Risk Management

The Bank endeavoured to fulfil the regulatory requirement of preventing and mitigating material risks and continued to improve its risk management system in line with the Group's strategies. It followed local and overseas regulatory requirements and, vigorously pushed forward its remediation and accountability for issues arising from the governance of market disruption, on-site efficiency examination of risk management and internal control and quarterly supervision reports, as well as comprehensively pushing forward compliance work in relation to effective risk data aggregation and risk reporting, so as to ensure compliant operations. The Bank refined its comprehensive risk management mechanism, re-examined and updated the Group's risk appetite management system, promoted the implementation of a new model of market-oriented risk management pertaining to asset management business and systematically monitored the risk management status of its comprehensive operation platforms. The Bank continued to develop and refine its risk measurement model, promoted the overseas implementation of an internal ratings-based approach and pushed forward the development of online models for inclusive finance, thus gradually improving its risk measurement abilities. In addition, it comprehensively implemented its Global Risk Mitigation System and proactively promoted the construction of an intelligent risk management system.

Credit Risk Management

Closely tracking changes in macroeconomic and financial conditions, the Bank successfully controlled and mitigated credit risks during the reporting period. It pushed forward the optimisation of its credit structure, further improved its credit risk management policies, strengthened credit asset quality management and took a proactive and forward-looking stance on risk management.

The Bank continuously adjusted and optimised its credit structure. With the aim of advancing strategic implementation and balancing risk, capital and return, it improved the management plans of its credit portfolios. In line with the national industrial policies, the Bank intensified the support to the real economy, boosted the high-quality development of the manufacturing industry, and bolstered the improvement of weak links in infrastructure. It also enacted guidelines for industrial lending and continued to push forward the building of an industrial policy system so as to optimise its credit structure.

Taking a customer-centric approach, the Bank further strengthened its unified credit granting management and enhanced full-scope centralised credit risk management. It continuously improved its long-acting credit management mechanism and asset quality monitoring system and further enhanced potential risk identification, control and mitigation mechanisms by intensifying post-lending management and reinforcing customer concentration management and control. The Bank enhanced the supervision of risk analysis and asset quality control in key regions, and strengthened window guidance on all business lines. In addition, it constantly identified, measured and monitored large exposures in line with the management requirements of large exposures.

In terms of corporate banking, the Bank further strengthened risk identification and control in key fields, proactively reduced and exited credit relationships in such fields. It strictly controlled the outstanding amount and use of loans through limit management, preventing and mitigating risk from overcapacity industries. Under the precondition of policy compliance, the Bank actively assisted local governments in mitigating implicit debt risk. In addition, it implemented the government's macro-control policies and regulatory measures in the real estate sector so as to strengthen the risk management of real estate loans. In terms of personal banking, the Bank reinforced the management of credit granting approval, improved approval quality, and prevented the risks of excessive credit and cross-infection while supporting the development of its personal credit business. It also strengthened the risk control of key products and regions.

The Bank strengthened country risk management. It performed an annual review of country risk ratings and implemented limit management and control of country risk exposures. It collected statistics, assessed, monitored, analysed and reported its exposures on a regular basis. The Bank regularly published country risk analysis reports within the Group and made timely assessments of the impact of material country risk events. In addition, the Bank adopted differentiated management of potentially high-risk and sensitive countries and regions. The Bank's net exposure of country risk mainly concentrated on the countries that have relatively low or low ratings, and its overall country risk remained at a reasonable level.

The Bank further stepped up the collection of NPAs. It re-allocated internal and external collection resources, and continued to adopt centralised and tiered management of NPA projects. It reinforced the supervision and management of key regions and key projects, in order to improve the quality and efficiency of disposals. The Bank proactively explored the application of "Internet Plus" in NPA collection, and diversified its disposal channels. In addition, it adopted policies based on the actual conditions of individual enterprises and took multiple measures where necessary. It gave full play to the role of creditor committee and enhanced the application of debt-for-equity swaps and restructuring efforts to help enterprises get out of difficulties, with the aim of realising mutual benefit for the Bank and the enterprises, and to support the real economy.

The Bank reasonably measured and managed the quality of its credit assets based on the *Guidelines for Loan Credit Risk Classification*. As at 30 June 2019, the Group's NPLs[4] totalled RMB175.899 billion, an increase of RMB8.958 billion compared with the prior year-end. The NPL ratio was 1.40%, down by 0.02 percentage point compared with the prior year-end. The Group's allowance for loan impairment losses amounted to RMB312.254 billion, an increase of RMB8.473 billion compared with the prior year-end. The coverage ratio of allowance for loan impairment losses to NPLs was 177.52%.

4 Total loans under the "Risk Management — credit risk management" part are exclusive of accrued interest.

Five-category Loan Classification

Unit: RMB million, except percentages

	As at 30 June 2019		As at 31 December 2018	
Items	Amount	% of total	Amount	% of total
Group				
Pass	**12,016,923**	**95.87%**	11,278,379	95.68%
Special-mention	**342,158**	**2.73%**	342,363	2.90%
Substandard	**71,652**	**0.57%**	49,788	0.42%
Doubtful	**42,159**	**0.34%**	49,341	0.42%
Loss	**62,088**	**0.49%**	67,812	0.58%
Total	**12,534,980**	**100.00%**	11,787,683	100.00%
NPLs	**175,899**	**1.40%**	166,941	1.42%
Domestic				
Pass	**9,430,642**	**95.32%**	8,818,838	95.10%
Special-mention	**293,156**	**2.96%**	291,933	3.15%
Substandard	**69,185**	**0.70%**	48,281	0.52%
Doubtful	**40,452**	**0.41%**	47,536	0.51%
Loss	**61,008**	**0.61%**	66,961	0.72%
Total	**9,894,443**	**100.00%**	9,273,549	100.00%
NPLs	**170,645**	**1.72%**	162,778	1.76%

Migration Ratio

Unit: %

Items	For the six-month period ended 30 June 2019	2018	2017
Pass	**0.86**	2.20	1.97
Special-mention	**13.62**	23.70	20.37
Substandard	**18.35**	51.89	57.97
Doubtful	**15.04**	33.57	31.98

In accordance with IFRS 9, the Bank assesses expected credit losses (ECL) with forward-looking information and makes relevant allowances. In particular, it makes allowances for assets classified as stage 1 and assets classified as stage 2 and 3 according to ECL of 12 months and ECL of the entire lifetime of the assets, respectively. As at 30 June 2019, the Group's stage 1, stage 2 and stage 3 loans totalled RMB11,939.782 billion, RMB415.739 billion and RMB175.899 billion respectively, accounting for 95.28%, 3.32% and 1.40% of total loans. In the first half of 2019, the Group's impairment losses on loans amounted to RMB35.721 billion, an increase of RMB3.864 billion compared with the same period of the prior year. Credit cost accounted for 0.59%, an increase of 0.02 percentage point compared with the same period of the prior year. Please refer to Notes III.16 and IV.1 to the Condensed Consolidated Interim Financial Information for detailed information regarding loan classification, the classification of ECL stages and allowance for loan impairment losses.

The Bank continued to focus on controlling borrower concentration risk and was in full compliance with regulatory requirements on borrower concentration.

Unit: %

Indicators	Regulatory Standard	**As at 30 June 2019**	As at 31 December 2018	As at 31 December 2017
Loan concentration ratio of the largest single borrower	≤10	**3.3**	3.6	3.8
Loan concentration ratio of the ten largest borrowers	≤50	**14.9**	15.3	17.4

Notes:

1 Loan concentration ratio of the largest single borrower = total outstanding loans to the largest single borrower ÷ net regulatory capital.

2 Loan concentration ratio of the ten largest borrowers = total outstanding loans to the top ten borrowers ÷ net regulatory capital.

The following table shows the top ten individual borrowers as at 30 June 2019.

Unit: RMB million, except percentages

	Industry	Related Parties or not	Outstanding loans	% of total loans
Customer A	Manufacturing	No	68,747	0.55%
Customer B	Transportation, storage and postal services	No	49,432	0.39%
Customer C	Transportation, storage and postal services	No	34,820	0.28%
Customer D	Transportation, storage and postal services	No	31,814	0.25%
Customer E	Commerce and services	No	25,861	0.21%
Customer F	Real estate	No	22,000	0.18%
Customer G	Production and supply of electricity, heating, gas and water	No	20,648	0.16%
Customer H	Transportation, storage and postal services	No	20,430	0.16%
Customer I	Commerce and services	No	20,185	0.16%
Customer J	Transportation, storage and postal services	No	17,200	0.14%

Market Risk Management

In response to changes in the market environment, the Bank continued to enhance its market risk management.

The Bank actively adapted to changes in its business and the market by improving the Group's market risk management policy system, and re-examining and adjusting the Group's market risk limit. Paying close attention to regulatory dynamics and development trends in the financial market, the Bank strengthened its forward-looking research and judgment regarding market risks, thus bolstering its risk warning and mitigation capabilities. It continuously advanced the improvement of its market risk data mart and management system, so as to enhance the accuracy of risk measurement and improve its ability to quantify risk. Please refer to Note IV.2 to the Condensed Consolidated Interim Financial Information for detailed information regarding market risk.

The Bank strengthened risk management of the Group's bond investments, closely tracked market fluctuations and changes on regulatory policy, explicitly specified the regulatory standards and requirements for major areas. The Bank continued to strengthen its efforts to monitor and screen high risk bonds, and regularly conducts risk inspection of credit bonds.

The Bank assessed the interest rate risk in its banking book mainly through analysis of interest rate re-pricing gaps, made timely adjustments to the structure of its assets and liabilities based on changes in the market situation, and controlled the fluctuation of net interest income within an acceptable level. In terms of exchange rate risk management, the Bank sought to achieve currency matching between fund source and application and managed exchange rate risk through timely settlement and hedging, thus effectively controlling its foreign exchange exposure.

Liquidity Risk Management

The Bank endeavoured to develop a sound liquidity risk management system with the aim of effectively identifying, measuring, monitoring and controlling liquidity risk at the institution and Group level, including that of branches, subsidiaries and business lines, thus ensuring that liquidity demand is met in a timely manner and at a reasonable cost.

Adhering to an appropriate balance of safety, liquidity and profitability, and following regulatory requirements, the Bank improved its liquidity risk management in a forward-looking and scientific manner. The Bank enhanced liquidity risk management at the institution and Group level, including that of branches, subsidiaries and business lines. It formulated sound liquidity risk management policies and contingency plans, periodically re-examined liquidity risk limits, upgraded the early warning system for liquidity risk and strengthened the management of high-quality liquid assets, in order to strike an appropriate balance between risk and return. In addition, the Bank regularly improved its liquidity stress-testing scheme and performed stress tests on a quarterly basis. The stress tests showed that the Bank had adequate payment ability to cope with distressed scenarios.

As at 30 June 2019, the Group's liquidity risk indicator met regulatory requirements. The Group's liquidity ratio is shown in the table below (in accordance with relevant provisions of domestic regulatory authorities):

Unit: %

Indicator		Regulatory Standard	**As at 30 June 2019**	As at 31 December 2018	As at 31 December 2017
Liquidity ratio	RMB	≥25	**52.4**	58.7	47.1
	Foreign currency	≥25	**60.0**	54.8	56.9

Reputational Risk Management

The Bank earnestly implemented regulatory requirements regarding reputational risk management, continued to enhance its reputational risk management system and mechanism and strengthened the consolidated management of reputational risk, so as to enhance the overall reputational risk management level of the Group. It attached great importance to the investigation and pre-warning of potential reputational risk factors, strengthened public opinion monitoring, continued to conduct reputational risk identification, assessment and reporting, established a coordination mechanism between reputational risk management departments and liable departments and dealt appropriately with reputational risk events, thus effectively maintaining the brand reputation of the Group. In addition, the Bank continued to roll out reputational risk training so as to enhance employees' awareness and foster a culture of reputational risk management across the Group.

Internal Control and Operational Risk Management

Internal Control

The Board of Directors, senior management and their special committees earnestly performed their duties regarding internal control and supervision, emphasising early risk warning and prevention, so as to improve the Group's level of compliance operation.

The Bank continued to adopt the "three lines of defence" mechanism for internal control. The first line of defence consists of business departments and all banking outlets. They are the owners of, and are accountable for, local risks and controls. They undertake self-directed risk control and management functions in the course of their business operations, including formulating and implementing policies, conducting business examination, reporting control deficiencies and organising rectifications.

The internal control and risk management departments of the Bank's institutions at all levels form the second line of defence. They are responsible for the overall planning, implementing, examining and assessing of risk management and internal control, as well as for identifying, measuring, monitoring and controlling risks. They led the first line of defence to enhance its use of the Group's operational risk monitoring and analysis platform, and are responsible for staff non-compliance sanctions and management accountability. Through regular monitoring of material risks, the Bank identified and mitigated risks in a timely manner and promoted the optimisation of business processes and systems.

The third line of defence rests in the audit department of the Bank. The audit department is responsible for performing internal audit of the Bank's internal control and risk management in respect of its adequacy and effectiveness. The Bank continued to push forward the reform of its human resource management system for the audit line, and further intensified the vertical management of its audit function. It enhanced audit team building, pushed forward the implementation of its three-year plan for IT applications in audit, reinforced the use of IT-based audit approaches and further improved the audit circulatory monitoring mechanism. Taking an issue-oriented approach, the Bank focused on comprehensive audits of its institutions and special audits of its businesses. It strengthened audits and inspections of high-risk institutions and businesses, as well as fields prioritised by the Group and of special concern to regulators. The Bank concentrated its attention on systemic, trending, emerging and important issues, so as to practically perform its internal audit function. It continued to apply a normalised supervision mechanism for the rectification of audit findings, and urged the timely and effective rectification of issues, so as to continually improve the Bank's internal governance and control mechanism.

The Bank rigorously implemented the work arrangements made by CBIRC regarding "consolidating the results achieved in cracking down irregularities and boosting compliant operations", case-based warning education campaign, and illegal fund-raising risk investigation and rectification, and organised bank-wide risk inspections to actively identify and mitigate risks, raised the compliance awareness of staffs and fostered an internal control compliance culture. In addition, the Bank implemented internal control and compliance management evaluation so as to enhance the routine management and control of its branches.

The Bank continued to implement the *Basic Standard for Enterprise Internal Control* and its supporting guidelines, adhering to the primary goal of ensuring the effectiveness of its internal control over financial reporting and the accuracy of its financial information. It also constantly improved non-financial internal control. The Bank earnestly implemented the *Guidelines for Internal Control of Commercial Banks* by following the basic principles of "complete coverage, checks and balances, prudence and correspondence", so as to promote internal control governance and an organisational structure characterised by a reasonable delegation of work, well-defined responsibilities and clear reporting relationships.

The Bank established and earnestly implemented a systematic financial accounting policy framework in accordance with relevant accounting laws and regulations. Accordingly, its accounting basis was solidified and the level of standardisation and refinement of its financial accounting management was further improved. Since 2018, the Bank has endeavoured to enhance the qualification of its accounting groundwork and establish a long-term accounting management mechanism. It continuously strengthened the quality management of its accounting information, so as to ensure internal control effectiveness over financial reporting. The financial statements of the Bank were prepared in accordance with the applicable accounting standards and related accounting regulations, and the financial position, operational performance and cash flows of the Bank were fairly presented in all material respects.

Focusing on fraud risk prevention and control, the Bank proactively identified, assessed, controlled and mitigated risks. In the first half of 2019, the Bank successfully prevented 131 external cases involving RMB90.5811 million.

Operational Risk Management

The Bank continuously improved its operational risk management system. It reviewed and refined the application of operational risk management tools, including Risk and Control Assessment (RACA), Key Risk Indicators (KRI) and Loss Data Collection (LDC), etc., to identify, assess and monitor operational risks, thus continuously improving its risk management measures. The Bank enhanced its system support capability by optimising its operational risk management information system. It strengthened its business continuity management system, optimised its operating mechanism to enhance its business operating sustainability, carried out disaster recovery drills and improved the Group's capacity for continuous business operation.

Compliance Management

The Bank continuously improved its compliance risk governance mechanism and management process to ensure the stable and sound development and sustainable operation of the Group. It strengthened the construction of its AML system, and refined its AML policies and rules system. It pushed forward system and model building and improved its system functions. The Bank made timely amendments to sanction compliance policies, improved sanction compliance procedures and standardised list maintenance, due diligence, judgment, handling and strengthened sanctions compliance monitoring and management. It drove forward overseas compliance management and improved its cross-border compliance management system by tracking global regulatory trends, regulatory inspection and evaluation as well as other compliance risk information in a timely manner, so as to implement the requirements of regulators and improve its overseas compliance management capabilities. It implemented AML training plan for all employees by conducting various forms of AML training, so as to enhance all employees' compliance awareness and abilities.

The Bank enhanced the management of its connected transactions and internal transactions. It stepped up efforts in the management of connected parties and consolidated the foundation of its connected transaction management. It strengthened the routine monitoring and examination of connected transactions and strictly controlled their risks. In addition, it continuously implemented internal transaction monitoring and reporting, thereby improving the technological capabilities of its internal transaction management.

Capital Management

Based on the requirement for high-quality development, the Bank continuously strengthened its capital management system to focus on optimising its business structure and improving its value creation capabilities, while also carrying out its external capital replenishment programme and increasing its capital adequacy through a variety of measures.

The Bank deeply implemented the concepts of capital constraint and value creation, optimised its assessment on capital budget implementation, promoted differentiated capital management, improved its assessment mechanism and reinforced the construction of its capital management system, so as to refine its overall capital management. The Bank accelerated its external capital replenishment. In the first half of 2019, it successfully issued RMB40.0 billion of its debut undated capital bonds in the domestic market, as well as completing the issuance of RMB73.0 billion of domestic preference shares. During the reporting period, the capital efficiency was further enhanced, the Group's capital adequacy ratio reached 15.33% at the end of June 2019, an increase of 0.36 percentage point compared with the prior year-end.

Capital Adequacy Ratios

As at 30 June 2019, the capital adequacy ratios separately calculated in accordance with the *Capital Rules for Commercial Banks (Provisional)* are listed below:

Unit: RMB million, except percentages

	Group		Bank	
Items	**As at 30 June 2019**	As at 31 December 2018	**As at 30 June 2019**	As at 31 December 2018
Net common equity tier 1 capital	**1,526,628**	1,465,769	**1,302,655**	1,251,056
Net tier 1 capital	**1,749,305**	1,575,293	**1,515,341**	1,350,770
Net capital	**2,087,358**	1,922,350	**1,837,530**	1,683,893
Common equity tier 1 capital adequacy ratio	**11.21%**	11.41%	**10.97%**	11.08%
Tier 1 capital adequacy ratio	**12.85%**	12.27%	**12.77%**	11.96%
Capital adequacy ratio	**15.33%**	14.97%	**15.48%**	14.92%

Please refer to Note IV.5 to the Condensed Consolidated Interim Financial Information and Supplementary Information II.5 to the Interim Financial Information for detailed information.

Leverage Ratio

As at 30 June 2019, the leverage ratio calculated in accordance with the *Administrative Measures for the Leverage Ratio of Commercial Banks (Revised)* and the *Capital Rules for Commercial Banks (Provisional)* is listed below:

Unit: RMB million, except percentages

Items	**As at 30 June 2019**	As at 31 December 2018
Net tier 1 capital	**1,749,305**	1,575,293
Adjusted on- and off-balance sheet assets	**23,813,940**	22,700,133
Leverage ratio	**7.35%**	6.94%

Please refer to Supplementary Information II.6 to the Interim Financial Information for detailed information.