Development Plan

Accelerate intelligent upgrade in the financial sector, establish a financial big data system, enhance data processing and interpretation capabilities, advocate the application of artificial intelligence in scenarios such as intelligent financial products and services, intelligent customer services, and intelligent early warning and prevention systems for financial risks

Cybersecurity Law of the People's Republic of China

Specify requirements for personal information protection in terms of artificial intelligence

Figure 5: Comparison between AI-related Guidelines in the Asian-Pacific Region and the Ethics Guidelines for Trustworthy AI issued by the EU

Key elements	EU	Singapore	Hong Kong, China	South Korea	Australia
Robustness	Technical robustness and security	Accuracy	Adequate professional knowledge, interpretability and excellent data quality	Accuracy and security	Reliability and security
Fairness	Diversity, non-discrimination and fairness	Rationality	Fairness	Fairness	Fairness
		Deviation		Customer rights	
					Human values
Accountability	Accountability	Internal accountability	Governance and accountability	Duties	Accountability
		External accountability	Auditability, model validation and third-party supervision	Provide third-party contractors with the same level of security guarantee	
Transparency	Transparency	Transparency	Transparency and information disclosure	Transparency	Transparency and interpretability
			Provide strategic advice		Disputability
Privacy and data security	Privacy and data management		Data privacy and protection		Privacy protection and security
Human supervision	Human initiative and supervision				
Social and environmental wellbeing	Social and environmental wellbeing	Moral rules			Human, social and environmental wellbeing

3 Deloitte's Trustworthy AI Framework

Given regulatory compliance demands, developing trustworthy AI solutions is crucial. Such solutions empower organizational leaders to effectively manage risks from swift AI adoption and fully leverage the AI-driven technological shift. Deloitte's Trustworthy AI Framework outlines seven key elements: robust and reliable, fair and impartial, accountable, transparent and explainable, private, safe and secure, and responsible. After comparing it with current compliance frameworks, we advise banks to set up trustworthy AI governance centered on transparency and accountability, fairness and robustness, and privacy and data security. Banks should achieve this by further improving and updating their corporate governance, risk management, and data governance systems.

Figure 6: Deloitte's Trustworthy AI Framework

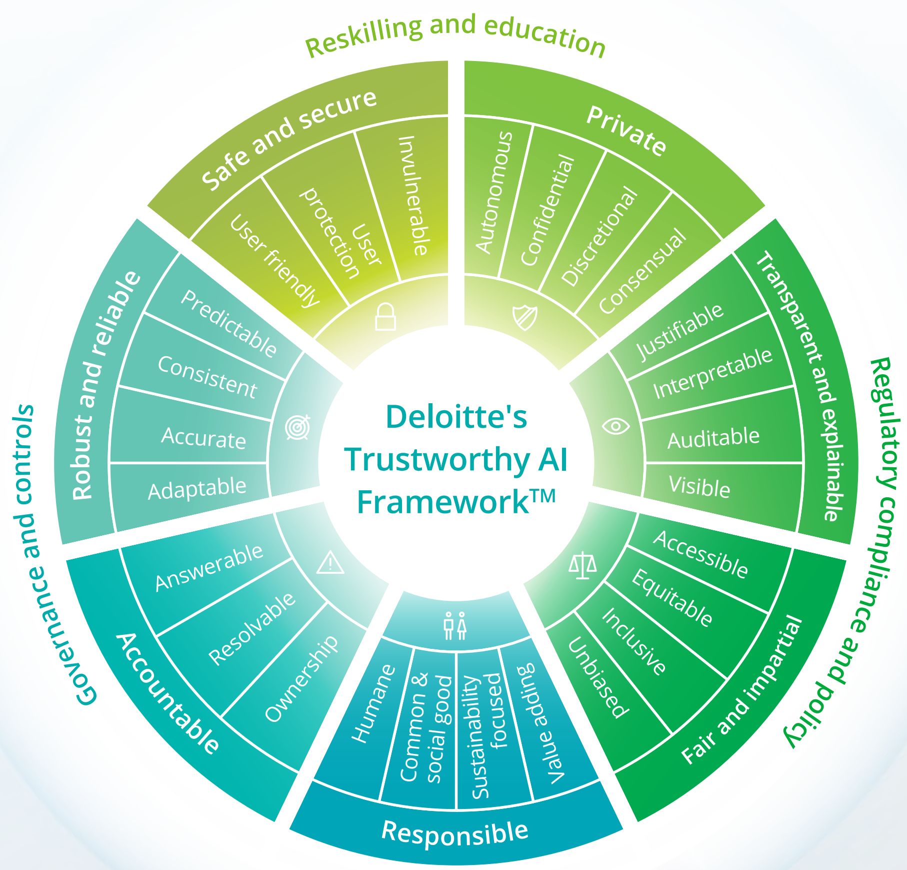


Table 1: Compliance elements of Deloitte's Trustworthy AI Framework[2]

Deloitte's Trustworthy AI Framework	AP AI Principles	Regulatory Requirements	Compliance Elements Suggested by Deloitte
Transparent and explainable **Responsible** **Accountable**	Transparency and accountability	The EU *Artificial Intelligence Act* categorizes AI applications into three risk groups. Different requirements are proposed for specific AI applications: 1. Unacceptable risk applications 2. high-risk applications 3. Other non-high-risk applications In the MAS *FEAT Principles*, the materiality of the AI application is also considered in the implementation guidance of each principle.	1. **Incorporate AI governance into the corporate governance and oversight priorities of the Board of Directors and Senior Management**, ensuring that all stakeholders (across all levels of the business) using AI applications understand how the AI applications work and how to interpret the results. This includes the Board of Directors and Senior Management, who are responsible for ensuring transparent, accurate, and ethical results of the AI application. 2. **Define responsibilities and accountability for risks associated with AI applications in the risk management framework**. The Board of Directors and Senior Management should be aware of the AI applications and their risks. 3. Establish a set of **information disclosure criteria** to distinguish between information that should be disclosed to customers and information protected by intellectual property rights. 4. Establish **a mechanism for proactive communications and response** upon request to disclose the decision-making process of the AI applications to the extent that is useful and understandable for customers. 5. Establish **a mechanism for revisiting the decisions made by the AI application** when contested by customers.
Fair and impartial **Robust and reliable**	Fairness and robustness	Both the MAS FEAT Principles and the HKMA *High Level Principles on Artificial Intelligence* require FS firms to conduct data quality assessments as well as regular reviews and validation of their data. FS firms should conduct data quality assessments on elements such as: 1. Completeness: check whether there are gaps of information in the data 2. Standardization: harmonize the format of data being used 3. Consistency: harmonize the view of data 4. Accuracy: ensure the data used capture information correctly 5. Uniqueness: avoid multiple entry of the same data point 6. Timeliness: ensure timely capture of information	1. Define business context and **ensure validation**. Business context and human judgment are also key components of the AI model to avoid bias and ensure ethical practices. 2. **Regularly adopt effective model performance and fairness checks for AI application evaluation.** 3. **Improve the management framework**, regularly conduct data quality assessments, incorporate AI into the data strategy and governance framework, and capture all important aspects of data quality. 4. **Embed fairness assessments into the AI system development lifecycle**. Formally define fairness metrics with diverse representation in the consultation process to ensure fairness is encoded and measured throughout development pipeline, prior to deployment. 5. Develop **criteria, standards, or metrics that can measure the extent to which AI's robust and reliable commitments have been met**. Incorporate the concepts, principles, and commitments into policies and procedures of the firm's operations and the AI model governance framework to make justifiable decisions. 6. **Solidify model development and periodic independent validation mechanisms**. Adopt both in-time validation (at model development state) and periodic out-of-time validation (throughout the model's life cycle). 7. **Carefully design and implement process business continuity and contingency measures** to ensure AI applications do not introduce unintended risks and harms in the data driven decision-making processes.

[2] *Trustworthy Use of Artificial Intelligence in Finance, Regulatory Perspectives from Deloitte Asia Pacific*

Deloitte's Trustworthy AI Framework	AP AI Principles	Regulatory Requirements	Compliance Elements Suggested by Deloitte
Safe and secure Private	Privacy and data security	Regulators and law makers in the AP region have introduced various laws and regulations on data privacy, data protection, and cybersecurity. The recent regulatory developments in operational resilience have also extended the regulatory scrutiny on the FS firm to outsourcing contractors, third-party vendors, and their subcontractors. Ensuring compliance with these regulations will be critical for FS firms adopting AI applications. In some jurisdictions, any data requested from a customer must have a predetermined use and FS firms are not allowed to request and store data with an unconfirmed future intention to use in modelling. Therefore, adding data fields to on-boarding systems, without clearly identified use cases, can be challenging.	1. Implement **data privacy protection** measures that ensure compliance with local data privacy laws and regulations throughout the life cycle of AI applications. 2. Carry out **data security classification** to ensure effective identification of high-risk data with appropriate permissions and privacy protection. 3. **Incorporate data protection into the design of AI applications as well as the ongoing monitoring** processes. 4. **Update data strategies** and develop a long-term data strategy that is in line with both the business needs and relevant data protection laws and regulations.

Time to forge ahead and upgrade the AI governance system

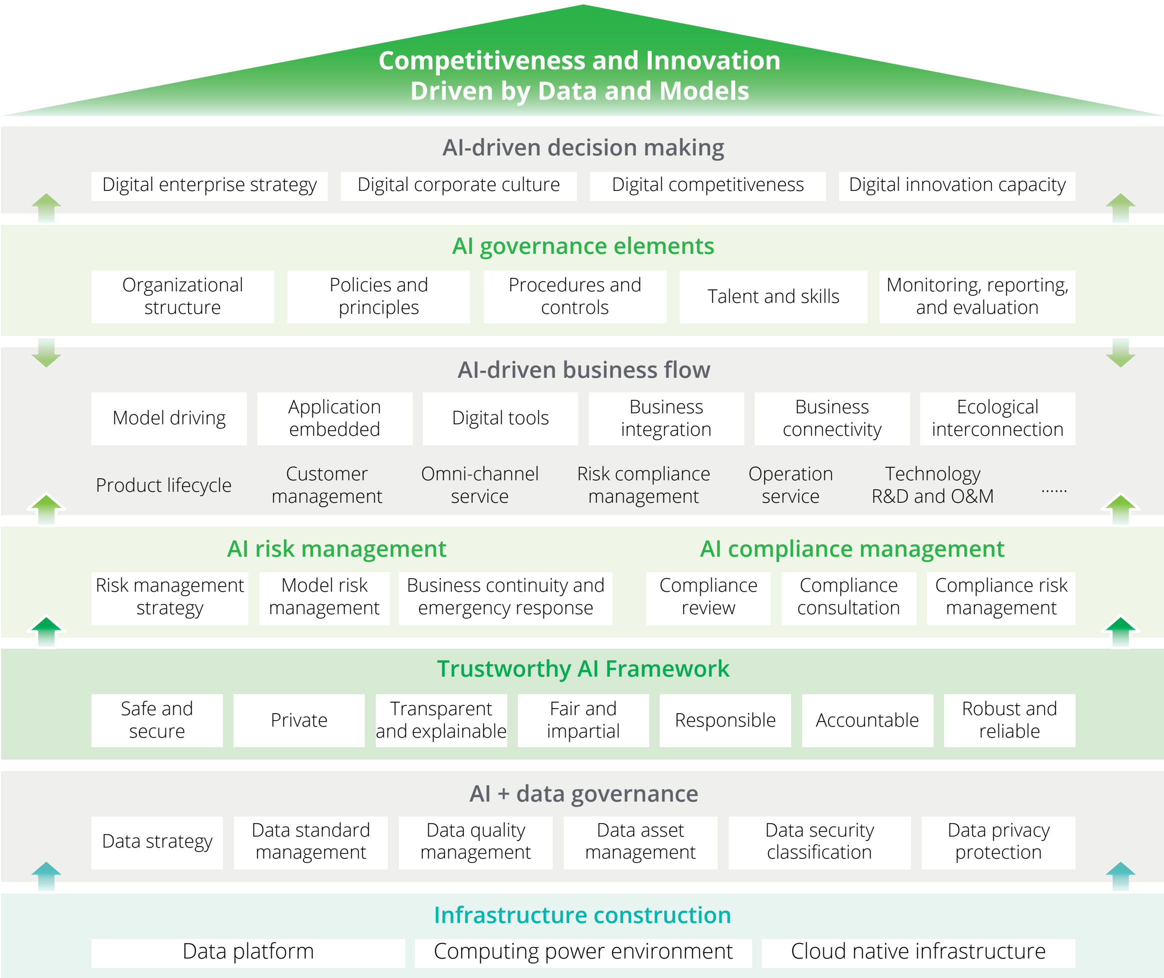
Deloitte's global research report, *Changing the game: the impact of artificial intelligence on the banking and capital markets sector*, highlights that, targeting an 18-month journey, a bank moves from crafting an AI strategic blueprint and developing foundational bets to iteratively scaling AI applications. The fusion of "AI + Finance" will reshape the banking industry's service model, fueling business innovation and growth. Throughout this cycle, banks should promptly set up governance frameworks to effectively harness emerging AI technologies.

Suggestion 1 Establish a comprehensive AI governance framework

Banks should strategically prioritize AI, set unambiguous transformation objectives, and seamlessly align them with their business development strategies. Concurrently, starting with top-level planning, they ought to make AI governance a key priority within corporate governance. Senior leadership should spearhead the AI governance initiative as a high-priority project. By implementing a top-down AI governance framework, establishing specialized AI management and promotion units, and routinely reviewing and refining transformation strategies, banks can guarantee the harmony between AI strategy, AI governance, and business growth. This strategy will drive AI-powered innovation and upgrades in banks' operations and management, helping them achieve high-quality development amid a complex and dynamic market landscape.

- Board-level responsibilities: Incorporate AI governance and oversight into their core duties and those of specialized committees. Prioritize reviewing key areas such as AI strategy development and execution outcomes, as well as AI risk monitoring and assessment reports.
- Governance-level enhancements: Consider forming a dedicated AI governance committee or integrate AI governance into existing committees to improve guidance and oversight on governance effectiveness and efficiency.
- Execution-level integration: Embed AI governance into critical corporate governance areas, including **strategic planning, HR, risk management, compliance, data governance, intellectual property right management, corporate culture, social responsibility, communication, and disclosure**, to strengthen the foundation for AI governance.
- Oversight-level accountability: Include AI strategy implementation and AI application reliability in internal audit scope. Establish an AI accountability system and formalize an independent oversight mechanism for AI governance.

Figure 7: Deloitte AI Governance Framework for Financial Services Industry



Suggestion 2 Build a three-tiered defense system for AI governance

Clear delineation of AI management organizations and responsibilities is critical to ensuring the effective implementation of AI strategy and governance. We recommend enhancing organizational leadership, strengthening management functions, and optimizing operational mechanisms based on the AI transformation strategy.

First, appoint senior executives to lead an AI governance steering committee, coordinating digital transformation and AI governance. The committee should identify AI-powered growth opportunities aligned with banks' operational needs and industry practices. Second, enhance management capabilities and streamline organizational structures by assigning a central department to drive bank-wide AI strategy execution and governance. Establish a three-tiered governance framework with business units (first line), risk and compliance teams (second line), and internal audit (third line). Define clear front-, middle-, and back-office roles for AI governance, promote cross-functional collaboration among business, tech, and data experts, and develop versatile talent with integrated skills. Concurrently, during digital and intelligent transformation, focus on high-impact, rapid-delivery projects to dissolve barriers between business and technology teams. Rebuild AI engineering capabilities based on business processes, enabling seamless AI integration into workflows. For each project, co-design customized AI governance processes with business, AI modeling, technical, and risk/compliance teams. During model training and development, strengthen knowledge validation, conflict detection, and security oversight. Adopt a dual-review process combining business insights with technical/data expertise to uphold security and standardize governance practices.

Figure 8: Deloitte's Three Lines of Defense (3LOD) Model for AI Governance

Banks' risk types under the Enterprise Risk Management (ERM) Framework

Risk Type	Risk Controller
Credit	Head of Credit Risk Management
Market	Head of Market and Liquidity Risk Management
Operational	Head of Operational and Technical Risk Management
Liquidity	Head of Market and Liquidity Risk Management
Interest rate	Head of Market and Liquidity Risk Management
Legal	Head of Legal and Secretariat
Technical	Head of Operational and Technical Risk Management
Compliance	Head of Compliance
Strategic	Head of Strategy and Transformation Office
Reputation	Head of the Human Resources and Sustainability
Model*	Head of Risk Analysis and Governance

Data and AI governance should adhere to the existing 3LOD Model

First line

- **The Data Services and Governance Department**, as the advocate for AI governance, is responsible for **establishing governance frameworks and guidelines** while promoting the internal adoption of AI technologies
- **The Information Technology Department**, as the primary entity managing technical risks in the first line of defense, develops risk assessment guidelines and ensures the effective implementation of IT and cybersecurity measures
- **Business owners and project teams**, as risk accountable parties, oversee end-to-end risk management and guarantee delivery quality throughout project execution

Second line

- **For operational (OTMD), technical (OTMD), legal, compliance (COMD), and model (RAGD) risks**, risk control entities shall perform the following functions:
  - Review, assess, and continuously monitor risks associated with AI activities
  - Approve AI application scenarios based on risk assessment outcomes

Third line

- **The Internal Audit Department**, as the third line of defense, is responsible for independently validating the effectiveness of the data and AI risk management framework

* Mechanisms are developed in response to the increased demand for risk management in banking models

Suggestion 3 Build AI risk and compliance management capabilities

The security risks arising from the complexity and opacity of AI models make them susceptible to malicious exploitation, often complicating post-incident audits and accountability processes. We recommend establishing comprehensive AI risk and compliance management capabilities by integrating risk governance across pre-event prevention, in-event control, and post-event review stages.

For risk management, we propose incorporating AI risks into the enterprise-wide risk management framework by implementing a tiered control mechanism based on risk ratings, enabling differentiated governance strategies for AI models across application scenarios; developing an AI risk identification and assessment process, establishing a risk-control knowledge base for end-to-end tracking of risks and issues; constructing a quantitative risk appetite model within medium and large risk management platforms, setting dynamically adjustable risk tolerance thresholds, and creating a standardized evaluation framework comprising a risk feature library, rating indicator system, and mitigation rule repository. Regular independent assessments of AI application models should be conducted to ensure regulatory compliance.

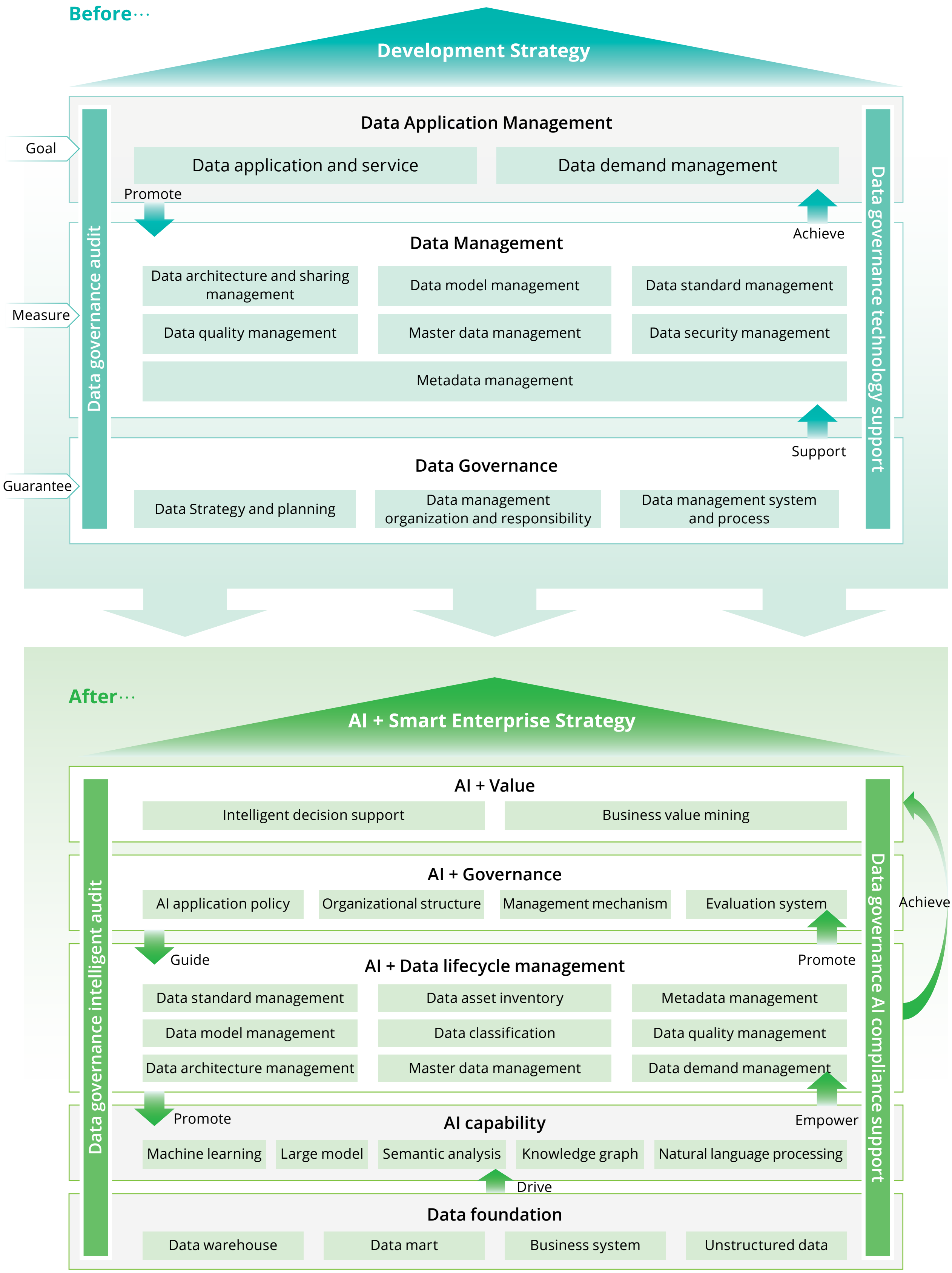
AI model development teams should consider establishing a relatively independent risk small- and middle-office to integrate fairness assessment into the AI system development lifecycle. Fairness metrics should be collaboratively determined during discussions to ensure fairness is systematically encoded and measurable throughout the development process prior to system deployment. The teams should solidify model development and periodic independent validation mechanisms, adopting both in-time validation (at model development state) and periodic out-of-time validation (throughout the model's life cycle). Proactive enhancements to application logging must be implemented to ensure auditability and traceability, while further refining AI model risk management through mechanisms such as model documentation cards, standardized model evaluations, operational monitoring, and reporting frameworks.

AI risk and compliance considerations should be mainstreamed into compliance management practices, including integrating privacy protections for foundational AI data/models and intellectual property rights into compliance reviews for new products, services, and intelligent agent introduction. Regular compliance risk assessments should be conducted, complemented by the establishment of AI-specific compliance consultation processes to support the advancement of AI applications.

Suggestion 4 Enhance the AI + Data governance framework

High-quality data acts as the lifeblood for the effective deployment of AI technology. Hence, data collection, processing, security, and privacy protection will rank among the top priorities for banks. They should set up a data governance system spanning the data lifecycle, concentrating on data quality management, security and privacy protection, architecture optimization, and application innovation and forming a top-down governance architecture, with an updated data strategy acting as the driving force. By clearly defining data catalogs and lineage topology, banks should strengthen their data asset foundation. They should also set up a standardized, long-lasting data management mechanism to guarantee accurate and sustainable data governance. Meanwhile, banks should deeply integrate AI technologies to enhance governance processes, use automated modeling tools to speed up data standard creation, deploy intelligent classification engines to boost security control, apply asset inventory algorithms for efficient data asset checks, and utilize traceability analysis models to identify the underlying causes of data quality problems. These steps will comprehensively optimize the efficiency of the entire data governance chain. In the end, this strategy will foster a "strategy-governance-technology" triad data ecosystem, offering a high-quality, reliable data base to back up innovative applications like AI.

Figure 9: Deloitte's Value-driven AI + Data Governance Framework



Suggestion 5 Enhance AI governance platforms

Gartner's *2025 Top 10 Strategic Technology Trends* reveals that AI Governance Platforms are central hubs for ecosystem development. These platforms clearly outline their evolution within the AI Trust, Risk, and Security Management (TRiSM) Framework 2.0. They enhance algorithmic transparency through an interpretable decision tree architecture, use federated learning to establish privacy-protected cross-institutional collaboration networks, and deploy blockchain technology to create a full-chain accountability tracing system. These functions drive AI governance from reactive compliance to proactive prevention and control. The technology empowers organizations to create, manage, and enforce responsible AI usage policies, clarify AI system operations, and provide transparency to build trust and accountability. Gartner forecasts that by 2028, enterprises using comprehensive AI governance platforms will see a 40% decrease in AI-related ethical incidents compared to those lacking such systems. Hence, we suggest eligible banks enhance or upgrade AI governance features on their existing platforms to strengthen AI trustworthiness management.

Suggestion 6 Cultivate an all-encompassing AI culture for the modern age

AI development hinges on a robust talent pool. Presently, the financial services industry is experiencing a sharp rise in demand for composite professionals proficient in AI technologies, but the availability of such talent is inadequate. Banks should intensify efforts in comprehensively promoting and training AI culture, set up a talent development framework that incorporates AI skills, and nurture an AI-centric culture across the organization. By devising a well-organized development framework and tapping into internal and external expertise, banks can provide training programs that merge finance with AI, incorporating the latest academic knowledge and real-world applications. Moreover, they should stimulate AI innovation and application by introducing scientific performance evaluation and competition systems to accelerate talent development. Additionally, establishing communication channels to enhance knowledge exchange will, through these concerted initiatives, propel banks' digital and intelligent evolution and high-caliber growth.

Conclusion

We predict that 2025 will herald a golden era for the proliferation of AI applications in financial services. AI technology is driving the industry transformation by revamping customer interactions, optimizing client services, and spurring product innovation, thus profoundly reshaping banks' operational models and cost management approaches. We suggest banks make AI governance a top strategic priority, led by senior leadership, and significantly bolster their AI governance capabilities across critical areas such as strategic formulation, organizational collaboration, risk and compliance management, data governance proficiency, and all-round talent development. Committed to strengthening the financial sector, banks should accelerate their digital and intelligent evolution, achieve full AI integration across the business value chain, stimulate corporate innovation, and attain premium development.

4.4 Observations and practices of Generative BI in financial institutions—The application of data in AI intelligence

Propelled by the swift progress in AI technology and the financial sector's digital shift, intelligent data query has become a vital asset for financial institutions, boosting decision-making speed and depth of insight. By harnessing the semantic comprehension and generalization strengths of Large Language Models (LLMs), this technology allows for seamless translation of Natural Language to SQL (NL2SQL) and drives the evolution of Generative Business Intelligence (BI). Consequently, it is revolutionizing how BI data applications are utilized within financial institutions.

Zheng He
Partner, Data Governance, Data Analytics and Data Innovation
Deloitte China
+86 21 6141 1507
zhhe@deloittecn.com.cn

BI marks the first phase of data application for financial institutions

Amid the banking sector's digital transformation, BI continues to underpin the development of data capabilities and the extraction of data value. As the gateway to data utilization, the banking industry has developed a BI analysis framework. This framework is built on data warehouses (or integrated Lakehouse platforms), channels operational analysis metrics across business domains through processing pipelines, and enables interaction via a variety of dashboards, large-screen visualizations, and adaptable reports. It handles billions of daily data transactions and presents tens of thousands of results, empowering strategic planning, routine operations, risk management, auditing, and regulatory compliance across all organizational tiers.

Data processing pathway from bottom to top under a typical BI architecture (Figure 1):

- Layer 01 ODS unifies and manages multi-source heterogeneous data from original systems, addressing issues of data fragmentation and processing inefficiency while ensuring consistency between source systems and the ODS layer for easier troubleshooting;

- Layer 02 DWI performs data cleansing, transformation, and anomaly handling;

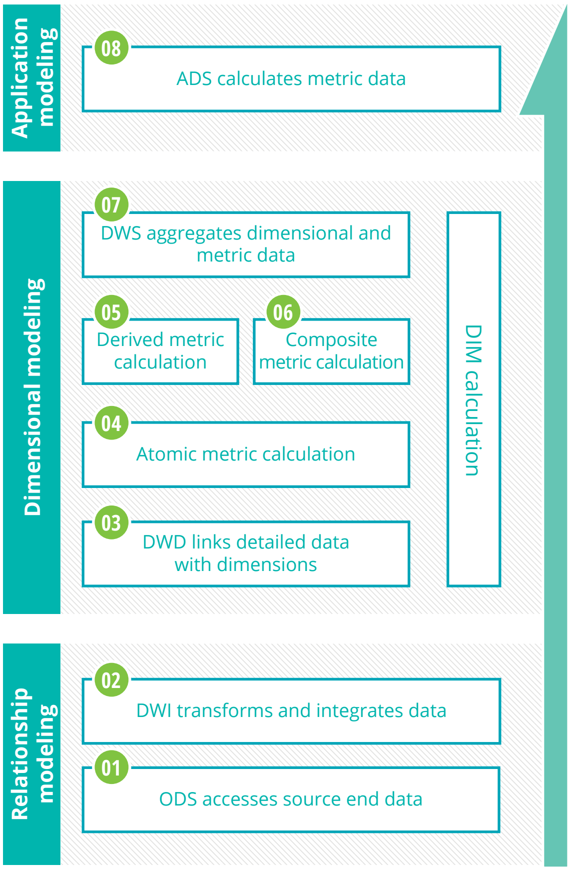
- Layer 03 DWD links detailed transactional data measuring business processes with dimensional values across business categories, creating granular fact data that serves as the foundational fact table for subsequent operational analysis;

- Layers 04 atomic metrics (e.g., indivisible foundational statistics like deposit balances), 05 derived metrics (recalculated from atomic metrics, such as average daily deposit balances), and 06 composite metrics (combinations of atomic metrics and dimensions, like regional average daily deposit balance growth rates) are constructed along the processing pathway based on the fact tables;

- Layer 07 DWS aggregates dimensional and metric data, providing standardized, high-performance summarized datasets for downstream analysis and applications;

- Layer 08 ADS customizes and delivers analytical metrics and reports tailored to application-specific themes for end users.

Figure 1: Data Processing Pathway under the Typical BI Architecture



Since its inception in 1996, Data Warehouse has been a mainstay in banking data processing for nearly 30 years. While the tech landscape has evolved with innovations like Data Lakes and real-time data warehouses, the core of BI architecture remains firmly rooted in "layered modeling with pipelined processing." This enduring stability reflects the financial sector's focus on system reliability and the proven compatibility of the classic three-tier framework (ODS, DWD, and DWS) with banking's operational needs.

LLMs inject fresh momentum into the evolution of BI paradigms

By early 2025, DeepSeek has become an essential foundational LLM for most financial institutions, prompting traditional BI applications to rapidly adopt AIGC for modernization. This convergence accelerates data analysis and report generation and enables smarter, more accurate responses in areas like interpreting user needs, matching semantic meanings, clarifying report insights, and analyzing metric relationships and root causes.

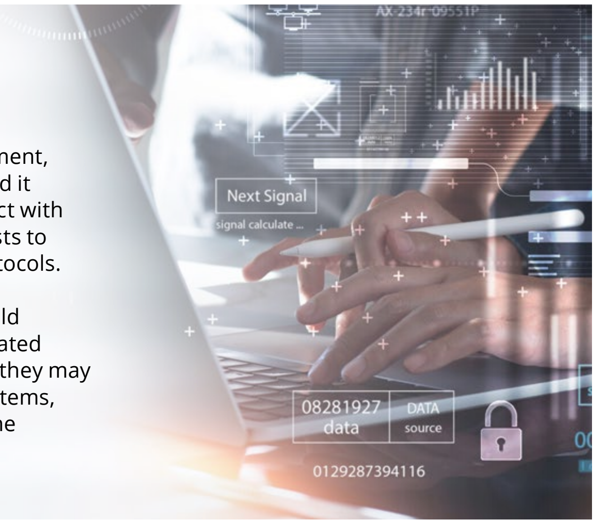
1 LLMs' natural language understanding capabilities

LLMs leverage semantic analysis, intent interpretation, and contextual mapping to be seamlessly embedded into traditional BI's core workflows, such as ETL (Extract, Transform, and Load), data modeling, and metric calculation, boosting text-processing efficiency.

Typical scenario: Rapid response to business users' requests for data metrics

When business users propose a new metric requirement, they often lack full awareness of existing metrics, find it challenging to remember how atomic metrics connect with dimensional values, or hesitate to adapt their requests to standardized metric definitions and governance protocols.

Demand management and technical personnel should dedicate time to clarify these requests through repeated discussions for confirmation. Facing tight deadlines, they may need to re-extract and process data from source systems, resulting in an unchecked expansion of metrics on the application platform.



LLMs leverage the **metric knowledge base for retrieval** to **enhance** their **dynamic semantic mapping** capability in the following ways: 1) they automatically align existing fundamental source metrics (e.g., monthly average daily deposits) with the dimensional framework (like organizational hierarchy and customer segmentation groups), helping users build query logic at the demand proposal stage; 2) alternatively, they perform similarity matching with existing metrics and suggest highly similar ones to users; 3) additionally, through **conversational demand clarification** features, they identify users' genuine business goals for data use during interactions, preventing redundant metric processing and criteria discrepancies.

2 Capability to analyze and generate data processing programs

LLMs, particularly instruction-following models with a colossal number of parameters (like DeepSeek V2 and Qwen-Max), have covertly grasped a wide range of data processing programs (such as SQL queries, Python data mining algorithm scripts, and Spark ETL tasks) during pre-training by ingesting vast amounts of general knowledge. In industrial applications, LLMs can precisely generate data processing programs that fit business contexts by merging a financial institution's **metadata** (e.g., table structures and field comments) with **data lineage ties** (like the underlying tables BI reports depend on).

When a user asks for creating a "data processing workflow for a particular regulatory report," LLMs can automatically spot existing data processing chain scripts, create data dependency chains, and enhance the existing scripts. These capabilities offer highly precise technical backing for the two-way conversion between natural language understanding and program generation, enabling NL2SQL that integrates business scenarios and contextual restrictions.

Meanwhile, we must pay attention to preventing hallucinations in LLMs during this process. For example, mismatches between the generated code and the actual data environment or technical limitations, as well as misinterpretations of the real intentions behind data usage requests, can all result in errors in the metric query statements produced by LLMs. To tackle this, making effective use of engineering methods related to LLMs can help ensure data processing logic complies with constraints, verify and align program logic, and significantly improve the reliability of LLMs.

Table 1: Application Scenarios of Generative BI Engineering Methods

Engineering Method	Example of Generative BI Applications in the Financial Industry
Prompt word engineering	Enforce the inclusion of Schema metadata in the current warehouse in the input
RAG search enhancement/Knowledge base search enhancement	Retrieve ETL task documentation from the internal knowledge base as the basis for generation
Code sandbox verification	Automatically detect whether generated SQL queries access unauthorized tables or fields
Human feedback reinforcement learning	Have risk control experts evaluate and score the LLM-generated "transaction monitoring rule code"

3 Comprehension and reasoning capabilities for massive general knowledge and domain-specific expertise

LLMs are exposed to extensive literature, cases, and industry standards during training, undergoing continuous pre-training with a hybrid of general datasets and financial proprietary data (e.g., annual reports, regulatory filings). This enables the native model to develop contextual understanding of financial metrics such as "EBITDA" and "capital adequacy ratio."

LLM application scenarios

Qwen2.5 Coder, a LLM that can comprehend financial metric calculation logic (e.g., ROE = net profit / net assets) and generate Python scripts that automatically map database fields and execute computations.

Reasoning-enhanced LLMs such as OpenAI o1 and DeepSeek R1 simulate human-like analytical processes through chain-of-thought reasoning, enabling these models to: 1) understand financial institutions' complex business rules and data schemas, automatically generating data processing statements compliant with specific business requirements and data structures; 2) analyze metric data through logical reasoning to produce professional reports that identify data anomalies, trends, and cyclical patterns, annotate statistical significance levels, and follow corporate documentation standards; 3) conduct multi-path metric attribution analysis based on metric decomposition or attribution relationships or perform scenario-based simulations to model metric changes through logical reasoning, quantify attribution contributions, and generate visualized causal chains to deliver business-actionable insights with stronger operational guidance.

4 AI Agent-LLM synergy for end-to-end BI optimization

When integrated with LLMs, AI Agents demonstrate enhanced environmental awareness, cognitive reasoning, task decomposition, and multi-task coordination capabilities, enabling the realization of a closed-loop cognition-decision-action system across the entire BI data processing lifecycle.

The core competencies of AI Agents manifest in three dimensions:

AI Agent's ability	Description	Example
Business objective-driven intelligent BI task decomposition and dynamic planning	Leverage semantic comprehension capabilities, AI Agents decompose users' data requirements into executable subtask chains while dynamically adjusting execution paths through their planning module.	• When handling a Q3 revenue target analysis task for a specific branch, the task decomposition Agent can segment it into multiple subtasks, including data discovery, transformation, anomaly detection, root cause analysis, and visualization report generation, each executed by specialized task Agents via their respective APIs.
Human-AI collaboration enhances task execution explainability	During autonomous execution, AI Agents engage in multi-round dialogues with human operators based on business rules and reasoning transparency needs, highlighting uncertainties encountered while providing multi-perspective cause analyses and mitigation recommendations. This feedback loop leverages human expertise to resolve complex business challenges.	• In the regulatory reporting transformation pipeline, AI Agents perform impact analysis on regulatory reporting data caused by upstream business changes, identifying potentially affected reports and fields; • AI Agents distribute impact assessment notifications to business analysts, reporting specialists, and compliance officers for collaborative verification of analysis results and confirmation of reporting logic modification proposals, ensuring timely alignment with business adjustments.
Efficient automated execution through multimodal tool collaboration	Multimodal capabilities serve as supplementary data sources and enhance BI analysis depth, compliance, and decision-making efficiency.	• Cross-modal alignment addresses limitations in traditional ETL tools by improving recognition and processing of complex heterogeneous charts; • Data visualization enhancement is achieved to improve BI report readability.

The core capabilities of LLMs and AI Agents are built on retrieving and generating text combinations that maximize probabilistic coherence, where there is no absolute right or wrong in linguistic expression. However, data processing logic in analytics requires strict correctness, governed by specific business rules and contextual constraints. Even minor hallucinations can produce erroneous results, eroding trust in the platform. Therefore, meticulous engineering implementation details will be critical to success.

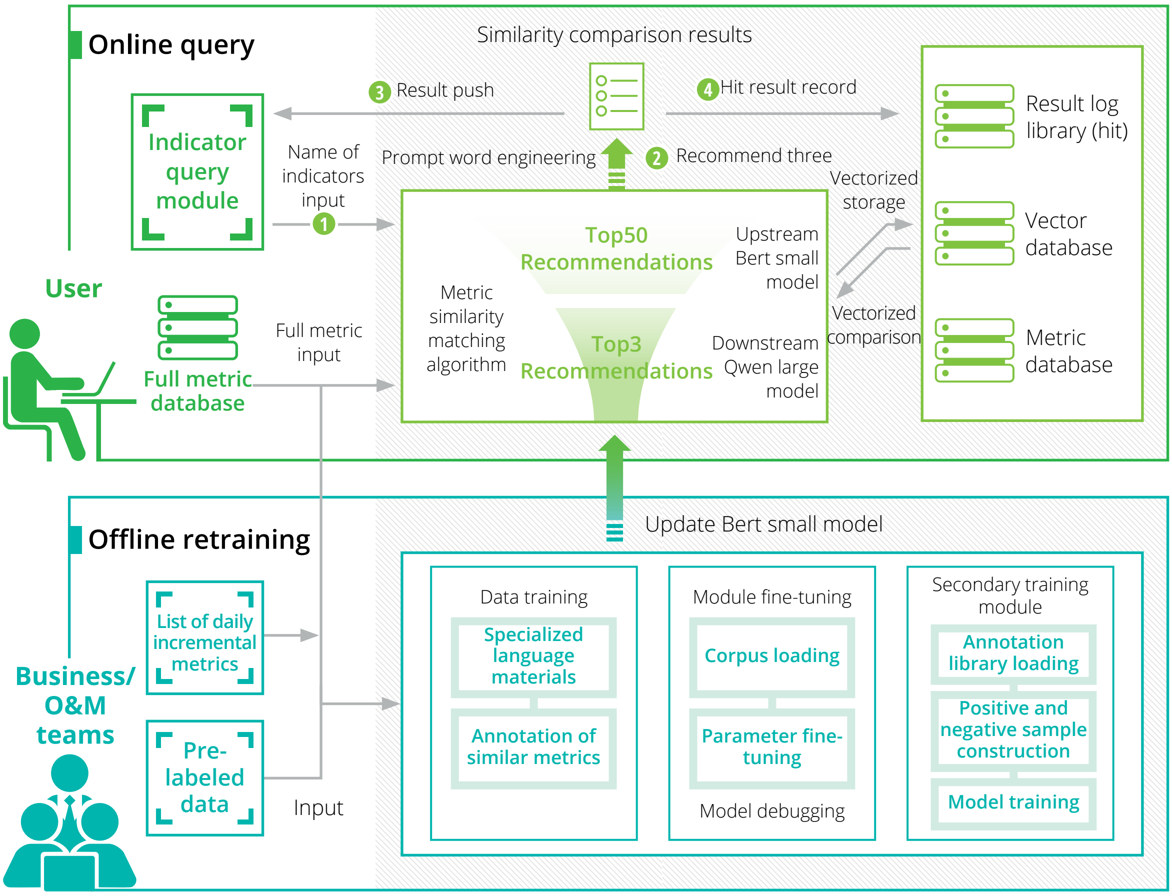
AI-powered data utilization application case in banking

A commercial bank has established a well-developed multi-topic business analytics platform with nearly 20,000 accumulated metrics and high user engagement. It aims to enhance metric demand management and interaction patterns through LLM integration without major modifications to the existing platform to improve business users' data access and query experiences while exploring AI-driven pathways for BI quality and efficiency improvements.

1 Collaborative large and small models for precise BI data requirement matching and recommendation

BI data requirement management involves semantic parsing of metric names and definitions when users submit requests. From an existing inventory of nearly 20,000 metrics, the system matches and recommends the most similar metrics based on semantic similarity analysis. Users can either directly utilize recommended metrics for query execution or specify discrepancies in business definitions and calculation logic compared to existing indicators, which are then submitted to BI requirement administrators. These administrators accurately assess differences between new requests and inventory metrics across business semantics, atomic calculation logic, and dimensional values. They identify reusable atomic or derived metrics, distinguishing reusable components from newly required processing elements when submitting development tasks. This approach enables developers to precisely locate reusable metrics.

Figure 2: Schematic Diagram of Metric Similarity Matching Function



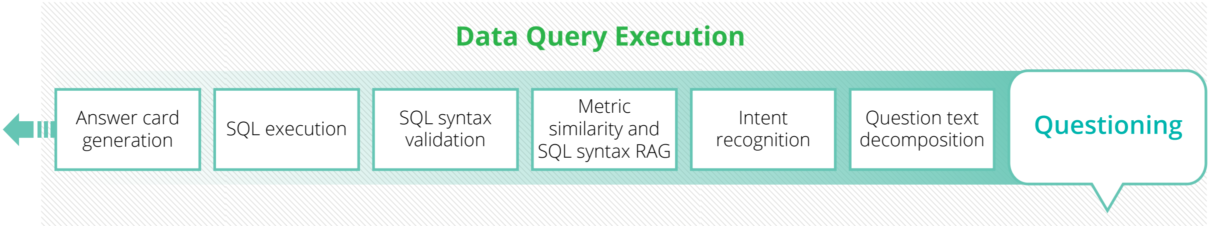
This solution leverages a hybrid large-small model architecture to achieve precise metric matching and recommendation. Key components include: 1) the small model is a Bert model optimized through contrastive reinforcement learning and trained with proprietary business logic from the client. It rapidly screens the corresponding query repository to identify the most similar metrics; 2) the large one is the Qwen-72B model, which applies business semantic comprehension capabilities to further analyze and optimize the ranking of screened metrics, ensuring recommendation accuracy and business relevance. When users input a metric name, the algorithm executes precise matching and recommendation through sequential upstream-downstream tasks. In the upstream task, the Bert model performs vectorized matching to shortlist 50 most similar metrics from the repository. Then, the Qwen-72B model conducts refined screening to recommend the top three optimal metrics. This architecture ensures both efficiency and accuracy while benefiting from the large model's strong generalization capabilities. It maintains semantic comprehension of indicators as the repository scales, enabling sustainable performance with expanding metric volumes.

The implementation of this collaborative model solution has significantly elevated the intelligence of metric query and recommendation systems. Users can rapidly access the most relevant metrics from the full repository, resolving challenges caused by inconsistent metric entry practices. This advancement propels the BI platform to new heights in data empowerment and decision support capabilities.

2 AI-driven data query via retrieval-augmented generation (RAG)

In this LLM application scenario, users can retrieve performance metrics by asking questions. The system precisely identifies users' data query intentions, harnesses the LLM's SQL generation prowess, and integrates intent recognition, retrieval enhancement, and SQL alignment methods to provide accurate outcomes. The application maintains the existing performance metric processing pipeline unchanged, concentrating on boosting retrieval accuracy and enhancing user interaction, while gathering technical know-how for future AI enhancements throughout the BI lifecycle.

The system employs Qwen2.5 Coder as the SQL generation LLM (with intentions to switch to DeepSeek V3 later). This LLM scores 82.1% accuracy in recognized Chinese SQL benchmark tests. With a pre-training dataset exceeding two million financial documents, it comprehends the business significance of specific financial metrics. Moreover, it ensures cost-efficient resource usage for both fine-tuning and inference. Leveraging this LLM, the intelligent data query process includes the following steps:



Question intent recognition is a critical step in intelligent data query. Considering the varied querying habits of users and the difficulty in recalling lengthy performance metrics texts, techniques like input suggestions and historical query caching are adopted to help and steer users in crafting their query texts.

Steps for question intent recognition:

- Sentence correction: Filter out queries unrelated to the main topic and address grammatical issues, such as filling in missing words;
- Named entity recognition and standardization: Identify and standardize specific fields, including locations, organizations, and time periods;
- Metric recognition and similarity matching: Recognize single or multiple metrics intended for retrieval and assess their similarity;
- Time dimension recognition and calculation: Determine start and end dates for phrases like "each week" and interpret "the same period" as "the same period last year";
- Business dimension recognition: Identify and match dimension fields with business significance, such as performance plans, product lines, and customer groups, using multiple methods;
- Calculation logic recognition: Recognize calculation logic, including terms like "trend," "year-over-year comparison," and "maximum value."

When conducting similarity matching for metrics and dimensions, the metric knowledge base should be searched. The search outcomes can help precisely match retrieval criteria, like metric names and business dimensions, that meet financial institutions' needs. Then, a LLM is used to create the SQL statements for data retrieval. Given the risk of hallucinations or instability in SQL generation by LLMs, validating and aligning the generated SQL is crucial. Running the aligned SQL can further improve the accuracy of the returned metric results. When multiple similar options emerge, such as several performance metrics or assessment plans with high similarity, ask users a single question to clarify their choice.

Development stages and future tech trends in Generative BI

From the lens of LLM advancements and the deployment of generative BI technologies, the domain is steadily transitioning from the existing NL2SQL phase to the Query, Report, and Insight stages.

- NL2SQL: It mainly generates SQL code, facilitating the writing of BI data processing scripts and improving coding efficiency and output quality;

- NL2Query: The previously mentioned intelligent data querying scenario fits into this stage. It converts query statements into SQL for data retrieval by analyzing the actual business data storage structure and integrating intent recognition techniques, displaying the results graphically;

- NL2Report: At this stage, business intents are further discerned, data processing hierarchies and logic are organized, and results undergo secondary aggregation to compile various report components. These are then presented interactively and visually. Pilot testing of this stage is currently underway in select financial institutions;

- NL2Insight: Beyond delivering precise query responses, this stage leverages the reasoning prowess of LLMs and the business analysis writing skills prevalent in financial institutions to interpret metrics or reports. It facilitates attribution and decomposition analysis and leads users through exploratory Q&A sessions to progressively reveal the essence of business insights.

Conclusion

The financial and tech industries are actively exploring Generative BI, with the swift advancements in LLMs underscoring the viability of reaching the NL2Insight goal. No matter how sophisticated general-purpose LLMs grow, successfully integrating them into financial institutions, so they can convey insights using the unique "vocabulary" of an institution's products, customer groups, and operations, presents inevitable hurdles tied to RAG architecture and knowledge base development. Approaching knowledge governance with the same strategic rigor as data governance, broadening knowledge scope, and boosting both recall and accuracy in knowledge retrieval are essential for Generative BI to genuinely fulfill its potential in driving data-driven business insights. These tasks pose the toughest challenges to tackle. The engineering rollout of Generative BI continues to be a demanding endeavor. We remain dedicated to persistent exploration and testing in this area.

4.5 Verification of AI models in the banking sector

Global banking is rapidly ramping up investment in AI and machine learning (ML). Tech giants are pouring resources into training large-scale models, like OpenAI's GPT-4 and Google's Gemini, while banks globally are actively seeking innovative ways to leverage AI for business enhancement. The Chinese banking sector has quickly embraced this trend, with independently controllable large-scale model applications already in use. The domestically developed DeepSeek model delivers strong performance at a competitive cost, and several leading commercial banks, including ICBC, PSBC, CCB, Bank of Jiangsu, and Bank of Beijing, have adopted it to bolster risk control, marketing, and compliance monitoring capabilities. AI's ability to improve performance and efficiency has made it increasingly vital in financial data processing and analysis.

However, as banks capitalize on AI's benefits, they also recognize the inherent risks and challenges of AI models. Many AI/ML models feature complex internal mechanisms and lack transparency, creating the **black box** problem that makes their decision-making processes difficult to understand. Without proper management, this opacity can erode the credibility of model outputs, undermining trust among regulators and stakeholders. Consequently, **model validation**, conducted throughout every stage of an AI model's lifecycle, has become essential for ensuring reliability and security. Regulators and industry bodies worldwide are intensifying their focus on AI model risks, imposing clear requirements for model governance. In this context, effectively applying AI/ML models while managing associated risks has become a strategic imperative for banking leaders.

Tom Wang
Partner, Strategy, Risk & Transactions, Deloitte China
+86 10 8512 4376
tomywang@deloittecn.com.cn

Jenny Huang
Partner, Strategy, Risk & Transactions, Deloitte China
+852 2852 1999
jennyjyhuang@deloitte.com.hk

Ivy Hou
Partner, Strategy, Risk & Transactions, Deloitte Canada
+1 416 8744 223
ihou@deloitte.ca

Zeki Wang
Senior Consultant, Strategy, Risk & Transactions, Deloitte Canada
+1 416 3541 256
zekwang@deloitte.ca

Table 1: Application and Value of AI Models in Banks

AI's Application Scenario	Value in Banking Sector
Credit risk assessment	Leverage borrower data analysis to boost the precision of loan approvals and credit scoring, while optimizing risk-adjusted pricing strategies
Fraud detection	Implement real-time transaction monitoring to spot unusual patterns and proactively thwart financial crimes, including credit card and online payment fraud
Intelligent investment advisory	Deliver tailored investment recommendations aligned with client preferences, elevating the automation and accuracy of wealth management offerings
Compliance monitoring & anti-money laundering	Minimize false alerts, flag suspicious transactions, and guarantee banking operations adhere to regulatory standards
Market risk management	Harness deep learning to predict market movements, streamline asset-liability management, and strengthen liquidity risk oversight
Measurement model valuation	Apply AI to assess financial assets, derivatives, and portfolios, enhancing pricing accuracy, optimizing capital deployment, and reducing exposure to market fluctuations

Critical role of model validation

As AI and ML models increasingly underpin decision-making in core business areas like credit approvals and investment strategies, rigorous validation and risk assessment are indispensable. **Model validation** acts as the foundation of model lifecycle management, directly shaping the trustworthiness and regulatory compliance of model outputs. Comprehensive validation helps uncover flaws and biases early, preventing flawed decisions that could trigger financial losses or regulatory breaches.

AI models' inherent opacity creates distinct risks. Their sophisticated algorithms and massive datasets make behavioral patterns hard to interpret at a glance. Without validation to catch biases or flawed patterns learned during training, models' "black box" problem may produce unfair or unreliable results. For example, some credit scoring models may place undue weight on irrelevant factors, leading to discriminatory outcomes. Model validation tackles this by integrating explainability tools to reveal decision logic, exposing hidden issues. Validation results must be presented clearly to business experts and leaders, ensuring they understand model behavior and can confidently act on its insights.

Regulators are tightening requirements for AI model governance and validation. The EU's AI Act designates financial AI systems, like credit risk assessment tools, as "high-risk," requiring strict adherence to standards for data quality, technical documentation, transparency, and human oversight. These models must provide interpretable decision-making processes and undergo human oversight to avoid unintended consequences from full automation. Though the U.S. lacks specific AI financial regulations, the Federal Reserve and the Office of the Comptroller of the Currency released the Guidance on Model Risk Management (SR 11-7) in 2011, covering all financial models, including AI. SR 11-7 mandates banks implement a comprehensive model risk framework, emphasizing independent model validation and continuous governance processes for monitoring and enhancing models to reduce associated risks.

In China, regulators have intensified their focus on AI model risk governance. In January 2022, the China Banking and Insurance Regulatory Commission (CBIRC) released the *Guidance on Digital Transformation of Banking and Insurance Industries*, marking the first explicit articulation of AI model risk management requirements. The guidance requires banks to integrate risk controls when adopting new technologies and models. The China Banking Association unveiled the *AI Model Risk Management Framework* the same year, outlining risk management principles and processes throughout the AI model lifecycle while offering standardized industry guidance. In 2024 and 2025, China introduced new AI governance regulations, including the *Basic Security Requirements for Generative AI Services* and the AI Safety Governance Framework. These regulations prioritize data security, model safety, and risk classification, compelling the financial sector to meet stricter standards in risk prevention & control, data security, privacy protection, ethics, and compliance. These regulatory developments highlight that transparency, interpretability, and prudent governance are essential for AI model deployment in global and Chinese markets. Banks must recognize AI models as potential risk sources and manage them with rigor comparable to credit and market risks, ensuring compliance and control throughout model development, validation, and operational use.

How does the validation of AI models differ from that of traditional banking models? For traditional banking models, such as statistical regression-based risk measurement tools, validation centers on confirming model assumptions, ensuring data completeness and reliability, and verifying result robustness. However, complex AI/ML models demand more than traditional approaches. With advanced algorithms and high-dimensional data, AI model validation requires broader methodologies, including deeper performance testing, stricter data quality assessments, and scrutiny of internal model mechanisms. In essence, AI model validation must maintain traditional accuracy and stability standards while addressing specialized concerns like bias, fairness, and interpretability. This raises the bar for banks' internal model risk management and highlights model validation's pivotal role in the AI-driven financial landscape.

Table 2: Comparison of Validation Methods between Traditional and AI/ML Models

	Validation Activity	Traditional Model	AI/ML Model
1	**Data evaluation**	• Evaluate the completeness, accuracy, consistency, and representativeness of the data	• ML models may require additional considerations, such as checking for bias and addressing class imbalance issues
2	**Rationality of model concept**	• Assess the model's assumptions, the variables used, and the rationale for model design	• ML models can be more complex and lack interpretability, necessitating greater efforts to understand and explain them
3	**Result analysis**	• Conduct back testing, out-of-sample/out-of-time testing (overall or segmented)	• For ML models, results may or may not align with traditional testing; additional factors like transparency, interpretability, and fairness should also be considered and tested
4	**Implementation status**	• Verify that the model implemented in production matches the version approved during validation	• Evaluate the model's implementation, including code reviews and testing, and ensure proper integration into the broader system
5	**Establish benchmarks**	• Where applicable, develop benchmark models to ensure they address the key weaknesses (identified through validation) of the proposed model	• Compare ML models with other ML models or state-of-the-art technologies. ML models should adapt to evolving data dynamics and continuously enhance their performance
6	**Continuous monitoring**	• Conduct back testing, out-of-sample/out-of-time testing (overall or segmented)	• Monitor ML models for stability, robustness, data drift, and model degradation • Additionally, continuous monitoring for ML may differ, with a focus on ongoing user feedback and the governance structure surrounding sustained usage
7	**Relevant documentation**	• Review model documentation for accuracy, transparency, and inclusion of test activity objectives and design, annotated result summaries, and evaluations of analyses, referencing completed work	• Additional documentation is required for the training process, data sources, and any interpretability efforts of ML models

* The table compares the similarities and differences between traditional model validation (relying on fixed assumptions, linear relationship testing, etc.) and AI model validation (emphasizing data bias detection, model complexity analysis, etc.).

Core methods for model validation

Given the complexity and high risks associated with AI/ML models, banks should set up a systematic model validation system to guarantee their robustness, transparency, and regulatory compliance. As AI applications expand in the financial sector, model validation has evolved into a technical hurdle and a vital element of risk management and regulatory adherence. Drawing on its world-class risk management know-how, Deloitte offers all-around model validation methods to help banks refine their model governance structures.

Table 3: Model Validation Methods

Validation Method	Goal	Application Scenario
Backtesting	Evaluate models' predictive accuracy by comparing historical data with actual results	Credit risk assessment, market risk modeling
Stress testing and scenario analysis	Assess the robustness of models under extreme market conditions	Liquidity risk management, asset pricing, capital adequacy testing
Data quality and hypothesis verification	Ensure data integrity and verify the validity of hypotheses	Quantitative trading, derivative pricing, credit rating
XAI	Improve model transparency and ensure that model decisions are consistent with business logic	Credit review and approval, smart investment advisory, anti-money laundering monitoring, compliance supervision

Deloitte can assist banks in constructing a comprehensive AI model governance framework, encompassing all key aspects including validation, evaluation, compliance, technology utilization, and capability enhancement. It strives to maintain a harmonious equilibrium between technological advancements and risk mitigation, thereby promoting the safer, more efficient, and regulation-abiding application of AI in the banking sector.

Independent validation
Carry out unbiased and objective model audits to verify adherence to international regulatory standards, thereby boosting model transparency and reliability.

Risk assessment and optimization
Pinpoint potential vulnerabilities, enhance model stability, minimize data discrepancies, and refine predictive accuracy.

Compliance governance
Devise governance frameworks tailored to global and local AI regulations, augment model interpretability, and guarantee full compliance.

Technological empowerment
Supply automated validation tools and data analytics platforms to streamline banks' AI governance processes and diminish operational risks.

Capability building
Aid banks in nurturing in-house AI risk management teams through tailored training and workshops, ensuring sustained and stable operations.

Strategic recommendations for banking leaders

AI/ML technologies hold immense potential for the banking sector, promising unparalleled efficiency gains and deeper insights for risk management and business strategy. Yet, these advantages are accompanied by inherent risks, as the complexity of AI models places greater demands on risk management and compliance functions. In response, banking leaders should adopt the mindset that "models are risks," viewing AI models as potential risk vectors and incorporating them into a holistic risk management framework, akin to how credit risks are managed. By implementing rigorous model validation, ongoing performance tracking, and stringent governance policies, banks can contain model risks within acceptable limits, fostering innovation while mitigating potential threats.

As AI technologies progress (including more advanced generative models, quantum computing-enhanced AI, and AI-blockchain integration), the models employed by banks will grow more varied and intricate. This necessitates the continuous evolution of model validation techniques, integrating cutting-edge interpretation and testing approaches. Risk managers must stay alert to new risk types and act swiftly to address them. Regulatory bodies worldwide are expected to regularly refine rules, demanding greater transparency, fairness, and robustness from AI models. In this ever-changing landscape, close cooperation among banks, regulators, and tech firms is vital to set industry benchmarks and best practices, balancing AI innovation with financial stability.

- **Enhance the model governance structure:** Set up a cross-departmental model risk management committee, craft explicit policies and procedures for AI model management, integrate all AI/ML models into a consolidated risk monitoring roster, and define clear responsibilities for model development, validation, approval, and updates.

- **Bolster model validation proficiency:** Allocate resources to assemble a specialized model validation team and tools, guaranteeing that every critical AI model is subjected to thorough independent validation prior to deployment. Implement a system for ongoing performance monitoring, periodically evaluate discrepancies between model forecasts and actual outcomes, and swiftly recalibrate or retrain models to sustain their efficacy.

- **Stay updated on regulations and prioritize compliance:** Continuously track the latest regulatory changes concerning AI models at home and abroad, and actively evaluate the disparity between the current model governance status and regulatory mandates. For high-stakes AI applications like credit scoring and intelligent investment advisory, prioritize improving data governance and model interpretability to ensure ample validation evidence can be presented to confirm model compliance and dependability during regulatory reviews.

- **Foster interdisciplinary talent:** Concentrate on cultivating a cadre of interdisciplinary experts who grasp AI technology and banking operations, along with regulatory demands. On one front, intensify internal training to acquaint data scientists with financial compliance and risk management; on the other, impart fundamental knowledge of AI model principles to risk and compliance staff to promote collaboration and collectively elevate model governance benchmarks.

- **Tap into external expertise:** Proactively engage with seasoned consulting firms and research entities to introduce third-party independent evaluations and best practices. Acquire cutting-edge AI risk management tools and methodologies through consulting engagements and industry dialogues, expedite internal capacity development, and establish the groundwork for a **sustainable AI model governance framework**.

Conclusion

Model validation and risk management are not obstacles to innovation; instead, they underpin and safeguard the effective deployment of AI strategies. Banking leaders should adopt AI transformation with a cautious yet forward-looking mindset, fostering innovation through thorough validation and compliance controls while venturing into new business areas within manageable risk levels. Banks can only thrive in the AI era by seamlessly blending risk management with technological progress, harnessing AI's full potential while maintaining safety and regulatory standards.

4.6 "One table" opens up a new era of digital supervision

Following the important guidelines issued by the CPC Central Committee and the State Council on accelerating the establishment of a systematic, efficient, and binding statistical supervision system and leveraging statistical supervision to prevent and defuse major risks, the National Financial Regulatory Administration (NFRA) is pushing forward the relevant tasks in areas such as regulatory statistics, risk monitoring, technological regulation, and digital regulation, aiming to strengthen and improve modern financial regulation. The pilot "one table" for regulatory reporting was launched in late 2022. It is designed to promote regulatory data standardization, break down data barriers, and enhance regulatory data collection and integration capabilities. It is also intended to accelerate the application of regulatory big data platforms and explore the implementation of full-process online banking regulation rating. After nearly three years of pilot work and expansion, "one table" is expected to cover all necessary data by the end of 2025, ushering in a new era of digital financial regulation.

Henry Cao
Data Risk Management Leader, FSI
RegTech Leader
Deloitte China
+86 21 2312 7154
hencao@deloittecn.com.cn

Cynthia Cai
Partner, Data Risk Management, FSI
Deloitte China
+86 21 2316 6368
cycai@deloittecn.com.cn

The Resolution of the CPC Central Committee on Further Deepening Reform Comprehensively to Advance Chinese Modernization (hereinafter "the Resolution") was adopted at the third plenary session of the 20th CPC Central Committee. The Resolution provided guidelines for improving the financial regulation system. It proposed "bringing all financial activities under regulation pursuant to law, strengthening regulatory responsibilities and accountability, and reinforcing regulatory synergy between the central and local governments". The adoption of the Resolution contributes to strengthening and improving financial regulation and enhancing financial risk control capabilities. This move also plays a pivotal role in promoting high-quality financial development and building a financial powerhouse. In response to the new round of financial regulation system reform, the NFRA is formulating comprehensive requirements to cover institutional, behavioral, functional, penetrative and ongoing regulation. The landscape of financial regulation statistics will be reshaped.

From an external trend perspective, the banking sector remained subject to stringent regulation in 2024. A total of 6,299 penalty notices were issued to banking institutions nationwide, with fines and confiscations amounting to RMB1.741 billion. In 2025, regulators are expected to focus on the implementation of national financial policies for "the five major tasks" in the financial sector, government debt resolution, reform and risk management in small and medium-sized financial institutions, and real estate transformation.

Figure 1: Overview of the Main Areas Subject to Regulatory Penalties

Stringent Regulation amid Comprehensive Digitalization in 2024

The People's Bank of China

Number of penalty notices
688

Aggregate amount
RMB209 million

The biggest penalty
RMB13.87 million

National Financial Regulatory Administration

Number of penalty notices
5,442

Aggregate amount
RMB1.43 billion

The biggest penalty
RMB60.7398 million

State Administration of Foreign Exchange

Number of penalty notices
169

Aggregate amount
RMB103 million

The biggest penalty
RMB6.455 million

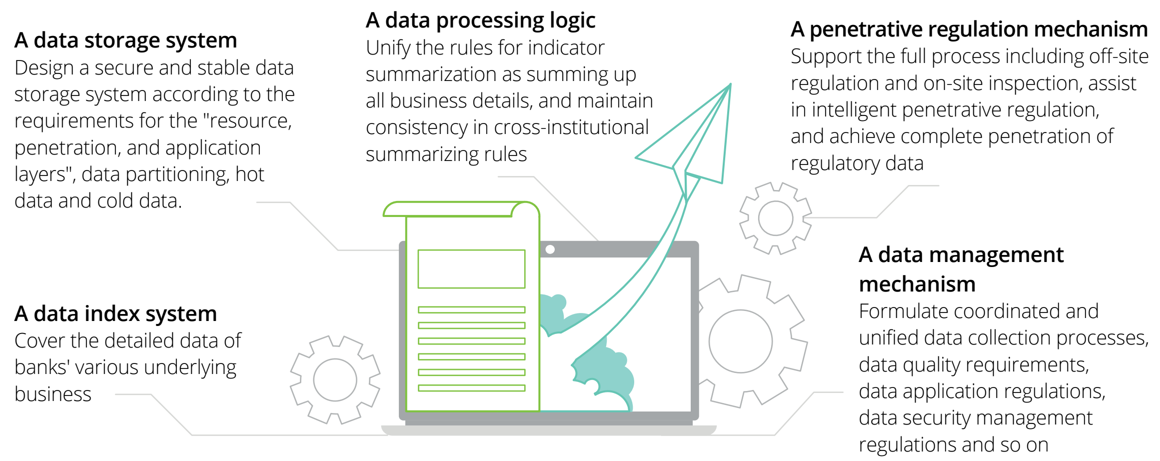
High-frequency words for regulatory penalties in2024	Main business areas
Authenticity of trade background	Bill business, trade financing business, etc.
Discounted cash flow to the drawer	Bill business
Credit funds misappropriated as deposits for bank acceptance drafts	Bill business
Unreasonable calculation of credit fund demands, non-compliant lending entity	Corporate loan business
Non-compliant post-loan fund flow	Corporate loan business
Non-compliant internet loan limit and term	Internet loan business
Independent risk control of internet loans	Internet loan business
Consumer rights protection in the internet loan business	Internet loan business
Falsehood in the inclusive business	Inclusive finance business
Issuance of insignificant small loans	Inclusive finance business
Inaccurate statistics of personal business loans	Inclusive finance business
Issuance of insignificant loans to small and micro businesses	Inclusive finance business
Incorrect statistics of green loans	Green finance business
Ineffective implementation or enforcement of green credit policies	Green finance business
Inveracious statistics of asset quality	Asset quality
Risk exposure postponing, business scale overstatement, profit adjustment	Asset quality
Non-compliant sales of financial and insurance products by proxy, entry of cooperative institutions, etc.	Proxy business
Authenticity of trading documents and their consistency with foreign exchange receipts and payments, declaration of international receipts and payments, etc.	International business
Illegal transfer of funds through internal accounts, risk exposure postponing, transfer of credit funds, etc.	Internal account management

Currently, "one table, official version 2.0" has been adopted by all the major state-owned banks and national joint-stock commercial banks. It is also piloted at foreign-funded institutions and regional banks under the regulatory administration of several provinces and municipalities including Zhejiang, Shanghai, Fujian, Jiangsu, Liaoning, Sichuan, Chongqing, Hebei, Jiangxi, Shandong, and Guangdong. Through pilot + expansion, the NFRA is expected to promote the application of "one table" among all institutions by the end of 2025.

Penetrative regulation from a panoramic perspective

"One table" is an important "**data project**" for establishing a unified regulatory data system and a unified data collection platform led by the NFRA statistical monitoring department. It aims to improve regulatory efficiency by building a **"five-in-one" framework** for data application in full-process penetrative regulation, **covering** data index, storage, processing, application, and management mechanisms.

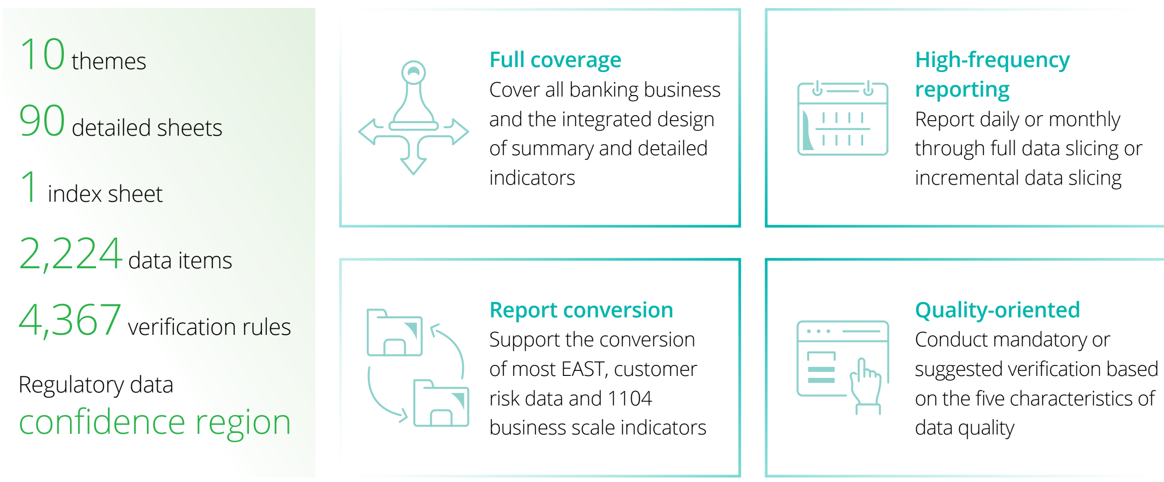
Figure 2: The "Five-in-One" Framework



"One table" denotes "reach" and "connection": "Reach" includes horizontal reach (covering all banking business) and vertical reach (integrated design of summary indicators and detailed indicators); "connection" refers to the connection among regulators' main regulatory data systems.

"One table" incorporates unified regulatory data collection norms and verification rules covering all banking products and services. It is innovative in various aspects including reporting methods and processes, compared with the existing regulatory reporting system.

Figure 3: "One Table" Description and Features



Unified model featuring multi-dimensional collection

"One table" is built on the EAST, 1104 and customer risk systems for data collection. EAST serves as the main reference, based on which certain data theme and model expansions have been made to design a more standardized unified data model. "One table" has been upgraded from version 1.0 and trial version 2.0 to official version 2.0. Its resource layer covers 10 data categories (institutional, customer, relationship, financial, product, agreement, transaction, status, resource, and parameter), 90 data sheets (85 from banks and 5 from wealth management registration centers) with a total of 2,224 fields, and one regulatory index sheet.

Figure 4: Panoramic View of "One Table, Version 2.0"

"One table, official version 2.0"

Detailed data

1 Institutional data (6 sheets)
- 1.1 Institutional information
- 1.2 Institutional relationship
- 1.3 Staff
- 1.4 Post information
- 1.5 Self-service machinery
- 1.6 Information on shareholders and related parties

2 Customer data (7 sheets)
- 2.1 Single legal person basic information
- 2.2 Group basic information
- 2.3 Inter-bank client basic information
- 2.4 Individual, small and micro business owners' basic information
- 2.5 Individual client basic information
- 2.6 Client financial information
- 2.7 Merchant information form*

3 Relationship data (8 sheets)
- 3.1 Important shareholders and major affiliated enterprises
- 3.2 Information on senior executives and key stakeholders
- 3.3 List of group entities
- 3.4 Group actual controller
- 3.5 Affiliated group information
- 3.6 Co-debtors
- 3.7 Individual client relationship related personnel
- 3.8 Correspondence between transactions and documents

4 Financial data (4 sheets)
- 4.1 General ledger accounts
- 4.2 Account information
- 4.3 Subsidiary ledger information
- 4.4 Subsidiary ledger changes

5 Product data (5 sheets)
- 5.1 Product business basic information
- ~~5.2 Loan product business~~**
- 5.3 Bond product business
- 5.4 Wealth management product business
- 5.5 Sales of insurance products by proxy
- 5.6 Cards

6 Agreement data (25 sheets)
- 6.1 Deposit agreement
- 6.2 Loan agreement
- 6.3 Project loan agreement
- 6.4 Internet loan agreement
- 6.5 Syndicated loan
- 6.6 Entrusted payment
- 6.7 Loan extension agreement
- 6.8 Guarantee agreement
- 6.9 Credit card agreement
- 6.10 Trade financing
- 6.11 Letter of credit agreement
- 6.12 Letter of guarantee and other guarantee agreements
- 6.13 Bill agreement
- 6.14 Bill rediscount agreement
- 6.15 real estate loan
- 6.16 Finance lease
- 6.17 Wealth management agreement
- 6.18 Entrusted Loan Agreement
- 6.19 Agency agreement
- ~~6.20 Sales agency agreement~~**
- 6.21 Investment agreement
- ~~6.22 Financing agreement~~**
- 6.23 Credit asset transfer
- 6.24 Loan commitment agreement
- 6.25 Internet loan cooperation agreement
- 6.26 Other agreements
- 6.27 Loan agreement supplementary information

7 Transaction data (12 sheets)
- 7.1 Client deposit account transactions
- 7.2 Credit transactions
- 7.3 Trade financing transactions
- 7.4 Credit card transactions
- 7.5 Derivatives transactions
- 7.6 Inter-bank transactions
- 7.7 Investment transactions
- 7.8 Non-performing asset disposal
- 7.9 Credit asset transfer
- 7.10 Internal subsidiary ledger transactions
- 7.11 Wealth management and agent products transactions*
- 7.12 Financing transactions*

8 Status data (16 sheets)
- 8.1 Loan receipt
- 8.2 Letter of credit status
- 8.3 Advance payment status
- 8.4 Credit card account status
- 8.5 Credit card installment status
- 8.6 Derivatives inventory
- 8.7 Inter-bank inventory
- 8.8 Investment situation
- 8.9 Financing situation
- 8.10 Wealth management products status
- 8.11 Off-balance sheet handling fees and revenues
- 8.12 Five-level classification status
- 8.13 Credit status
- 8.14 Deposit status
- 8.15 Repayment status
- 8.16 Client wealth management product holding status

9 Resource data (5 sheets)
- 9.1 Investment target relationship
- 9.2 Investment and financing targets***
- 9.3 Collateral
- 9.4 Commercial documents
- 9.5 Wealth management investment targets***

10 Parameter data (2 sheets)
- 10.1 Common codes (no need to submit)
- 10.2 Exchange rate and interest rate

Regulatory data
- Key regulatory indicators

*Added to version 1.0 **Deleted from version 1.0
***Split from <investment target> in version 1.0

The unified model of "one table" is designed to enable unobstructed data flow in regulatory indicator processing, facilitating full-process online banking regulation rating and off-site data monitoring.

Innovative pattern characterized by co-construction and co-governance

"One table" adopts a new regulatory reporting channel. Banks need to independently construct "confidence regions" in accordance with regulatory standards and regularly push data for real-time access by regulators. This new pattern realizes the cooperative storage and linkage of institutional and regulatory data, facilitating high-quality regulatory data co-governance.

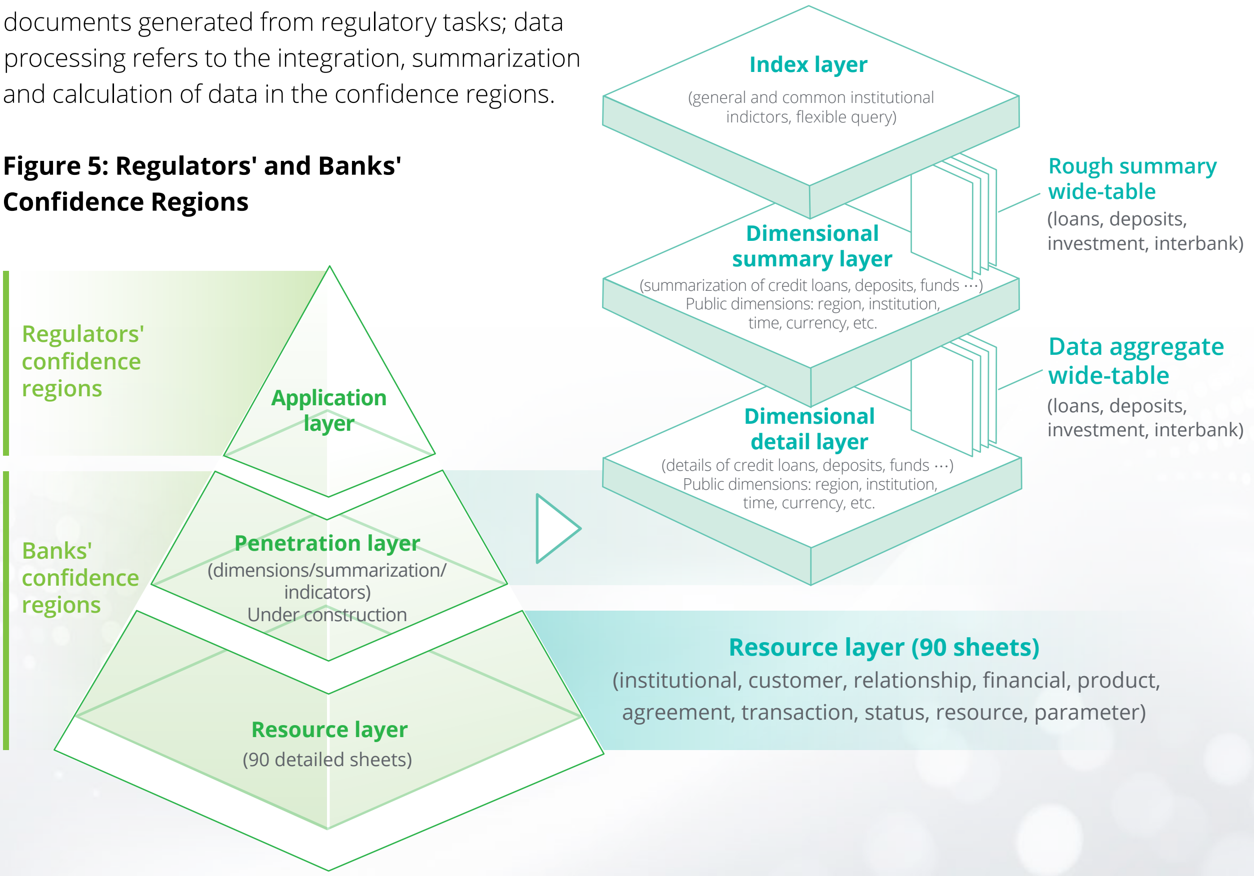
Regulators can integrate local "hot data" and institutional "cold data" to innovate cross-institutional and cross-regional data cooperation models. These models will contribute to unobstructed application of indicators and detailed data in regulation, thus enhancing timely risk monitoring and comprehensive risk management, promoting refined regulatory management decisions, and improving financial risk perception. They will also accelerate the establishment of a data ecosystem characterized by co-construction, sharing and co-governance in financial regulation, elevating the level of informatization in financial regulation.

Institutional confidence regions include data storage and processing: data storage refers to saving data on the resource and penetration layers (detailed, summarized and indicator data, etc.) as well as from documents generated from regulatory tasks; data processing refers to the integration, summarization and calculation of data in the confidence regions.

"One table" adopts layered construction and management:

- Banks' confidence regions involve the construction of the resource and penetration layers: The resource layer consists of detailed data covering 90 sheets collected from banks in accordance with data collection interface standards; the penetration layer is built on the resource layer data and includes the dimensional detail layer, the data aggregate wide-table, and the index layer according to the principles of unity and flexibility, moderate perspectiveness, appropriate redundancy, sharing and reusability.
- Regulators' application layer is positioned to meet the demand for usage of regulatory statistics. Through system services or data queries, it will support regulatory statistics and monitoring systems and contribute to comprehensive digital application in regulation. Currently, regulators' application layer has taken its initial shape. It can dynamically monitor each bank's key operational, risk, and spread indicators and changes on a daily basis.

Figure 5: Regulators' and Banks' Confidence Regions



Data base reshaping to boost high-quality development

The "one table" data project provides the best opportunity for banks to reshape the regulatory data base. It plays a significant role in their digital transformation and statistical management.

First, establish a full-lifecycle product management mechanism. "One table" will prompt banks to further strengthen product management, promote the standardization of the processes and data norms for creating new products and new business, reinforce the management of master data for new products and new business, and ensure the data integrity of regulatory statistics. It will also facilitate the management of banks' overall business and product data by incorporating unified product coding standards.

Second, improve the customer operations system. "One table" enables banks to further strengthen master data governance and system support in line with their own management needs. It also allows banks to enrich and optimize customer tags and hierarchical management relationship graphs based on the requirements for regulatory reporting of customer information. Thus, a well-developed customer operations system will come into being.

Third, reinforce penetrative risk management. "One table" sets higher requirements for collecting the information on customer association relationships, loan investment orientation, self-owned and wealth management underlying assets. It also spurs banks to further strengthen transaction management, standardize transaction channels and classifications, pay attention to fund flows, and secure actual counterparties. Banks can make the one-to-one association between transaction/business information and financial changes, and see through accounts to perceive the essence. This is crucial for banks to enhance credit and liquidity risk monitoring.

Fourth, realize business data interconnection. "One table" can cover detailed business data from multiple perspectives and dimensions. By running through the entire business system, it cements the integration of data and business, and breaks down "data silos". It will facilitate the full integration and sharing of the overall data, leading to better "consistency between business and finance".

Fifth, support the monitoring of operational and management indicators. "One table" provides authoritative data on daily operations and management. It ensures the authoritativeness of business data and further enhances data quality.

Figure 6: Implications of Applying "One Table" in Banks

Implications of applying "one table" in banks: realize data homology, improve data quality, and reduce the burden of reporting in the future

1 Improve the product management framework	2 Clarify customer data management responsibilities	3 Reinforce penetrative risk management	4 Realize business data interconnection	5 Support the monitoring of operational and management indicators
Manage the overall business and product data, formulate unified product coding	Build a customer operations system based on customer information reporting requirements	Refine information collection requirements, utilize business data verification models	Cover detailed business data from multiple perspectives and dimensions	Provide authoritative data on daily operations and management
Establish product management mechanisms and standards	Create a unified customer view	See through accounts to perceive the essence	Run through the entire business system, cement the integration of data and business	Ensures the authoritativeness of business data
Establish a regularly updated product catalog	Strengthen system support	Enhance credit and liquidity risk monitoring capabilities	Break down "data silos"	Enhance business data quality
	Solve difficulties in customer data management		Facilitate the full integration and sharing of the overall data	

New era, new challenges, new missions

The "one table" data project collects the overall customer, business and accounting data on a daily basis. Therefore, it poses new challenges for banks' data governance, team building, data architecture, and data operation and maintenance.

Figure 7: New Challenges Posed by "One Table"

1 Regulatory trend: stringent regulation + strict accountability

- **Conduct thorough inspection, impose necessary punishment**
- **Cross-check** multiple reporting systems, monitor indicator changes
- Implement **off-site monitoring of business compliance** issues through regulatory data

2 Management requirement: head office and branches + "business-technology-data-finance" integrated team

- Regulators require each institution to attach great attention, and the brank president in charge must take the command personally
- Establish an organizational guarantee mechanism, leading groups, and working groups
- Cover relevant **business departments, the science and technology department** and the **statistics department**
- Prepare sufficient resources, allocate **designated personnel** to the lead department

3 New reporting pattern: confidence region construction + daily reporting

- "One table" data is administrated by **the NFRA statistical information bureau**, and confidence region construction is supervised by **the NFRA technology bureau**
- "One table" data need to be handled by designated personnel and reported daily, and therefore confidence regions require specialized **service operation and maintenance, as well as security management**, different from the current IT operation and maintenance pattern

4 Data architecture requirements: organize the data architecture + strengthen system support

- **Organize the data architecture**, ascertain the data relation between "one table" and EAST and 1104, reshape the bank's data base
- Implement T+1 reporting requirements for foreign banks, **promote systematic governance and transformation from the source** through regulatory requirements, ensure that data standards and quality meet requirements from the source

5 Cross-system verification requirements: cross-system verification + homogenous transformation

- The official version 2.0 incorporates **4,300+ "five characteristics"** rules and **200+** indicator rules, and it is necessary to carry out **EAST/1104/"one table" variance analysis and problem solving**
- A reasonable explanation for verification failure should be provided

6 Formal reporting timetable requirements: complex standards + tight schedule

- The data volume of "one table" is **nearly twice that of EAST**, with expanded scope and increased difficulty in data reporting, and therefore preparations must be made in advance
- Currently, joint-stock banks have **less than three months** to initiate first large-scale reporting since the official document release, and therefore preparations must be made in advance

In response, banks should take high-quality data as a guarantee and give priority to six core tasks:

Core task 1 Carry out overall planning and resource allocation, build a "head office and branches" + "business-technology-data-finance" integrated team

Establish a "one table" leading group + working group structure, with the head of the institution in charge of the leading group. Build an internal integrated team covering relevant business departments, the science and technology department and the statistics department; prepare sufficient resources, and allocate designated personnel to the lead department; promote the integration of business, finance, technology, and data through multi-team collaboration, in view of the close relation between the "one table" data project and 1104 and EAST.

Core task 2 Organize the data architecture and enhance the automatic collection function amid "one table" engineering

Guided by the overall digital transformation strategy, organize the data architecture, shift from the past stovepipe reporting systems featuring the combination of system and manual data collection to 1+1+N, i.e. unified data base + unified statistical management + N intelligent analysis applications, and make full use of technologies such as big data, cloud computing and artificial intelligence to reshape and upgrade the regulatory data base.

Core task 3 Reconstruct the regulatory statistical indicator system, trace the source of statistical indicators, and reinforce unified supervision of data assets

During the period of "one table" data engineering, cross-check the regulatory data from EAST, 1104 and customer risk reporting, trace the source of statistical indicators, take stock of the data elements associated with statistical indicators, and build a valuable regulatory data asset base.

Core task 4 Enhance the development of master data on customers, products, institutions, employees, etc. during the "one table" system construction

The product-themed reports in "one table" data engineering require banks to standardize product management by providing consistent coding standards and master data management requirements, serving as a guide for regulating product development and business management. Additionally, collecting data on group customers, customer-related parties, and interbank clients will improve banks' customer management and KYC processes. It is recommended that all institutions take this opportunity to conduct specialized master data governance, laying a solid foundation for the digital and intelligent operations of the bank.

Core task 5 **Full-chain data sorting across business categories based on business-finance alignment: From product catalogs to transaction details, customer agreements, and financial accounting records**

"One table" data engineering involves collecting detailed data on bank customers, agreements, transactions, and financial accounts. Given the complex interconnections among these datasets, institutions should conduct end-to-end data sorting for each business category, spanning product catalogs, transaction details, customer agreements, and financial accounting details based on business-finance alignment. This approach ensures consistency between business and financial details for customer and internal accounts, facilitating the refined transformation of business-finance integration and accounting.

Core task 6 **Implement the requirements of "one table" engineering management to reshape regulatory data governance rules and management practices**

Banks should formulate administrative measures, core processes, guiding principles, and corresponding assessment requirements to improve data ownership definition, closed-loop data quality management, data demand management, new product and business management, and the establishment of a Single Source of Truth for indicators. This approach will continuously foster the internal regulatory data governance culture and improve management systems, thereby providing guarantee for producing high-quality regulatory data.

Conclusion

From the release of good practice standards to the introduction of standardized regulatory data specifications for banking financial institutions, and from data governance guidelines to the "one table" data engineering, Deloitte has supported renowned domestic and international banking and insurance institutions in their regulatory data transformation from "opaque data lineage and disordered management" to "clear data lineage and high-quality, organized data governance." Based on our extensive practical experience, forward-looking industry insights, and specialized expertise accumulated through years of professional services, we design customized solutions to help clients lay a solid foundation for regulatory data governance. The solutions include building management systems and operational models, implementing regulatory data standards, designing multi-level data quality verification rules, constructing unified regulatory data marts and platforms, and developing intelligent regulatory data applications. Ultimately, these solutions enable financial institutions to achieve value transformation in their regulatory data governance.

4.7 Analysis of key compliance points under the *Administrative Measures for Data Security of Banking and Insurance Institutions* from an internal audit perspective

Darwin Tang
Partner, IT Audit & Assurance, Deloitte China
+86 10 8512 5766
darwintang@deloittecn.com.cn

Chaphy Lin
Partner, Cyber Strategy & Transformation, Deloitte China
+86 10 8512 4888
chaphylin@deloittecn.com.cn

Zoe Wang
Manager, Cyber Strategy & Transformation, Deloitte China
+86 10 8524 6840
zoedwang@deloittecn.com.cn

New data security regulations impose higher requirements on internal audit

In recent years, with the deepening of digitalization and intelligence in the financial industry, data has become a core strategic asset for banking and insurance institutions. However, the value of data comes with significant security risks and regulatory pressures. Against the backdrop of an increasingly complex global cybersecurity environment and frequent data breaches, how financial institutions can strike a balance between data compliance, risk prevention and control, and business innovation has become an important issue in IT risk management.

On 27 December 2024, the NFRA issued the *Administrative Measures for Data Security of Banking and Insurance Institutions* (hereinafter referred to as the "Measures"), which clarified the responsibilities of banking and insurance institutions in data security management. The Measures require the institutions to build a security governance system covering the entire data lifecycle and to strengthen supervision and management of data security. NFRA requires the institutions to conduct a data security assessment annually and a comprehensive data security audit at least every three years. For financial institutions, in addition to upgrading data security technologies and management measures within business and technology departments, their audit departments should also improve audit methodologies, talent allocation, and technical capabilities to ensure that the institutions' data security management is compliant and effective.

The roles and responsibilities of audit departments in data security compliance

According to the Measures, financial institutions are required to conduct a data security risk assessment annually. Audit departments should carry out a comprehensive data security audit at least once every three years and a special audit in the event of any major data security incident. Audit departments, as the third line of defense in financial institutions, primarily exercise independent and objective supervisory functions, evaluate and identify weaknesses in the data security governance of financial institutions, and ensure the effective implementation of all data security controls from an internal audit perspective. Although the first and second lines of defense usually conduct data security risk assessments, audit departments should review their methodologies, execution, and risk mitigation measures to ensure the effectiveness of data security risk management.

Audit departments must also ensure compliance with regulatory requirements in their data use. The Measures require banking and insurance institutions to establish a clear data classification and grading system, with strict controls over the collection, storage, sharing, transmission, and deletion of data. While overseeing financial institutions' implementation of data classification, grading, and protection requirements, audit departments should pay attention to whether they implemented adequate technical and administrative controls for core and important data. Meanwhile, audit departments should ensure their compliance when using data, such as adhering to the principle of "business necessity authorization" for data use.

Key points of data security audits

In practice, audit departments of banking and insurance institutions should focus on whether the institutions have strictly implemented the requirements outlined in the Measures in the following aspects: data governance framework, data classification and grading, data security management, technical protection measures, personal information protection, and risk monitoring and handling.

1 Data security governance

- Whether a multi-tiered data security governance system covering the board of directors, senior officers, data security coordination departments, and technology protection departments is established, with clear division of responsibilities across all departments
- Whether data security accountability is implemented, with a centralized management department designated and security management responsibilities defined for each business area
- Whether data security is incorporated into the comprehensive risk management system, internal control evaluation, and audit scope, with a technical protection department designated as the primary responsible entity
- Whether a robust data security culture is fostered through institution-wide education and training programs to enhance awareness and proficiency in data security protection

2 Data classification and grading

- Whether a data classification and grading protection system and a dynamic management mechanism are established, supported by a data catalog and data classification and grading norms, with differentiated security protection measures implemented accordingly
- Whether data is classified into core, important, and general levels based on its significance and sensitivity
- Whether the time-sensitive management of data security levels is strengthened, with a dynamic mechanism established for the approval of adjustments on data security grading

3 Data security management

- Whether data security policies, full lifecycle management measures, classification and grading mechanisms, and enterprise-level data service management framework are established
- Whether implementation guidelines are formulated for scenarios such as external data introduction, data sharing, and cross-border data transfer
- Whether data security assessments are conducted as required
- Whether related data collection or processing activities cease immediately upon termination of financial business or services
- Whether anonymization, de-identification, or other necessary security measures are adopted during data processing
- Whether access authorization controls are implemented for sensitive-level and above data, and whether audits have been conducted on data access behaviors
- Whether a firewall is established to segregate data between a bank's parent and branches
- Whether outsourced data processing is incorporated into the scope of IT outsourcing management, with clear definitions of responsibilities and protective measures for each party involved
- Whether data transfer measures are secure and reasonable, and whether data subjects are informed timely

4 Technical protection of data security

- Whether technical controls are deployed from both logical and physical security perspectives for data at different security levels
- Whether reasonable data access control policies are configured, with audits conducted regularly
- Whether secure data transmission methods, storage measures, and destruction strategies are implemented
- Whether data security requirements are met during system development, testing, and production deployment phases
- Whether an admission control mechanism is established for externally sourced model and algorithm products
- Whether the development and application of AI models are uniformly managed
- Whether reasonable disclosure, monitoring, detection, and emergency response measures are in place for AI technology usage
- Whether centralized security governance is implemented for interface design, development, service provision, and operations

5 Personal information protection

- Whether the processing of personal information complies with the principle of "explicit notification and prior consent"
- Whether personal information is excessively collected
- Whether the rules for processing personal information are clearly and explicitly presented
- Whether provision of services is refused on the grounds of disagreement with personal information processing
- Whether personal information protection impact assessments are conducted as required
- Whether, in cases of entrusted processing, the requirements for the entrusted party's processing of personal information are specified
- Whether fairness and impartiality are ensured in automated decision-making
- Whether emergency remediation and notification capabilities are in place for personal information leakage incidents

6 Data security risk monitoring and handling

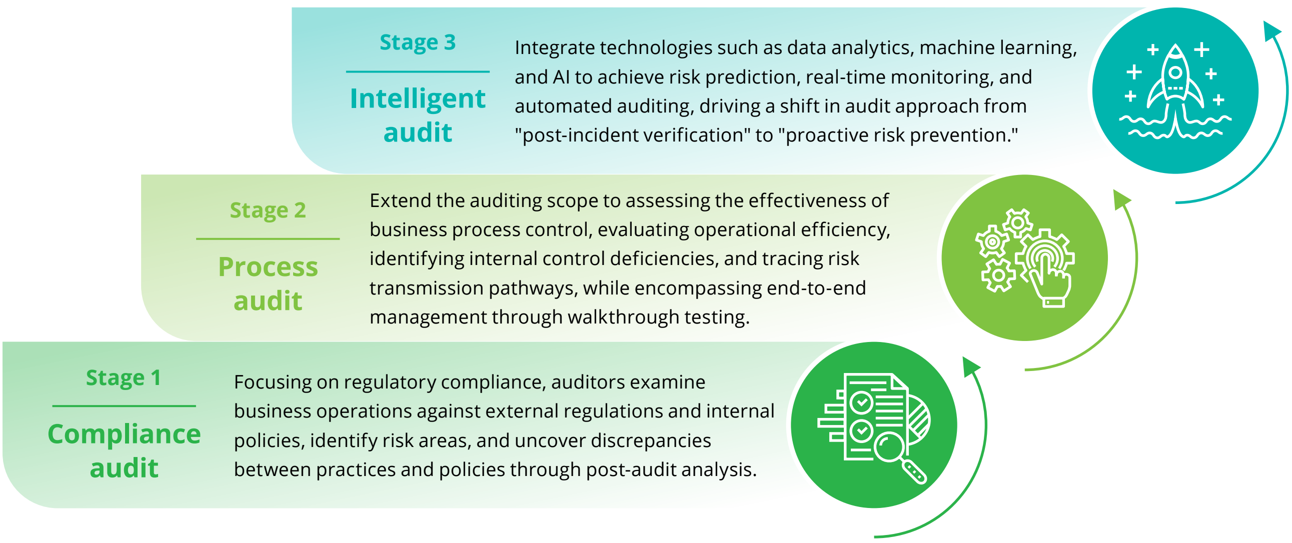
- Whether data security risks are incorporated into the comprehensive risk management system, with monitoring, assessment, emergency response, and remediation procedures clearly defined
- Whether a proactive threat monitoring mechanism is established, covering nine types of threats, including abnormal access, third-party data breaches, and sensitive data flows
- Whether annual risk assessments and triennial comprehensive audits (with ad-hoc audits following major incidents) are conducted, and whether external auditors maintain independence without conflicts of interest
- Whether an emergency response mechanism is established based on a four-tier incident classification system (including contingency plans, simulation drills, response procedures, root-cause analysis, and supplier accountability tracing)
- Whether regulatory reporting deadlines are strictly adhered to, including initial reporting within two hours, formal written reporting within 24 hours, immediate reporting for critical incidents, dynamic progress updates during response operations, and submission of post-incident reports including impact assessment, root-cause analysis, and corrective action plans within five days following incident resolution

Pathways for enhancing data security audit capabilities of financial institutions

Under the new data security regulations, traditional compliance audits can no longer fully meet the requirements of data security audits. The technical challenges in data security are growing, spanning automated decision-making analytics, data virtualization, and model algorithm development, requiring audit departments to develop interdisciplinary expertise. Many leading financial institutions are actively enhancing their internal audit teams' IT audit capabilities to ensure they can comprehend complex data security technology frameworks and evaluate the effectiveness of data security systems.

Based on Deloitte's extensive experience in serving financial institutions, we believe their audit capabilities have extended from compliance and process audit to intelligent audit.

Figure 1: Three-Stage Evolution of Audit Capabilities in Financial Institutions



Leading financial institutions are gradually acquiring or have already attained the audit capabilities at Stage 3, while the IT auditing capabilities of most small and medium-sized institutions are confined to Stage 1 or 2. Facing the challenges of data security compliance, the audit departments of leading financial institutions are proactively exploring more efficient and accurate audit methods to further enhance the efficiency and effectiveness of data security audits.

Meanwhile, to better address the challenge of data security auditing, many institutions choose to engage third-party professional consultants or audit firms to gain access to cutting-edge technical capabilities and industry expertise. These external institutions can provide independent and objective assessments and assist financial institutions in optimizing their data security governance systems, thus improving data protection and risk management.

Conclusion

The promulgation and implementation of the *Rules on Data Security of Banking and Insurance Institutions* (hereinafter referred to as the "Rules") provide financial institutions with a clear compliance framework for data security management and set forth explicit supervisory requirements for audit departments. In response to the Rules, audit departments should redefine their roles, evolving from compliance inspectors to promoters of institutional data strategy. During this process, audit departments should enhance their technological auditing competencies and strategically leverage external resources to incorporate industry-leading practices. The adoption of such measures ensures that data security governance complies with regulatory requirements and more effectively drives digital transformation and business growth.

4.8 Difficulties in serving rural revitalization for banking and financial institutions

Jacky Zhu
Partner, Audit & Assurance,
Deloitte China
+86 21 6141 1547
jaczhu@deloittecn.com.cn

Xiangfei He
Associate Director, Audit & Assurance,
Deloitte China
+86 21 2316 6068
xianhe@deloittecn.com.cn

Policy evolution: From top-level design to targeted implementation

Since its initial proposal in the 19th National Congress of the Communist Party of China in 2017, the rural revitalization strategy has progressively evolved from a macro-level blueprint to in-depth implementation. In 2022, China's No. 1 Central Document for the first time designated "strengthening financial services for rural revitalization" as a specific task, signaling a systematic boost to financial support mechanisms. In 2025, China's No. 1 Central Document "*Opinions on Further Deepening Rural Reform and Steadily Advancing Comprehensive Rural Revitalization*" further clarifies the "one province, one policy" reform path, aiming to guide capital to flow into rural areas through differentiated required reserve ratios, refinancing, and other tools, while incorporating innovative mechanisms such as livestock collateral and agricultural facility financing into the policy framework.

Figure 1: Timeline of Policies Related to Rural Revitalization

2017.10 1

The ***Report to the 19th CPC National Congress*** *(Secure a Decisive Victory in Building a Moderately Prosperous Society in All Respects and Strive for the Great Success of Socialism with Chinese Characteristics for a New Era)* delivered at the 19th National Congress of the Communist Party of China by General Secretary Xi Jinping

> Proposed the implementation of the rural revitalization strategy for the first time

2018.02 2

The ***Opinions on Implementing the Rural Revitalization Strategy*** issued by the CPC Central Committee and the State Council

> No. 1 Central Document called for **improving financial services**, emphasizing that local financial institutions should **better serve rural revitalization**, with a **focus on extending inclusive finance to rural areas**

2018.09 3

The ***Plan for the Rural Revitalization Strategy (2018 – 2022)*** issued by the CPC Central Committee and the State Council

> Proposed to strengthen financial support for agriculture by improving the financial support system, innovating financial products and services, and refining incentive policies

2019.06 4

The ***Guidelines on Promoting Rural Industry Revitalization*** issued by the CPC Central Committee and the State Council

> Innovated rural financial services by guiding county-level financial institutions to use absorbed deposits mainly for local development, broadening the scope of collateral, increasing financing guarantees for rural industrial projects, and supporting qualified agricultural enterprises in going public for financing

2021.03 5

*The **Opinions** of the CPC Central Committee and the State Council **on Comprehensively Promoting Rural Revitalization and Accelerating Agricultural and Rural Modernization***

> No. 1 Central Document encouraged banking financial institutions to establish **specialized units for rural revitalization** and mandates improvements in **governance structures and internal control mechanisms of agricultural-related financial institutions**

2021.04 6

The ***Law of the People's Republic of China on the Promotion of Rural Revitalization*** adopted by the Standing Committee of the 13th NPC at its 28th Meeting

> The rural revitalization strategy has entered a new stage, ensuring **legal compliance and implementation in accordance with the law**, with a priority on promoting inclusive finance in rural areas

2022.02 7

The ***Guidelines on Key Tasks in Comprehensively Promoting Rural Revitalization for 2022*** issued by the CPC Central Committee and the State Council

> No. 1 Central Document mandated financial institutions to strengthen **financial services for rural revitalization**

2023.02 8

The ***Guidelines on Key Tasks in Comprehensively Promoting Rural Revitalization for 2023*** issued by the CPC Central Committee and the State Council

> No. 1 Central Document urged financial institutions to **boost lending in rural revitalization-related fields**

2023.06 **9**

The ***Guiding Opinions on Providing Financial Support for Comprehensively Advancing Rural Revitalization and Accelerating the Building of a Nation Strong in Agriculture*** released by PBC, NFRA CSRC, MOF, and MARA

> Jointly issued by five ministries and commissions to establish and improve a **modern rural financial service system** that is multi-tiered, widely accessible, and sustainable, enhance financial service capabilities, and thereby facilitate the comprehensive advancement of rural revitalization and the accelerated development of a nation strong in agriculture

2024.02 **10**

The ***Opinions on Learning and Applying the Experience of the "Thousand Villages Demonstration and Ten Thousand Villages Renovation" Project to Effectively Promote the Comprehensive Revitalization of Rural Areas*** issued by the CPC Central Committee and the State Council

> No. 1 Central Document mandated the optimization of the diversified rural revitalization investment mechanism

2025.01 **11**

The ***Comprehensive Rural Revitalization Plan (2024-2027)*** issued by the CPC Central Committee and the State Council

> Proposed improving the diversified investment guarantee mechanism for rural revitalization by enhancing financial services, advancing rural digital inclusive finance, and increasing green financial support

2025.02 **12**

The ***Opinions on Further Deepening Rural Reforms and Steadily Advancing Comprehensive Rural Revitalization*** released by the CPC Central Committee and the State Council

> No. 1 Central Document urged financial institutions to **innovate investment and financing mechanisms for rural revitalization**

The underlying logic of policy evolution lies in the fact that rural revitalization is crucial for economic development and a key pathway to achieving common prosperity. According to data from the National Bureau of Statistics, the per capita disposable income ratio between urban and rural residents was 2.34 in 2024, a decrease of 0.05 compared to 2023, indicating a further narrowing of the relative income gap. The continuous intensification of rural revitalization-related policies primarily aims at balancing financial resource allocation between urban and rural areas and advancing the goal of common prosperity.

Implementation challenges: Data governance, technological applications, and talent development

Guided by national macro policies, banking financial institutions are actively promoting and implementing rural revitalization initiatives. However, in implementing rural revitalization and agricultural-related lending, they often encounter the following challenges:

1 Insufficient data governance

Statistical criteria for data collection remain ambiguous, and the classification standards for agricultural-related loans (e.g., subsectors of agriculture, forestry, animal husbandry, and fishery, definitions of rural households, and urban-rural demarcation) are complex. Although regulators have issued relevant standards, discrepancies in interpretation across institutions still lead to data distortion. For example, 1) the definition of "rural households" is often simplified to agricultural household registrations, questions arise about whether agricultural product processing loans include deep processing activities and forestry loans include those for urban greening management; 2) some banks experience data distortion issues, such as difficulty in verifying rural household income proofs, incomplete rural asset rights confirmation, and overreliance on manual data entry, leading to potential overreporting or underreporting.

Figure 2: Regulatory Definitions of Rural Areas and Rural Households

Rural areas refer to areas other than urban areas. **Urban areas** include urban administrative districts of cities at the prefecture level or above, county-administered towns, county seat urban areas, and development zones. Specifically, county seat urban areas refer to townships, towns, or sub-districts where county-level (including autonomous counties and county-level cities) governments are seated. Development zones refer to various types of development zones approved by the State Council or provincial, autonomous regional, or municipal governments, including economic and technological development zones, high-tech industrial development zones, special customs supervision areas, border/cross-border economic cooperation zones, economic development zones, industrial parks, high-tech industrial parks, etc.

Rural households are defined as households residing for a long term (over one year) within the administrative boundaries of townships (excluding county seats towns), households residing long-term in administrative villages under the jurisdiction of county seats towns, households without local household registration but residing locally for over one year, employees of state-owned farms, and rural individual industrial and commercial households. Rural households are treated as statistical units and may engage in agricultural or non-agricultural production and operations.

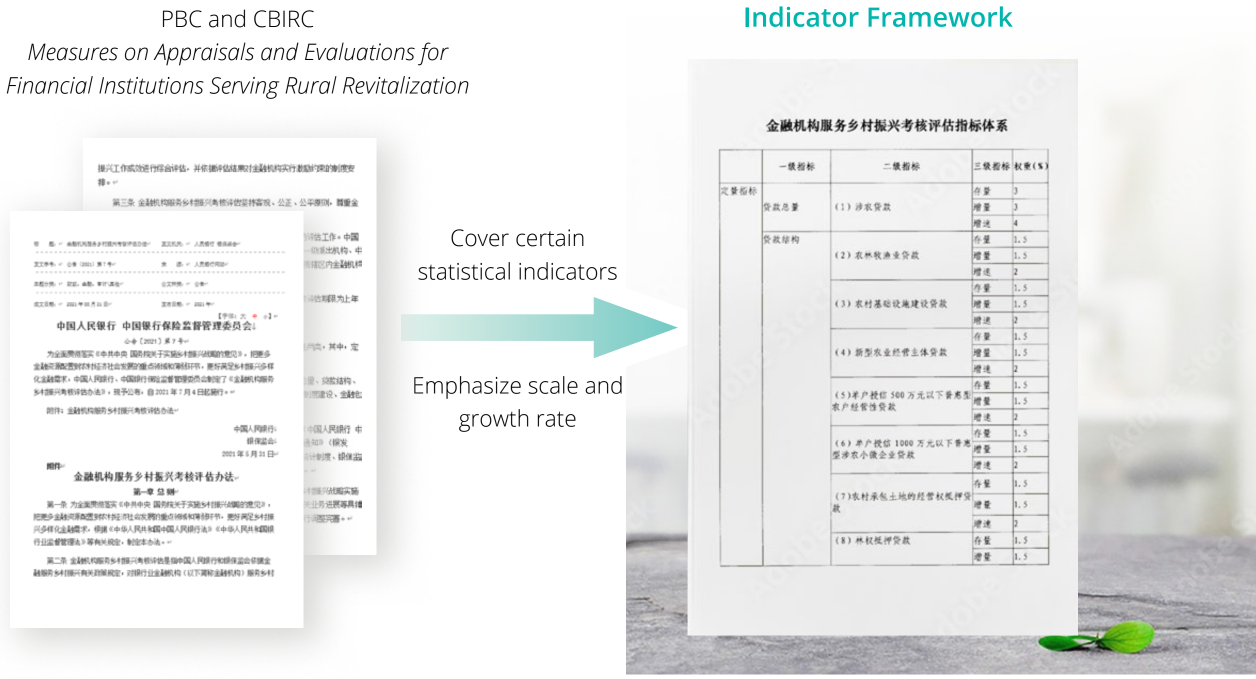
2 Relatively lagging technology application

Data collection methods in rural areas remain relatively outdated, relying on manual input at offline branches and suffering from low coverage of mobile banking terminals, resulting in delayed data updates. The integration and filing of village and resident information are challenging, and the rural credit system remains underdeveloped. Agricultural-related data is scattered across multiple departments, including agriculture, finance, and social security, lacking a unified platform for consolidation and sharing. Furthermore, traditional risk control models or existing risk mitigation measures embedded in credit systems rely on collateral, making it difficult to cover rural households and new agricultural business entities lacking credit records. This results in significant fluctuations in banks' NPL ratios, such as default risks triggered by price volatility of agricultural products.

3 Rigid organizational assessment mechanisms

Assessment metrics are overly focused on scale expansion, with banks often prioritizing quantitative growth while neglecting social benefit indicators such as coverage and innovation rates. Furthermore, the talent structure for rural revitalization-related finance is imbalanced, particularly at county-level branches, which lack professionals with integrated expertise in finance and agriculture. This gap constrains product innovation and service penetration in rural areas.

Figure 3: Appraisal and Evaluation Measures & Indicators for Financial Institutions Serving Rural Revitalization



	一级指标	二级指标	三级指标	权重(%)
定量指标	贷款总量	(1) 涉农贷款	存量	3
			增量	3
			增速	4
	贷款结构	(2) 农林牧渔业贷款	存量	1.5
			增量	1.5
			增速	2
		(3) 农村基础设施建设贷款	存量	1.5
			增量	1.5
			增速	2
		(4) 新型农业经营主体贷款	存量	1.5
			增量	1.5
			增速	2
		(5)单户授信 500 万元以下普惠型农户经营性贷款	存量	1.5
			增量	1.5
			增速	2
		(6) 单户授信 1000 万元以下普惠型涉农小微企业贷款	存量	1.5
			增量	1.5
			增速	2
		(7)农村承包土地的经营权抵押贷款	存量	1.5
			增量	1.5
			增速	2
		(8) 林权抵押贷款	存量	1.5
			增量	1.5

Response strategy: Construct a three-pronged empowerment system

To address the aforementioned challenges, Deloitte suggests that banking financial institutions establish a three-pronged empowerment system focusing on specialized data governance, technological application, and talent development. Key measures include:

1 Implement specialized data governance

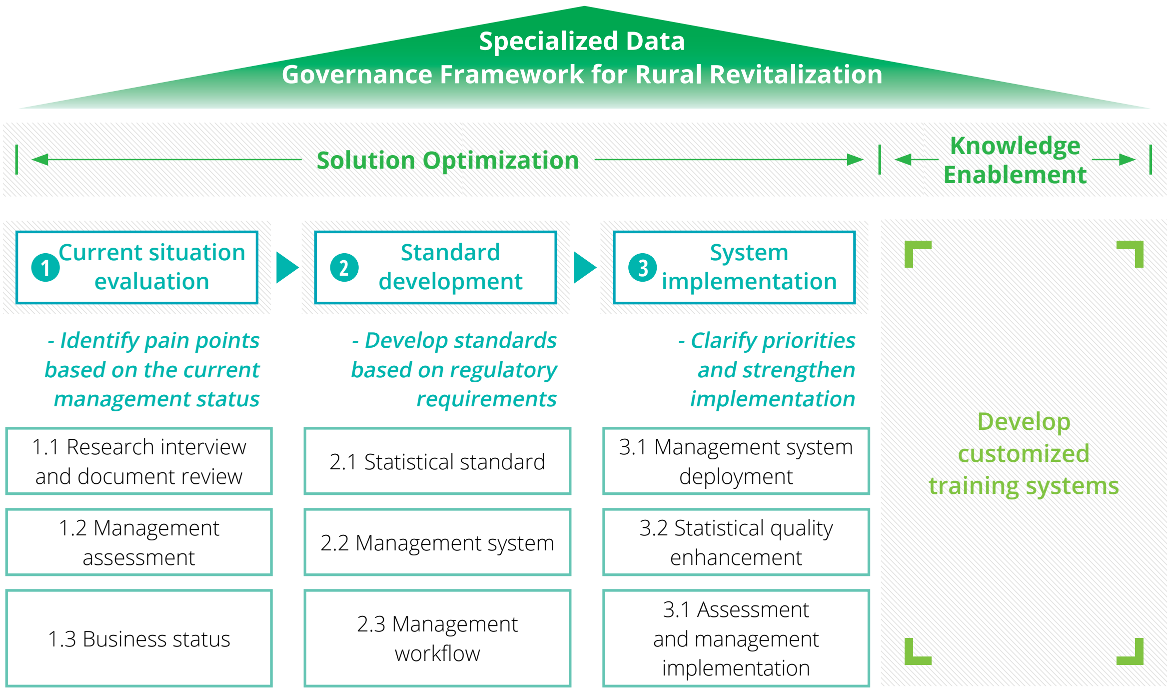
1. **Evaluate the current situation**: Conduct a comprehensive evaluation of the institutions' existing management practices, benchmark against regulatory requirements, and identify specific gaps existing in the field of rural revitalization and agriculture-related loans.

2. **Establish standards**: This involves Interpreting various regulatory policies and statistic scope, optimizing management frameworks, and developing statistical standards, management systems, and related processes for rural revitalization and agriculture-related loans that conform to banks' actual operations.

3. **Implement the system**: Execute statistical processes through digital platforms, enhance data quality via performance evaluation mechanisms, enforce management requirements, and carry out targeted quality improvement initiatives based on standardized criteria.

These specialized data governance measures enable banking financial institutions to establish a comprehensive management system, standardize rural revitalization statistical criteria and source data collection norms, thereby improving the quality of existing data on rural revitalization and agriculture-related loans.

Figure 4: Specialized Data Governance Framework for Rural Revitalization



In particular, it is crucial to standardize the statistical criteria for rural revitalization. For example, the statistical criteria for the rural revitalization loan-related business should be set clear based on loan recipients, loan fund utilization, collateral and pledged assets, and the nature of loan products, among others.

Figure 5: Examples of Statistical Criteria for Rural Revitalization Loans

1 Based on the nature of loan recipients

Interpretation of "agriculture-related enterprises and organizations"

- Policy reference: The ***Statistical Classification of Agriculture and Related Industries (2020)*** issued by the NBS and the ***Guiding Catalogue for Key Rural Industries (2021 Edition)*** issued by the MARA
- Interpretation: Enterprises and organizations whose primary business falls within agriculture and related industries and typically reflects value creation across the entire industrial chain, including agricultural production, processing, logistics, marketing, and services.

Interpretation of "rural collective economic organizations"

- Policy reference: The ***Law on Rural Collective Economic Organizations***
- Interpretation: The law emphasized that rural collective economic organizations serve as core entities for developing and strengthening new rural collective economies, upholding the socialist public ownership, and advancing common prosperity.

Interpretation of "common prosperity entities" other than the above types

- Policy reference: The ***Report to the 20th CPC National Congress*** and the ***Law on Rural Collective Economic Organizations***
- Interpretation: The policies demonstrate China's emphasis on common prosperity. Entities where village committees, village collectives, or township-village collectives act as actual controllers or shareholders play a pivotal role in advancing farmers' common prosperity.

2 Based on loan fund utilization

Interpretation of "agriculture and related industries"

- Policy reference: The ***Guiding Catalogue for Key Rural Industries (2021 Edition)*** issued by the MARA
- Interpretation: The policy strengthens synergy across rural industries, fiscal measures, financial services, talent development, and land resources, ensuring that loans used in catalog-listed sectors demonstrate the supportive role of such funds in fostering rural industrial development.

2 Boost new technology adoption

Banking financial institutions should improve quality control for agricultural indicators in source business systems, including credit systems. For example, within credit systems, they can apply trigger controls and carry out regular audits for factors such as agricultural household registration, residential addresses, agricultural loan identifiers, loan investment sectors, and related industries. This approach allows for automated data collection and monitoring of agricultural loans and rural revitalization initiatives. Additionally, banking financial institutions can partner with regional regulators, agricultural agencies, or banking associations to drive the creation of a unified rural database, foster rural credit system development, and enhance the aggregation and sharing of agricultural credit data.

Figure 6: Rural Credit Information Sharing Database

Establish a unified regional rural database

Currently, banks heavily rely on manual methods to determine the locations and specific attributes of loan recipients, which often leads to discrepancies due to human interpretation errors, operational oversights, and outdated data.

Create a database to store the registered addresses of corporate clients and the residential addresses of individual clients. By combining detailed address data with administrative division codes, banks will consistently manage and update their classification of these clients as rural or non-rural, improving accuracy and minimizing manual work.

Leveraging the maintained and utilized rural area data, banks should broaden the scope of criteria for identifying rural revitalization loans. This encompasses designating more loans as rural revitalization loans within the rural areas specified by the National Bureau of Statistics, including loans to rural non-financial enterprises and institutional bodies, as well as loans for rural infrastructure development.

In response to recommendations on bolstering rural digital inclusive finance at the Second Session of the 14th National People's Congress, the People's Bank of China announced plans to refine the alignment mechanism for the financing project repository supporting agricultural and rural infrastructure. It will also drive the sharing and application of agricultural data, enhance the development of agricultural credit information platforms, streamline the assessment process of credit townships, villages, and households, and improve the quality and efficiency of credit reporting services for the agricultural sector and rural communities. Banking financial institutions are encouraged to actively engage with and leverage these resources. They can also harness fintech solutions, like using satellite remote sensing to track crop acreage and growth, as an alternative to collateral evaluations, thereby boosting service efficiency through technology.

3 Enhance performance assessment and talent cultivation

Banking financial institutions can give priority to special performance assessments centered on the quality of fundamental agricultural loan data, covering aspects like the number of data quality issues, rectified data quality problems, and regulatory reporting issues, to guarantee top-notch regulatory statistical reporting. Additionally, they can adjust and set up assessment criteria, encompassing the agricultural loan coverage ratio, non-performing loan tolerance threshold, and proportion of innovative products, while appropriately channeling policy support into agricultural loans and rural revitalization projects.

Figure 7: Quality Assessment Metrics for Rural Revitalization Fundamental Data

Fundamental data quality assessment

Number of data quality issues

Total number of data quality issues identified within the branch/sub-branch's purview in the current year. Records with identical issue descriptions that can be resolved by the same solution are counted as a single issue.

For identifying new data quality issues

-0.5‱*x
**x is calculated using the regulatory reporting assessment conversion coefficient*

For not identifying any new data quality issue during the year

+0.5‱

Number of rectified data quality issues

Total number of data quality issues identified within the branch/sub-branch's purview and remedied within a set timeframe. Likewise, records with identical issue descriptions that can be resolved by the same solution are counted as a single issue.

For rectifying data quality issues within the month of their discovery

+0.5‱*x, with a cumulative cap of 3‱
**x is calculated using the regulatory reporting assessment conversion coefficient*

For rectifying data quality issues within the quarter of their discovery

+0.3‱*x, with a cumulative cap of +3‱

Number of regulatory reporting

Incidence rate of the branch/sub-branch receiving criticism from regulatory bodies for data statistics or quality discrepancies during the current year.

For receiving criticism during the year

-1‱, with a cumulative cap of -5‱

For specialized talent development, banking financial institutions can partner with agricultural colleges and universities to launch a "rural revitalization finance program," designed to train client managers skilled in farming, aquaculture techniques, and rural e-commerce. They can also implement a rotation system between county branches and the headquarters to swiftly replicate successful models, coupled with an incentive scheme that boosts allowances for county-level staff. Moreover, they can introduce a "rural revitalization innovation award" to spur innovation in products and services. Through multifaceted training, they can nurture versatile professionals well-versed in rural revitalization across agriculture, rural areas, and farmers, data statistics management, and specialized financial services.

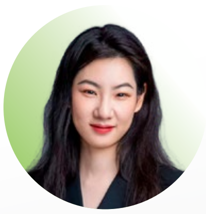
Future outlook: Digital finance fuels a transformed rural economic landscape

At present, we stand at a critical turning point as the 14th Five-Year Plan draws to a close and the 15th Five-Year Plan begins. Rural finance is experiencing a significant shift, moving from receiving external support to fostering self-sustained internal growth. Through the steady adoption of financial standards and the extensive use of cutting-edge technologies like satellite remote sensing, blockchain, and AI, along with the incorporation of financing project databases for rural infrastructure, the banking sector will gradually create a self-contained ecosystem centered on "data integration—tech-driven enhancement—industrial growth." In the future, once financial services closely match rural economic development requirements, rural revitalization will evolve beyond a policy mandate, becoming a key strategic avenue for banks to broaden their market reach and attain top-tier growth.

4.9 Tax legislation promotes VAT restructuring in banking—Tax compliance challenges and institutional optimization

Natalie Yu
Partner, Core Business Tax,
Deloitte China
+86 10 8520 7567
natyu@deloittecn.com.cn

Phoebe Li
Director, Core Business Tax,
Deloitte China
+86 10 8520 7681
haowenli@deloittecn.com.cn



Huiling Dong
Senior Manager, Core Business Tax,
Deloitte China
+86 10 8512 5428
hudong@deloittecn.com.cn

Value-added tax (VAT) stands as the predominant tax category within China's tax framework, distinguished by its neutrality, fairness, and efficiency. It effectively prevents double taxation throughout the business chain, fosters specialized economic division and cooperation, and enhances rational resource allocation, thereby playing a crucial role in bolstering national fiscal revenue and maintaining macroeconomic stability. The development of the VAT system in the banking sector directly influences banks' operational performance and strategic planning, while also significantly shaping the real economy's financing landscape and financial markets' resource allocation efficiency. Hence, the reform and enhancement of the banking sector's VAT system have consistently drawn widespread attention.

On 25 December 2024, the 13th session of the Standing Committee of the 14th National People's Congress approved the *Value-Added Tax Law of the People's Republic of China* (hereinafter referred to as the "VAT Law"), set to take effect on 1 January 2026. This legislation represents China's first dedicated VAT law, marking a major advancement in tax legislation. The VAT Law consists of six chapters, encompassing general provisions, tax rates, tax payable, tax preferences, collection and administration, and supplementary provisions. Its implementation is anticipated to significantly impact banks. Under the new legal framework, adjustments to the VAT rate structure, taxation scope, and tax incentives may directly affect the banking sector's cost accounting and profitability, potentially reshaping existing business models and product strategies within the industry.

Development and challenges of the VAT system in the banking industry

Before the shift from business tax to value-added tax (hereinafter referred to as the "BT-to-VAT reform"), banks had to pay business tax on the entire sum of their interest income and commission charges. Business tax was imposed on entities and individuals offering taxable services, transferring intangible assets, or selling real estate within China, based on the total business turnover without any provision for deducting taxes paid on services purchased. While this system offered simplicity in calculation and ease of tax collection and enforcement, it had notable shortcomings. The lack of input tax deductions resulted in serious double taxation problems. Banks, in particular, were obligated to pay business tax on their total business turnover, yet they couldn't deduct the VAT paid on acquired fixed assets, goods, and services.

In 2012, China launched pilot projects to the BT-to-VAT reform in the transportation sector and select modern service industries, signaling the start of an all-encompassing VAT overhaul. On 1 May 2016, the reform was rolled out nationwide, expanding VAT to cover construction, real estate, financial services, and life services, thus phasing out business tax.

VAT is imposed exclusively on the value added during the transfer of goods and services, effectively eliminating double taxation. It ensures equitable tax burdens and encourages specialized cooperation among enterprises, enhancing resource allocation efficiency. Banks can now claim input tax deductions for fixed assets, equipment, and services they purchase. Nevertheless, under the current VAT framework, the VAT on interest expenses, a significant operational cost for banks, cannot be deducted as input tax, partially disrupting the VAT deduction chain.

Key impacts of the VAT Law on banking business

The introduction of the VAT Law codifies VAT policies relevant to the banking sector, establishing a stable and foreseeable tax policy landscape. Several policy shifts concerning banks' core operations require the banking industry's attention, urging them to actively refine their business strategies and management approaches.

1 Eliminate the ban on input tax deductions for "purchased loan services," potentially enhancing the continuity of the VAT deduction chain

Currently, VAT regulations bar input tax deductions for interest expenses and directly associated costs (like commission charges) from loan services. However, Article 22 of the VAT Law repeals the clause stating that "input tax for loan services is non-deductible." This change provides a legal basis for deducting input tax on loan interest.

Considering the distinctive nature of banking activities, interest income and expenses represent the primary elements of a bank's revenue and expenses. On the one side, a bank's interest income from loan disbursements falls under the "loan services" category and is taxed at a full 6% VAT rate, whereas the interest expenses from its financing activities, like bond issuance, cannot be claimed as input tax deductions. On the other side, when enterprises borrow from banks, the interest they pay is similarly non-deductible for input tax purposes. The essence of VAT lies in its function as a turnover tax imposed on the value added at every stage of production, distribution, and service provision, or on the incremental value of goods.

Loan services are vital for economic growth. They offer financial backing through banks to enterprises, enabling enterprises to expand production and boost investment, thus fueling economic development. However, current VAT regulations prohibit the deduction of input tax on interest expenses, disrupting the VAT deduction chain and leading to double taxation. Meanwhile, banks frequently conduct capital transactions in financial market investments. Without input tax deductibility for interest expenses, the same transaction might face double VAT levies. After the BT-to-VAT reform in 2016, a slew of VAT exemptions for financial interbank transactions were rolled out, encompassing interbank lending, deposits, borrowing, and agency payments. These exemptions have, to some degree, alleviated the double VAT taxation issue for banks in interbank dealings. Yet, given the diversity and rapid evolution of interbank business, the exemption regulations cannot cover all transactions exhaustively. Moreover, tax authorities' varying interpretations of these exemptions create substantial hurdles for banks in setting VAT parameters and ensuring tax compliance.

Whether input VAT deductions for interest expenses will be allowed once the VAT Law takes effect on 1 January 2026 hinges on the release of detailed implementation guidelines and other pertinent documents. The banking industry should keep a close watch on these forthcoming documents. Should input VAT deductions for loan interest be permitted, banks should contemplate upgrading their current VAT systems and managing the surge in invoice issuance. This will necessitate banks to better integrate tax data with their business and financial systems, presenting fresh hurdles for tax compliance.

2 The "financial commodity" category is excluded from the scope of taxable transactions, and the VAT rules for selling financial commodities require further elaboration

Under current VAT rules, the price difference arising from the transfer of financial commodities is taxable. Financial commodities include foreign exchange, marketable securities, non-goods futures, and other financial commodities, with the latter including diverse asset management products and financial derivatives. Given the varied categories and intricate structures of financial commodities, the following disputes arise concerning VAT levies on their transfer under existing regulations:

Firstly, current regulations lack definitions or criteria for classifying each major type of financial commodity. Specifically, for financial derivative transactions, only the Accounting Standard for Business Enterprises' "Recognition and Measurement of Financial Instruments" section defines derivatives, while neither tax regulations nor regulatory guidelines clearly specify the scope of financial derivatives.

Secondly, there is a need for further clarification on how to define the act of "transfer" in the buying and selling of financial commodities. For the vast majority of financial derivative transactions, little to no initial net investment is required, meaning there is virtually no "cost" associated with the initial investment in financial commodities. The value of derivatives fluctuates with changes in specific interest rates, financial instrument prices, commodity prices, exchange rates, price indices, rate indices, credit ratings, credit indices, or other similar variables. These derivatives take the form of contracts specifying settlement on a predetermined future date, and no transfer of ownership or usage rights occurs during the contract period. According to current VAT policies, a taxpayer's holding of asset management products, such as funds, trusts, and wealth management products, until maturity does not constitute a transfer of financial commodities. However, there is no policy explanation regarding whether the settlement of financial derivatives upon maturity qualifies as "holding to maturity" and thus does not constitute a transfer of financial commodities. In practice, taxpayers and tax authorities hold differing views on whether the settlement and delivery of derivatives upon maturity constitutes a VAT-taxable activity, leading to disputes over policy applicability between tax collectors and taxpayers.

Banks should monitor whether subsequent supplementary documents to the VAT Law will further clarify the scope and criteria for defining financial commodities, as well as whether VAT will be levied on more flexible derivative settlement transactions in the capital market.

3 Improve information sharing mechanisms and strengthen tax compliance requirements for banks

Grounded in the concept of "tax governance through data", the VAT Law introduced a tax governance system based on data sharing and intelligent analysis. Article 35 requires tax authorities to establish VAT information sharing and cooperation mechanisms with the MIIT, the Ministry of Public Security, the General Administration of Customs, the State Administration for Market Regulation, the PBC, and the NFRA, creating the legal basis for data-driven tax collection and management. Meanwhile, tax authorities shall utilize technical tools such as electronic invoices and the Golden Tax System Phase IV to achieve precise and fully digitized tax collection and management.

For banks, the full-process digitalization of the Golden Tax System Phase IV means that electronic and paper invoices now carry equal legal weight. Looking ahead, tax authorities will gain access to banks' transaction data. Combined with AI-powered industry tax burden modeling, tax systems will gradually automate risk warnings and identify abnormal declarations. Given banks' significant transaction volumes, future systems may entail real-time synchronization of transactional, invoicing, and tax data. This ensures tax data consistency and relevance across business classification, invoice management, and data submission. On the other hand, under the VAT Law, banks must progressively share taxpayers' tax-related data with tax authorities to strengthen penetrative regulation. For example, banks could integrate large transaction data with tax systems, and explore whether tax data (such as verified corporate sales figures) could help banks evaluate client credit and set credit limits. In this context, banks should strengthen the construction of tax mid-platforms, deploy intelligent tax management systems, coordinate business data, invoice data, and risk warning, and connect business systems (such as credit management) with tax systems, thereby ensuring the accuracy of transaction data sources.

Outlook for adaptation to VAT reform in banking

The VAT Law's promulgation deepens the policy of replacing business tax with value-added tax while marking a major milestone in modernizing China's tax regime.

Reform direction

From tax regime optimization to promoting fairness, the VAT Law has made breakthroughs in loan interest rate deduction, leaving room for further policy adjustments. The implementation of follow-up State Council rules may substantially reduce corporate financing costs. However, banks will face new challenges in invoice management and tax compliance. Meanwhile, it is worth looking forward to whether preferential tax rates will apply to policy-driven sectors like green credit and inclusive finance, steering funds to national strategic areas.

Challenges

Rising digital transformation and compliance costs, coupled with mounting pressure from system upgrades and data governance, coincide with VAT reform's objective of achieving real-time integration among transaction data, invoicing information, and tax systems. The upcoming Golden Tax System Phase IV will intensify penetrative regulation of data on financial product transfer prices and holding periods, among others, forcing banks to establish a "business-finance-tax" integrated management system. Furthermore, product pricing and profit models may be restructured under VAT Law requirements, particularly if loan interest input taxes become deductible. Consequently, the transferability of VAT will drive banks to adjust their business layouts and pricing strategies.

Banks' adaptation

As VAT reform advances, banks must progressively establish digital collection and management and intelligent tax mid-platforms. The widespread adoption of electronic invoices and blockchain technology will facilitate automated tax management.

Business side: Establish coordinated processes between tax and business departments. For new product development (such as supply chain finance and asset securitization), the tax department should engage early in transaction structure design. This ensures compliance with VAT neutrality principles and advances "business-finance-tax" integrated management.

Internal management side: Empower internal tax teams and strengthen training mechanisms, conduct regular tax policy sessions to ensure that frontline employees (such as customer managers and tellers) understand the applicable tax rate rules. Additionally, given extensive branch networks, banks should implement periodic tax audits to detect high-risk areas of their branches.

Conclusion

China's VAT regime in banking has evolved from business tax and transformation pilot program for value-added tax (VAT) to formal legislation, profoundly reshaping tax burdens, business models, and operational frameworks. While current VAT policies still contain ambiguities, ongoing reforms and improvements will yield more reasonable and scientific policies, providing solid support for the healthy development of the banking sector. Guided by law-based tax principles, the banking sector must continuously monitor changes in tax frameworks and policy details, adapt business strategies and management models in a timely manner, and leverage institutional advantages to ensure compliant and effective tax management.

2025

Macroeconomic and Banking Outlook

Global economic recovery remains weak and slow

Following the COVID-19 pandemic, issues like residents' income expectations, government debt risks, and obstacles to globalization have become increasingly prominent. Consequently, the global economy is expected to continue its weak recovery in the short term. Forecasts for 2025 global economic growth from the International Monetary Fund (3.3%), the World Bank (2.7%), and the OECD (3.3%) all exceed their respective 2024 projections by 0.1 percentage points (3.2%, 2.6%, and 3.2%). However, these rates remain below the historical (2000-2019) average of 3.8%. According to the *World Economic Outlook* released by the International Monetary Fund in January 2025, global headline inflation is expected to decline to 4.2% in 2025 and to 3.5% in 2026, converging back to target earlier in advanced economies than in emerging market and developing economies.

In 2025, major central banks worldwide are expected to continue cutting interest rates, and monetary policies among different economies will diverge further. At its December 2024 monetary policy meeting, the Fed stated that it would slow the pace of interest rate cuts in 2025. Meanwhile, should the Eurozone's economic downturn and inflation cooling continue, the European Central Bank is expected to continue cutting interest rates throughout the year, potentially reducing them more aggressively than the Fed.

Growing geopolitical uncertainty poses significant challenges to global trade prospects. On 2 April 2025, U.S. President Trump signed an executive order imposing a 10% base tariff on all imported goods, a maximum reciprocal tariff of 49% on certain trading partners, and a 25% tariff on imported automobiles. This U.S. tariff policy triggered significant turmoil in global stock markets, directly disrupting business operations and international trade. The move intensified global trade frictions, accelerated supply chain restructuring, and slowed worldwide economic growth. In response, multiple countries and regions including China, the EU, and Canada enacted countermeasures. The policy directly increased business operating costs and consumer price pressures, further contributing to the global economic slowdown. Both the International Monetary Fund and the World Trade Organization have warned that global merchandise trade volume would decline by approximately 1%.

In the future, the U.S. government may adjust tariffs depending on market reactions and international negotiations. However, in the short term, trade frictions and geopolitical risks stemming from policy uncertainty are likely to persist or even escalate, leading to heightened volatility in capital markets and increased inflationary pressures. Ongoing policy uncertainty will continue to affect the global economy, making international cooperation and policy adjustments crucial for mitigating these impacts.

Domestic demand will drive and stabilize China's economic growth

In December 2024, the 30-year treasury bond yield dropped below 2%. Following this, the 10-year treasury bond yield fell to a record low under 1.6% in January 2025. Meanwhile, the RMB exchange rate against the U.S. dollar breached the 7.30 threshold. The U.S. tariff policy announced on 2 April 2025 jolted global stock markets and intensified global trade frictions. Tariff uncertainty will directly affect export performance, heightening the need for support from domestic policies, and from the consumption and investment areas.

Echoing the Central Economic Work Conference's priority on "stimulating domestic demand across the board", the 2025 Report on the Work of the Government clearly proposed launching special initiatives to boost consumption and expanding effective investment. Additionally, the government will increase support for a new round of large-scale equipment upgrades and consumer goods trade-in programs. It will also ramp up efforts in major national strategies and security capacity building in key areas.

Regarding consumption: The government will arrange RMB300 billion in ultra-long special treasury bonds to support trade-ins of green household appliances and new energy vehicles, and expand the supply of diversified services like healthcare, elderly care, childcare and housekeeping. Meanwhile, efforts will focus on consolidating the foundation of consumption, setting "personal income increasing in step with economic growth" as a key development goal for 2025. This aims to stimulate residents' consumption by raising income expectations.

Regrading investment: This year's central budget allocates RMB735 billion for investment, a 5% increase from last year's RMB700 billion. Notably, private enterprises are increasingly involved in the major national strategies and security capacity building in key areas. Alibaba has announced plans to invest over RMB380 billion in cloud and AI hardware infrastructure over the next three years, exceeding its total investment in the past decade. Looking ahead, further improvements to long-term mechanisms for private enterprises' involvement in national projects, alongside the enactment of the Private Economy Promotion Law, are expected to attract more private capital.

2025 represents a pivotal transition between the conclusion of China's 14th Five-year Plan and the beginning of its 15th Five-year Plan. For the third consecutive year, the GDP growth target remains at around 5%, demonstrating policy consistency with the aim of stabilizing employment, preventing risks, and improving people's livelihoods. Notably, the government adopted "a more proactive fiscal policy" for the first time since 2008, setting a historic-high deficit ratio of 4%. Deficit, special debt, and ultra-long/special treasury bonds totaled RMB11.86 trillion, a RMB2.9 trillion increase over 2024. This expansion aims to ensure the continuity of existing policies, sustain momentum from Q4 2024 initiatives, and stimulate domestic demand.

Table 1: List of Government Work Goals for 2025

Indicator	2024 goal	2024 achievement	2025 goal
GDP growth rate	Around 5%	5%	Around 5%
CPI increase	Around 3%	0.2%	Around 2%
Energy consumption per unit of GDP	Reduce by around 2.5%	Over 3%	Reduce by around 3%
Newly increased urban employment population	Over 12,000,000	12,560,000	Over 12,000,000
Urban unemployment rate	Around 5.5%	5.1%	Around 5.5%
Monetary policy	Implement a prudent monetary policy in a flexible, appropriate, targeted, and effective way	-	Appropriately accommodative monetary policy
M2 growth rate	In step with projected economic growth and CPI levels	YoY increase of 7.3%	In step with projected economic growth and CPI levels
Fiscal policy	Appropriately enhance the intensity of the proactive fiscal policy and improve its quality and effectiveness	-	A more proactive fiscal policy. Ensure that the fiscal policy provides sustained and more effective support.
Deficit ratio	3%	-	4%

Implement an appropriately accommodative monetary policy and strengthen unconventional counter-cyclical adjustments

On 9 December 2024, the Political Bureau of the CPC Central Committee proposed implementing an "appropriately accommodative monetary policy" in 2025—a stance last adopted in 2009. It also called for "strengthening unconventional counter-cyclical adjustments" for the first time, signaling stronger policy support than in 2024.

Pan Gongsheng, president of the PBC, indicated at the 2025 National People's Congress that while the Fed cut interest rates throughout 2024, its policy rate remained high, keeping monetary policy restrictive. By contrast, China's monetary policy was supportive. PBC will cut reserve requirement ratios (RRR) and interest rates in 2025 according to domestic and international economic conditions and financial market performance. The average RRR in China's banking sector is 6.6%, and there is still room for RRR cuts in the future. The re-lending and rediscount rates offered by the PBC to commercial banks also have room to decrease. This will further reduce banks' liability costs, leading to slow decline in net interest margins. The comprehensive social financing costs will keep falling, with loan interest rates remaining at historically low levels.

In addition, the PBC will optimize and innovate structural monetary policy tools. It will intensify efforts to support the healthy development of the real estate and stock markets, continue scaling up affordable housing re-lending to address the overhang of existing housing stock, and use the two policy tools introduced on 24 September 2024 to bolster capital market expectations.

Strengthen large state-owned banks' capital resilience, and ease their interest margin pressures

In April 2025, the Ministry of Finance announced plans to issue RMB500 billion of special treasury bonds (first batch) to support the BOC, CCB, BOCOM and PSBC in replenishing their core tier 1 capital. The last comparable issuance occurred in 1998, when RMB270 billion was injected into the four major state-owned banks.

Future capital replenishment is expected to follow a phased, bank-specific approach. Large state-owned banks supply 40-50% of credit lending, bearing the highest interest margin pressure. As of the end of 2024, large banks' interest margin was 1.44%, below the commercial banks' 1.52% average. Most banks reported negative net profit growth in 2024, with only joint-stock banks achieving positive growth. National capital injections will directly bolster large banks' core capital. Combined with retained revenues and TLAC non-capital bond issuance, this will alleviate their interest margin pressure and enhance risk resistance capabilities.

Establish the three-year development goal for the "five major tasks"

During the two sessions, the General Office of the State Council released the *Guidelines on Advancing Technology Finance, Green Finance, Inclusive Finance, Old-age Finance, and Digital Finance* on 5 March 2025, establishing a top-level mechanism. The goal is that by 2027, remarkable achievements will have been made in accomplishing the "five major tasks" in financial sector, the financing availability for major strategies, key areas, and weak links and the alignment between supply and demand for financial products and services will keep enhancing, and relevant financial management and supporting systems and mechanisms will become more comprehensive.

Figure 1: Focal Points of the "Five Major Tasks"

Technology finance

Strengthen financial support for achieving high-level technological self-reliance and for building a technology powerhouse

- Comprehensively utilize equity, debt, insurance, and other instruments to provide full-chain and full-lifecycle financial services for technology enterprises
- Play the pivotal role of the multi-tiered capital market, with a focus on early-stage, small-scale, long-term, and hard technology investments
- Diversify financial policies and tools for supporting major national sci-tech projects, and improve the mechanisms for dispersing risks in major technological breakthroughs
- Develop equity, venture capital, and angel investments, expand patient capital, support the cultivation and growth of leading technology enterprises, unicorn companies, and specialized, sophisticated, distinctive, and innovative SMEs

Green finance

Provide high-quality financial supply for the comprehensive green transformation of economic and social development and for the building of a beautiful China

- Establish a robust green finance standard system
- Guide financial institutions to incorporate green and low-carbon transition factors into asset portfolio management
- Enrich the products and services for green finance and transition finance
- Encourage financial institutions to gradually implement carbon accounting and sustainability disclosure

Inclusive finance

Improve the multi-tiered, wide-ranging, and sustainable inclusive finance system

- Deepen the execution of strategies to bolster financial service proficiency for MSMEs and spur growth in the scale, reach, and quality of inclusive loans for micro and small enterprises
- Refine policy structures to bolster private enterprise financing
- Elevate financial services for rural revitalization, ensuring national food security, and cementing and expanding poverty alleviation gains
- Strengthen inclusive finance services for special groups such as new citizens and college students

Old-age finance

Establish a sound old-age finance system for the aging population

- Strengthen financial support for the silver economy
- Serve the development of a multi-tired, multi-pillar pension insurance system
- Reinforce investment management for pension funds to promote steady appreciation
- Vigorously develop commercial insurance annuities and effectively connect them with health, elderly care, and other services
- Enhance financial knowledge publicity and education to safeguard the legitimate financial rights and interests of the elderly

Digital finance

Promote the high-quality development of digital finance

- Expedite digital transformation in financial institutions
- Accelerate innovation in digital finance, consolidate and expand the advantages of the digital economy
- Build a convenient, secure, and efficient digital payment service system
- Steadily promote the R&D and application of digital RMB
- Promote the sharing and circulation of financial data in accordance with laws and regulations
- Improve the digital finance governance system to bring innovative digital finance businesses into the regulatory net

Boost technology finance, emphasize risk prevention

Technology finance is the primary issue among the "five major tasks" and is closely related to new quality productive forces. Regulators are focused on directing financial capital toward early-stage, small-scale, long-term, and hard technology investments to meet the financing needs of technology enterprises throughout their lifecycle. During the 2025 two sessions, the PBC announced plans to establish a "sci-tech board" in the bond market and optimize re-lending policies for sci-tech innovation and technological transformation. On March 5, the NFRA released on *Notice on Further Expanding the Pilot Program for Equity Investments by Financial Asset Investment Companies (AICs).* These measures will stimulate technological innovation and spur market vitality, encouraging greater participation from private capital, government funds, and other social investments in technological innovation. This will also attract international investors to invest in Chinese technology enterprises.

This also means that: 1) The financial system has increased its risk tolerance for light-asset technology enterprises. Financial institutions should enhance their risk control capabilities, improve risk assessment models, and promote digital technology applications to prevent risks (as exemplified by Silicon Valley Bank's bankruptcy in March 2023). Regulatory requirements for their performance evaluation and risk management are expected to tighten accordingly. 2) More financial resources will flow to light-asset-based new quality productive forces, with direct financing's share projected to grow. The main business areas include sci-tech enterprise listings, sci-tech corporate bonds, and sci-tech bills.

Table 2: Regulators will Ramp Up Support for Sci-tech Financing in 2025

Institution	Measures	Description/Effect
PBC	Launched a "sci-tech board" in the bond market to promote the issuance of sci-tech innovation bonds by financial institutions, tech firms and private equity investment institutions	• Enrich the sci-tech innovation bond portfolios, and guide bond funds toward sci-tech innovation more effectively, conveniently and at a lower cost
PBC	Expand the scale of re-lending for sci-tech innovation and technological transformation from the current RMB500 billion to RMB800 billion-RMB1 trillion, and reduce re-lending interest rates	• Better met the financing needs of enterprises • Strengthen policy incentives for banks
NFRA	Expand the pilot program for equity investments by financial asset investment companies (AIC)	• Expand the AIC equity investment scope to other pilot provinces • Increase the number of AIC institutions established by the five major banks in a stable and orderly manner • Allow insurance capital to be used for AIC equity investments

Source: Public information, Deloitte's financial research

Guard against financial risks, accelerate risk mitigating through reform for small and medium-sized banks

The 2025 Report on the Work of the Government proposed "guarding against financial risks" for the first time. The government will make coordinated efforts to address risks in small and medium local financial institutions and promote their transformation through market- and law-based means, signaling a more proactive stance on financial risk mitigation. Additionally, the government will replenish the deposit insurance fund, the financial stability fund, and other resources that aim to defuse financial risks, and improve contingency plans for handling external shocks so as to effectively safeguard financial security and stability. The promulgation of the Financial Stability Law may accelerate.

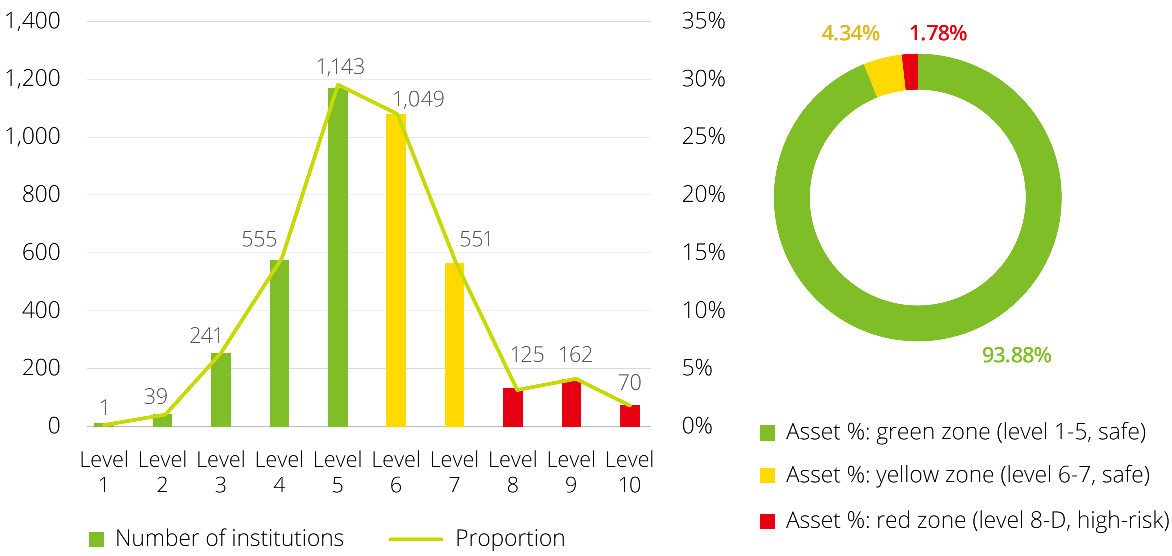
According to the PBC's 2024 China Financial Stability Report, PBC conducted the Central Bank Rating of Financial Institutions on 3,936 banks (including 24 large banks and 3,912 small- and medium-sized banks). The rating results showed that banking institutions as a whole were stable. 357 banks were in the "red zone". Most of them were rural cooperative institutions (including rural commercial banks, rural cooperative banks, and rural credit cooperatives) and village and township banks, though their combined assets constituted under 1% of that of all participating banks.

Rural commercial banks and other small and medium-sized banks largely depend on local government assistance to address risks through capital replenishment, restructuring, and exit. The pace of rural credit union reforms and village and township bank mergers has accelerated from 2024 onward. According to Yicai, approximately 200 small and medium-sized banks (predominantly rural financial institutions) were deregistered (including mergers, dissolution, etc.) in 2024, exceeding the combined deregistration in 2021 and 2023.

In June 2024, Liaoning Rural Commercial Bank received the regulatory approval to incorporate and consolidate Liaoning Xinmin Rural Commercial Bank and 35 other rural small and medium-sized banking institutions, and took over the effective assets, liabilities, business, outlets, and employees of these banking institutions after asset and capital verification.

In February 2025, 25 legal entities in Henan province, including Henan Rural Commercial United Bank, were approved to merge to form Henan Rural Commercial Bank. In March 2025, the Inner Mongolia Rural Commercial Bank was approved for establishment, combining 120 rural credit cooperatives and village banks. Similar mergers and absorptions are vital risk-mitigation and reform strategies for small and medium-sized banks. Establishing rural commercial banks with a unified legal entity in economically underdeveloped regions can amplify the asset scale effect and effectively enhance risk control capabilities. As risk mitigation accelerates, the number of regional small and medium-sized banks will maintain at the existing level, leading to a further decline in high-risk banks.

Figure 2: Results of the Central Bank Rating of Financial Institutions as of the End of 2023



Source: PBC

Authors

Sitao Xu
Deloitte China Chief Economist
Tel: +86 10 8512 5601
Email: sxu@deloittecn.com.cn

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

Contacts

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

Francesco Nagari
Southern Region FSI Leader (Hong Kong)
Tel: +852 2852 1977
Email: frnagari@deloitte.com.hk

Eric Yang
Deputy Leader, FSI
Audit & Assurance Leader, FSI
Tel: +86 10 8512 5058
Email: ericboyang@deloittecn.com.cn

Calvin Zeng
Banking and Capital Markets Leader, FSI
Audit & Assurance Deputy Leader, FSI
Tel: +86 21 6141 1821
Email: calzeng@deloittecn.com.cn

Natalie Chan
Banking and Capital Markets Leader (Hong Kong), FSI
Tel: +852 2238 7510
Email: nachan@deloitte.com.hk

Fang Ye
Banking and Capital Markets Consulting Leader (Chinese mainland), FSI
Tel: +86 21 6141 1569
Email: yefang@deloittecn.com.cn

Natalie Yu
Tax and Business Advisory Leader (Chinese mainland), FSI
Tel: +86 10 8520 7567
Email: natyu@deloittecn.com.cn

Jane Luan
Northern Region FSI Leader
Tel: +86 10 8512 5831
Email: yluan@deloittecn.com.cn

Christine Hu
Eastern Region FSI Leader
Tel: +86 21 6141 2068
Email: chrihu@deloittecn.com.cn

Rachel Hong
Southern Region FSI Leader (Chinese mainland)
Tel: +86 20 2831 1202
Email: rhong@deloittecn.com.cn

Lynda Wu
Western Region FSI Leader
Tel: +86 10 8520 7479
Email: lyndawu@deloittecn.com.cn

Zhongbin You
FSI Integrated Solutions Leader, Deloitte Consulting
Deloitte AI Institute Co-Managing Partner
Tel: +86 21 2316 6172
Email: zhyou@deloittecn.com.cn

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

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

Henry Cao
Digital Risk Management Leader
RegTech Leader
Tel: +86 21 2312 7154
Email: hencao@deloittecn.com.cn

Zheng He
Partner, Contract Intelligent Management Products
Tel: +86 21 6141 1507
Email: zhhe@deloittecn.com.cn

Tom Wang
Partner, Strategy, Risk & Transactions
Tel: +86 10 8512 4376
Email: tomywang@deloittecn.com.cn

Jacky Zhu
Assurance Transformation Leader
Tel: +86 21 6141 1547
Email: jaczhu@deloittecn.com.cn

Darwin Tang
Partner, IT Audit & Assurance
Tel: +86 10 8512 5766
Email: darwintang@deloittecn.com.cn

Chaphy Lin
Partner, Cyber Strategy & Transformation
Tel: +86 10 8512 4888
Email: chaphylin@deloittecn.com.cn

Cynthia Cai
Partner, Regulatory & Financial Risk
Tel: +86 21 2316 6368
Email: cycai@deloittecn.com.cn

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Hot Topics

Keeping a close watch on the financial industry and market hotspots, such as the 14th Five-Year Plan formulation, the 15th Five-Year Plan outlook, corporate governance, technology finance, green finance, old-age 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
Partner, Audit & Assurance, FSI
Tel: +86 21 2312 7166
Email: charshen@deloittecn.com.cn

Lawrence Chen
Partner, Deloitte China Center for Financial Services
Partner, Deloitte China Corporate Governance Center
Tel: +86 10 8512 4058
Email: lawrchen@deloittecn.com.cn

Annie Zhou
Senior Manager, Deloitte China Center for Financial Services
Tel: +86 10 8512 5843
Email: annizhou@deloittecn.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
Unit 17, 13/F, Tower 2, HC International Plaza
No. 109 Furong Road Middle
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
High-tech District
Chengdu 610041, PRC
Tel: +86 28 6789 8188
Fax: +86 28 6317 3500

Chongqing
30/F Deloitte Tower
8 Corporate Avenue
10 Ruitian Road, Yuzhong District
Chongqing, 400043, 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

Haikou
Unit 1202, Building B
HNA Internet Finance Building
No.3, Guoxing Street
Meilan District, Haikou
Hainan 570100, PRC
Tel: +86 898 6866 6982

Hangzhou
Room 1206-1210
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 1506, Tower A China Resource Building
No.111 Qian Shan Road
Shu Shan District
Hefei 230031, 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, 2803 & 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-N
43-53A Av. do Infante D. Henrique
Macau
Tel: +853 2871 2998
Fax: +853 2871 3033

Nanchang
Unit 08-09, 41/F Lianfa Plaza
No.129 Lv Yin Road
Honggutan District
Nanchang, 330038
Tel: +86 791 8387 1177

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

Qingdao
Room 1006-1008, Block 9
Shanghai Industrial Investment Center
195 HongKong East Road
Laoshan District
Qingdao 266061, PRC
Tel: +86 532 8896 1938

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
Unit 3003, 30/F China Life Finance Centre
11 Tangyan Road, High-tech Zone
Xi'an 710075, PRC
Tel: +86 29 8114 0201

Zhengzhou
Unit 5A10, Block 8, Kineer Center
No.51 Jinshui East Road
Zhengdong New District
Zhengzhou 450018, PRC
Tel: +86 371 8897 3700
Fax: +86 371 8897 3710

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