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S&P Global China Ratings

Credit Rating Report

Bank of China Limited

Issuer Credit Rating*: AAA_{spc}; Outlook: Stable

July 28, 2023

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*This rating is an Issuer Credit Rating (ICR). An ICR typically reflects our view of the senior unsecured credit rating of an issuer and is not specific to an individual issuance that it may issue.

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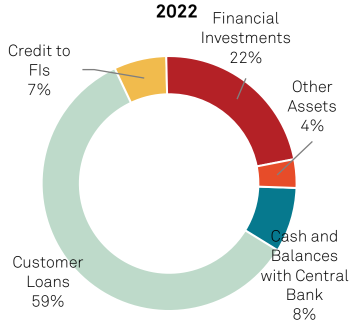
Tear Sheet

Company Name	Rating Type	Current Rating	Rating Date	Outlook/CreditWatch
Bank of China Limited	Issuer Credit Rating	AAA_{spc}	July 28, 2023	Stable

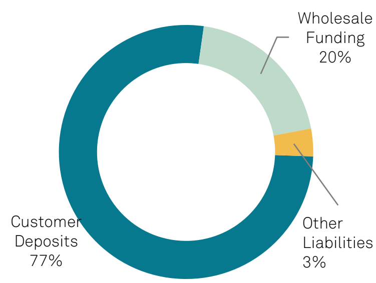
Industry Classification: Commercial bank.

Company Overview: Bank of China Limited ("BOC") is the fourth largest bank in China by asset size, and one of the six state-owned mega banks. Compared to its peers, it has a more internationally diversified business franchise. As of the end of March 2023, it reported total assets of 30.39 trillion RMB and achieved a return on equity of 10.81% in 2022.

Asset Breakdown as of the End of 2022



Liability Breakdown as of the End of 2022



Economy and Industry Trends:

We expect China's 2023 GDP growth to recover significantly from 2022. We believe new regulations and policies are aimed at common prosperity and greater self-reliance, marking a shift in China's growth strategy. Taking this long-term strategy into consideration, we have increasingly factored in lower emphasis on the quantity of growth in favor of factors such as deleveraging and lowering inequality so our baseline includes some of these dynamics.

We expect the overall credit outlook for commercial banks in China to remain stable because of ongoing government support and the economic recovery. China's commercial banking sector continues to report stable capital and asset quality metrics, but we continue to expect pressure on credit cost and profitability going forward. State-owned mega banks are expected to maintain stable capitalization and resilient profitability, while small- and medium-sized banks face more pressure. Therefore, we believe the stand-alone credit profiles of commercial banks are likely to show greater differentiation in the foreseeable future. In our opinion, ongoing strong regulatory and government support for the banking sector should keep overall credit quality stable.

Key Metrics:

	2019	2020	2021	2022	2023.03
Total assets (bil)	22,769.74	24,402.66	26,722.41	28,913.86	30,385.69
Customer deposits (bil)	15,817.55	16,879.17	18,142.89	20,201.83	21,918.12
Net income (bil)	201.89	205.10	227.34	237.50	61.73
Reported capital adequacy ratio (%)	15.59	16.22	16.53	17.52	17.53
Reported return on equity (%)	11.45	10.61	11.28	10.81	11.14
Non-performing loans ratio (%)	1.37	1.46	1.33	1.32	1.18
Reserve coverage ratio (%)	182.86	177.84	187.05	188.73	202.56
Customer deposits/total liabilities (%)	76.07	75.9	74.44	76.68	78.93

Sources: BOC, collected and adjusted by S&P Global (China) Ratings.

Rating Snapshot

Anchor	bbb+
Business Position	+3
Capital and Earnings	0
Risk Position	0
Funding and Liquidity	+2
Stand-alone Credit Profile	aa_{spc}
Government Support	+2
Issuer Credit Rating	AAA_{spc}
Outlook	Stable

Business Position: BOC is China's fourth largest commercial bank. It has balanced and strong business franchise in corporate and retail banking in the domestic market and enjoys a more internationally diversified presence than its peers. Bank of China (Hong Kong) Ltd. is the second-largest bank by assets in Hong Kong and also one of the region's three note-issuing banks.

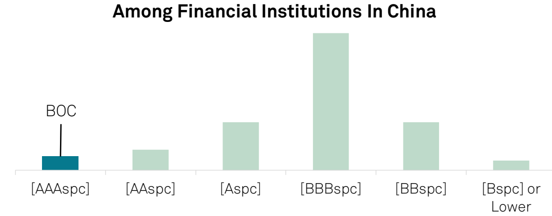
Capital and Earnings: BOC has adequate capitalization and healthy profitability. Given its status as a global systematically important bank, we expect it to strengthen its capitalization and maintain capital adequacy and profitability.

Risk Position: The asset quality performance of the bank's loan portfolio is consistent with its mega bank peers. BOC's overseas loan portfolio is larger than that of its peers, and has good asset quality. The bank's asset quality has remained stable in recent years.

Funding and Liquidity: BOC has a solid and sticky corporate and retail deposit base in China, and its use of wholesale funding is limited. It also has very good liquidity metrics. As a state-owned mega bank, it benefits from "flight to quality" when the market has general credit risk concerns over the banking sector. Therefore, its funding and liquidity is far more stable than the industry average.

External Support: We believe that BOC is extremely likely to receive support from the central government in times of need, considering its status as a state-owned mega bank and its critically important role in maintaining financial stability in China.

BOC's Relative Issuer Credit Rating Position Among Financial Institutions In China



Note: This chart serves as a hypothetical example of S&P Global China Ratings' rating distribution of financial institutions. Ratings below AAA_{spc} could be adjusted by "+" and "-".

Peer Comparison

	2021			2022		
	BOC	Commercial Bank Average	Mega Bank Average	BOC	Commercial Bank Average	Mega Bank Average
Total assets (bil.)	26,722.41	158.13	23,066.67	28,913.86	174.48	26,043.28
Net income (bil.)	227.34	1.20	205.21	237.50	1.26	215.53
Reported capital adequacy ratio (%)	16.53	15.13	17.29	17.52	15.17	17.76
Return on average assets (%)	0.89	0.79	0.92	0.85	0.76	0.88
Non-performing loan ratio (%)	1.33	1.73	1.37	1.32	1.63	1.31
Reserve coverage ratio (%)	187.05	196.91	239.22	188.73	205.85	245.04

Sources: JPMorgan Chase Bank (China), CBIRC, Wind, collected and adjusted by S&P Global (China) Ratings.

Rating Summary

Company Name	Rating Type	Current Rating	Rating Date	Outlook/CreditWatch
Bank of China Limited	Issuer Credit Rating	AAA_{spc}	July 28, 2023	Stable

Stand-alone Credit Profile	aa_{spc}
Anchor	bbb+
Business Position	+3
Capital & Earnings	0
Risk Position	0
Funding & Liquidity	+2
Holistic Adjustment	0

+

External Support	+2
Government Support	+2

Issuer Credit Rating
AAA_{spc}/Stable

Credit Highlights

Strengths	Weaknesses
It is the fourth largest commercial bank in China with a more internationally diversified business franchise than its peers.	The macroeconomic environment is increasingly challenging, and asset quality may continue to be under pressure.
It has a very stable deposit base and superior liquidity profile.	
The bank is extremely likely to receive central government support in times of stress.	

Rating Outlook

The stable outlook reflects our expectation that BOC's business operations and financial strength will remain stable over the next two years and beyond. We also anticipate that its critical importance to the central government will remain stable.

Downside Scenario: We may consider lowering its issuer credit rating ("ICR") if we believe that its importance to the central government has declined, which is highly unlikely in our view. We may also consider lowering its stand-alone credit profile ("SACP") if BOC fails to effectively manage the credit risk of its lending business, resulting in a significant deterioration of asset quality metrics, or if its capital adequacy ratios can no longer meet minimum regulatory requirements and there is no plausible plan for immediate and effective remediation.

Upside Scenario: We may consider raising its SACP if its adjusted capital adequacy ratios rise significantly, and its management is committed to maintaining high capitalization on a sustainable basis, or if it significantly lowers its risk appetite and improves its asset quality performance to a level far beyond the industry average.

Related Methodologies, Models & Research

Methodology Applied:

- S&P Global (China) Ratings Financial Institutions Methodology.
- S&P Global (China) Ratings General Considerations on Rating Modifiers and Relative Ranking.

Model Applied: None.

Anchor

Macro-Economic and Industry Trend

We expect China's 2023 GDP growth to recover significantly from 2022. We believe new regulations and policies are aimed at common prosperity and greater self-reliance, marking a shift in China's growth strategy. Taking this long-term strategy into consideration, we have increasingly factored in lower emphasis on the quantity of growth in favor of factors such as deleveraging and lowering inequality so our baseline includes some of these dynamics.

We expect the overall credit outlook for commercial banks in China to remain stable because of ongoing government support and the economic recovery. While capital and asset quality performance indicators have remained stable, we expect pressure to continue on credit cost and profitability. State-owned mega banks are expected to maintain stable capitalization and resilient profitability, but medium and small sized banks face greater pressure. For this reason, commercial banks' stand-alone credit profiles are becoming increasingly differentiated. Under the strict oversight of regulators and the government, the credit quality of the banking sector should overall remain stable.

Considering the economic risk and industry risk faced by China's commercial banking industry, we apply an anchor of "bbb+" to BOC.

Considering the economic risk and industry risk faced by China's commercial banking industry, we typically apply an anchor of "bbb+" to commercial banks in China.

Stand-alone Credit Profile

BOC is one of the country's six state-owned mega banks. It has solid and massive corporate and retail customer bases in China. It also has a strong business franchise in Hong Kong and is generally more internationally diversified than its peers. As of the end of March 2023, it reported total assets of 30.39 trillion RMB and a regulatory capital adequacy ratio of 17.53%. In 2022, it reported a return on equity of 10.81%.

BOC is China's fourth largest commercial bank by asset size.

Business Position

BOC is the fourth-largest commercial bank in China. As of the end of 2022, it reported gross loans of 17.55 trillion RMB (up 11.72% YoY) and a deposit base of 20.2 trillion RMB (up 11.35% YoY), representing 9.6% and 7.6% of the commercial bank market share of loans and deposits in China, respectively.

BOC maintains a high growth rate in the first quarter of 2023. As of the end of March 2023, it reported total loans of 18.58 trillion RMB and total deposits of 21.92 trillion RMB, up 5.86% and 8.5% from the beginning of the year, respectively.

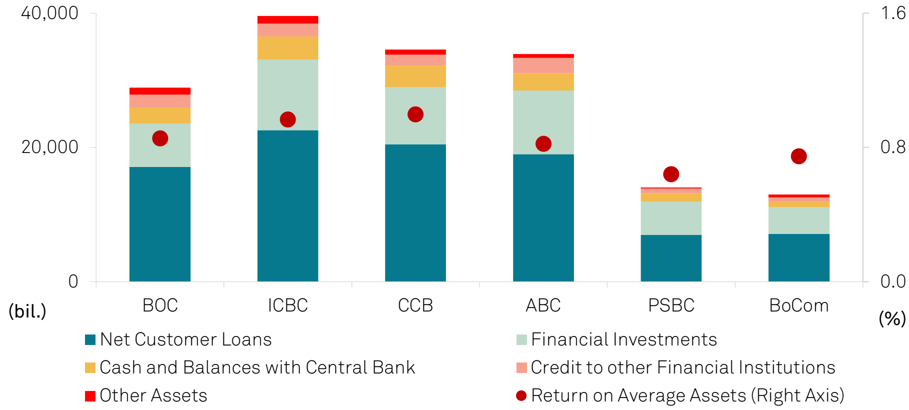
It has very strong franchise in Chinese Mainland and Hong Kong. Compared to other mega banks, BOC is more internationally diversified.

Therefore, we apply a three-notch upward adjustment for its business position.

Chart 1

BOC is China's Fourth Largest Commercial Bank

Peer Comparison: Total Asset Breakdown as of End of 2022 and Return on Average Assets in 2022



Note 1: Return on average assets = net income / [(total assets at the beginning of the year + total assets as of the end of the year)/2] * 100%.

Note 2: ICBC - Industrial and Commercial Bank of China Limited, CCB - China Construction Bank Corporation, ABC - Agricultural Bank of China Limited, PSBC - Postal Savings Bank of China Co., Ltd., BoCom - Bank of Communications Co., Ltd.

Sources: Public information of banks, collected and adjusted by S&P Global (China) Ratings.

Table 1

BOC -- Market Share

(%)	2019	2020	2021	2022	2023.03
Total assets/total assets of China's commercial banking industry	9.51	9.18	9.26	9.04	9.01
Gross customer loans/total loans of China's commercial banking industry	10.08	9.68	9.53	9.61	9.65
Customer deposits/total deposits of China's commercial banking industry	7.98	7.73	7.60	7.64	7.82
Retail deposits/total domestic retail deposits of China's commercial banking industry	8.51	8.12	7.83	7.54	Not Available

Sources: BOC, CBIRC and PBOC, collected and adjusted by S&P Global (China) Ratings.

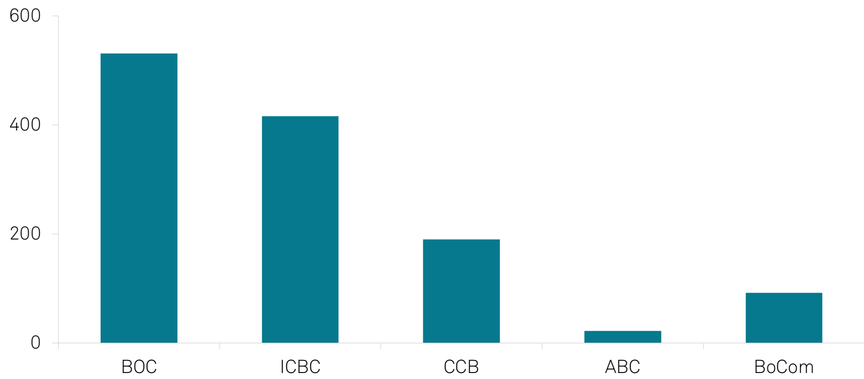
BOC has a balanced business revenue mix. In 2022, 36% of its revenue came from its corporate business, 40% retail business and 15% capital market business. It achieved operating income of 618 billion RMB, an increase of 2.06% YoY. The slower revenue growth was mainly due to the decline in net fees and commissions income and profit on changes in fair value of 9.18 billion RMB and 23.24 billion RMB in 2022, respectively. Meanwhile, its profit on foreign exchange and net interest income was 9.08 billion RMB and 460.68 billion RMB in 2022, up 129% and 8% YoY, respectively.

Compared to the other mega banks, BOC has a more extensive global branch network and more internationally diversified business. BOC operated in 62 countries and regions as of the end of 2022, including 42 countries along the "Belt and Road". In 2022, its revenue outside the Chinese mainland contributed to 21.6% of its total revenue. Compared to its peers, the bank has a leading position in cross-border custodian business, panda bond and off-shore bond underwriting, foreign exchange trading and cross-border RMB settlement. As of the end of 2022, BOC's loans to Hong Kong, Macau, Taiwan and other foreign regions accounted for 17% of its total loans, the highest among the six state-owned mega banks.

Chart 2

BOC Has the Most Extensive Overseas Operations Among Peers

Peer Comparison: Number of Network Outlets and Subsidiaries Outside Chinese Mainland as of End of 2022



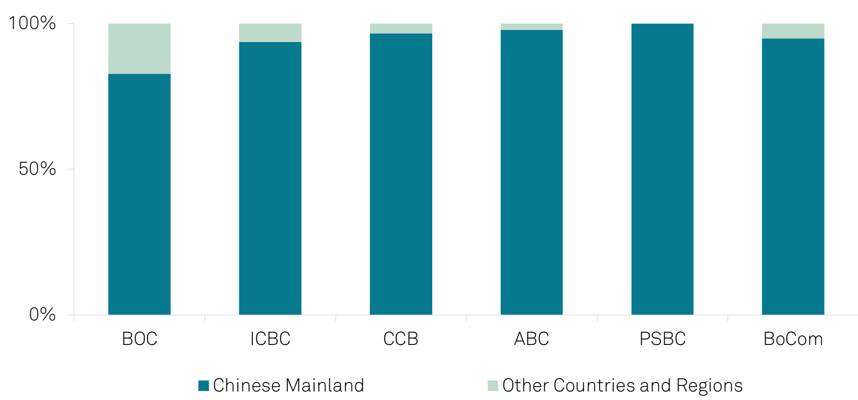
Sources: Public information of banks, collected and adjusted by S&P Global (China) Ratings.

The asset allocation of BOC is more internationally diversified than that of its peers. As of the end of 2022, its foreign currency assets accounted for 23% of total assets, of which USD assets (equivalent to 3.06 trillion RMB) accounted for 10.6%, and HKD assets (equivalent to 1.86 trillion RMB) 6.4%.

Chart 3

Compared to Its Peers, BOC Has a More Internationally Diversified Loan Book

Peer Comparison: Geographic Breakdown of Loans as of End of 2022



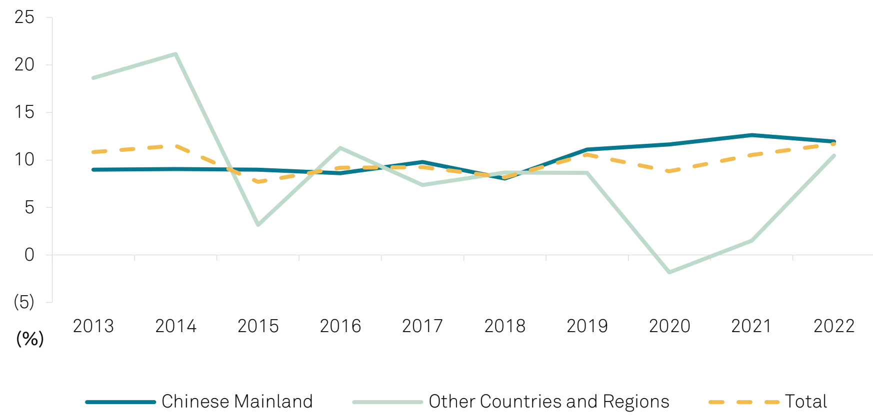
Note: Hong Kong, Macao and Taiwan are included in other countries and regions.

Sources: Public information of banks, collected and adjusted by S&P Global (China) Ratings.

Chart 4

BOC's Loan Growth Rate Outside Chinese Mainland Keeps Rising over Past Two Years

BOC: Loan Growth Rate YoY



Sources: BOC, collected and adjusted by S&P Global (China) Ratings.

Bank of China (Hong Kong) Ltd ("BOCHK"), its Hong Kong-based subsidiary, is very important to its international business expansion. BOCHK has a very strong business franchise in Hong Kong as the second-largest bank by assets and also one of the three note-issuing banks. In our view, BOCHK has great business growth potential thanks to the development of the Guangdong-Hong Kong-Macau Greater Bay Area. BOCHK also acts as BOC's regional center in Southeast Asia, covering nine countries in the region.

BOC has a group of strong subsidiaries which contributes to its business diversification in terms of business lines.

Table 2

Major Subsidiaries of BOC

Bank of China (Hong Kong) Limited ("BOCHK")	BOCHK is the Hong Kong-based banking subsidiary of BOC. It is the second-largest bank by assets and one of the three note-issuing banks in Hong Kong. As of the end of 2022, it had total assets of 3,685.06 billion HKD. Its net income was 29 billion HKD in 2022.
BOC Aviation Limited ("BOC Aviation")	BOC Aviation is a Singapore-based subsidiary of BOC. It is one of the world's leading aircraft operating leasing companies and is the largest aircraft operating leasing company headquartered in Asia by value of aircraft fleet. As of the end of 2022, BOC Aviation's total assets were 22.07 billion USD. Its net income was 527 million USD in 2022.
Bank of China Group Investment Limited ("BOCG Investment")	BOCG is a Hong Kong-based subsidiary of BOC, focusing on direct investment and investment management. It also holds BOC Aviation on behalf of BOC. As of the end of 2022, its total assets were 141.03 billion HKD. Its net income was 2.53 billion HKD in 2022.
BOC Fullerton Community Bank Co., Ltd. ("BOC Fullerton Community Bank")	BOC Fullerton Community Bank is the community bank operations of BOC headquartered in Beijing. It is the largest domestic community bank group in China. As of the end of 2022, it controlled 134 village banks with 185 sub-branches, its loan balance was 73.43 billion RMB, its non-performing loan ratio

	was 1.83% and reserve coverage ratio was 261.78%. In 2022, its net income was 426 million RMB.
BOC Group Life Assurance Co., Ltd. (“BOC Life”)	BOC conducts life insurance business in Hong Kong through BOC Life. BOC Life is a market leader in RMB-denominated insurance business in Hong Kong. As of the end of 2022, its total assets were 196.05 billion HKD. Its net income was 883 million HKD in 2022.
Bank of China Group Insurance Company Limited (“BOC Insurance”)	BOC conducts property and casualty (P&C) insurance business in the Chinese mainland through BOC Insurance. As of the end of 2022, BOC Insurance's total assets were 14.39 billion RMB. Its net income in 2022 was 302 million RMB.
BOC Wealth Management Co., Ltd. (“BOC Wealth Management”)	BOC conducts wealth management businesses in the Chinese mainland through BOC Wealth Management. BOC Wealth Management has played a key role in the transformation of BOC’s wealth management business. As of the end of 2022, BOC Wealth Management had more than 1.76 trillion RMB in assets under management. Its net income in 2022 was 1.85 billion RMB.
BOC Financial Asset Investment Co., Ltd. ("BOC Asset Investment")	BOC conducts debt-for-equity swap in the Chinese mainland through BOC Asset Investment. Debt-for-equity swaps play an important role in China’s supply-side reforms and help Chinese companies steadily reduce leverage. As of the end of 2022, BOC Asset Investment had total assets of 85.50 billion RMB and its cumulative market-oriented debt-for-equity swap business reached a size of 212.84 billion RMB. Its net income in 2022 was 2.24 billion RMB.

Sources: BOC, collected and adjusted by S&P Global (China) Ratings.

Capital and Earnings

BOC has solid capitalization and robust earnings, and we expect its capital adequacy to remain adequate.

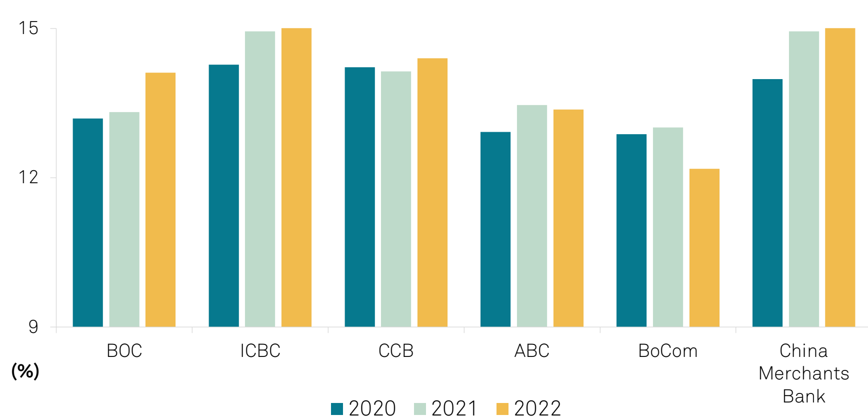
Therefore, there is no notching adjustment for its capital and earnings.

BOC’s reported capital adequacy ratios are adequate and consistent with its mega bank peers. As of the end of March 2023, its reported regulatory Tier 1 capital adequacy ratio was 13.79%, higher than the minimum regulatory requirement of 10% and slightly better than mega banks’ average level of 13.5%.

Chart 5

BOC’s Capital Position is Comparable with Mega Bank Peers

Peer Comparison: Reported Tier 1 Capital Adequacy Ratio



Note: Together with ICBC, CCB, ABC and BoCom and China Merchants Bank, BOC uses an internal rating-based (“IRB”) approach to calculate regulatory capital ratios, whereas other Chinese banks adopt the standard approach. The IRB approach has different risk weights for loans compared to the standard approach, and as a result there is limited comparability between capital adequacy ratios calculated under the two different approaches.

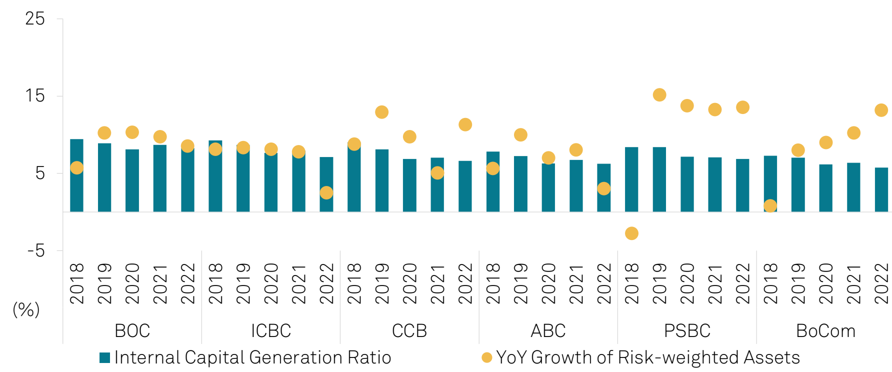
Sources: Public information of banks, collected and adjusted by S&P Global (China) Ratings.

BOC has very strong profitability, and its ability to generate capital is generally in line with its risk-weighted asset growth rate. In 2022, the bank's internal capital generation ratio was about 6.2%, slightly lower than its RWA growth rate of 3%, supporting the bank's capital adequacy ratio rise steadily.

Chart 6

BOC's Internal Capital Generation Capacity is Generally Consistent with Its RWA Growth Pace

Peer Comparison: Internal Capital Generation Capacity Vs RWA Growth Rate



Note: Internal capital generation ratio = (net income – cash dividend) / average total equity.

Sources: Public information of banks, collected & adjusted by S&P Global (China) Ratings.

BOC has enhanced its capitalization through significant issuance of hybrid bonds. In 2022, BOC issued 50 billion RMB perpetual bonds and 90 billion RMB Tier 2 capital bonds, accounting for 1.7% and 3.1% of its total capital respectively. In the first half of 2023, the bank issued 60 billion RMB Tier 2 capital bonds and 30 billion RMB perpetual bonds respectively.

We expect BOC to maintain very good profitability in 2022. At the same time, its loan book is set to continue growing at a relatively fast rate, and capital consumption will remain high. We expect BOC's Tier 1 capital adequacy ratio under the advanced approach to remain above 13% in the next 12 months.

Table 3

BOC -- Capital Adequacy Forecast by S&P Global (China) Ratings

(Tril. RMB, %)	2023F		2024F		Base-case assumptions and Opinions
	Amount	YoY change	Amount	YoY change	
Risk-weighted assets	17.9	6	19.1	7	RWA increases by around 6-7% YoY in 2023 and 2024.
Net Tier 1 capital	2.5	7	2.7	8	1. Our capital forecast takes into account planned issuance of around 100 billion RMB in new perpetual bonds before the end of 2024. We assume the bank will choose to redeem the issued perpetual debt at the earliest redemption date over the forecast period and the balance of preferred shares remains unchanged; 2. NIM stays around 1.6%, NPL ratio stays around

			1.3%, reserve coverage ratio above 190% and return on average equity above 0.8% in 2023 and 2024; 3. We assume its annual dividend payout ratio remains around 30%.
Tier 1 capital adequacy ratio forecast by S&P Global (China) Ratings	13%-14%	>14%	This forecast is based on the advanced approach. According to our estimation, the bank's capital adequacy ratio would still fully meet regulatory requirements under the standard approach. According to the *"Capital Management Measures for Commercial Banks (Draft)"*, commercial banks are required to implement the new capital management measures effective January 1, 2024, which is still draft for comment. We believe the new measures will not have any significant impact on the capital adequacy of BOC, and it will still be able to meet the regulatory requirements.

Note: F – Forecast.

Source: BOC, collected and adjusted by S&P Global (China) Ratings.

Bank of China has sufficient capital resilience to bad loans. According to our stress tests, the bank's Tier 1 capital adequacy ratio remains generally stable under the mild stress scenario (assuming a problem loan rate of 6% and a problem loan recovery rate of 30%).

BOC is a global systemically important bank ("G-SIB"). According to Financial Stability Board ("FSB") requirements, BOC needs to increase its total loss absorbing capacity ("TLAC") to 20% of its risk-weighted assets at the beginning of 2025, before a further increase to 22% at the beginning of 2028. We expect BOC to issue non-capital TLAC bonds to meet TLAC requirements. In April 2022, the PBoC and CBIRC jointly issued *"Notice on Relevant Issues Concerning the Issuance of Non-capital TLAC Bonds by Global Systemically Important Banks*", clarifying the core elements of the non-capital TLAC bonds and the regulatory requirements on the bond issuance. We believe that capital generated from earnings, improved asset and liability management and issuance of non-capital TLAC bonds and hybrid bonds can help the bank meet TLAC requirements. Compared with hybrid bonds, non-capital TLAC bonds offer a more economical solution to complying with TLAC standards, thanks to their lower credit risk and lower issuance costs.

Thanks to the improved return on assets in foreign currencies, BOC's NIM is under lower downward pressure compared with its peers. On one hand, the bank's return on RMB loans declined due to the downward movement of LPR in RMB; on the other hand, the interest rate hikes in Europe and the U.S. has driven up its return on assets in foreign currencies. BOC's NIM was 1.76% in 2022, up slightly by 1 bp from 2021, while the average NIM of domestic commercial banks fell by 17 bps during the same period, and the other five state-owned mega banks fell by 15 bps on average.

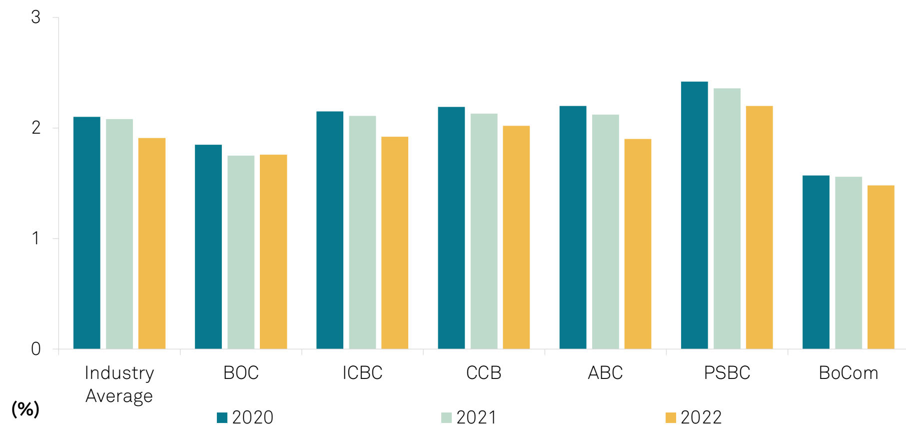
BOC's return on assets in foreign currencies improved thanks to higher foreign currency interest rates. BOCHK's average return on total assets increased from 0.7% in 2021 to 0.8% in 2022.

The repricing of RMB loans in early 2023 further depressed the return on RMB loans, but the reduction in deposit rates facilitated the bank's efforts to control the downside of NIM. Following the deposit rate cut in September 2022, in June 2023, BOC reduced its RMB demand deposit rate by 5 bps to 0.20%, the two-year RMB deposit rate by 10 bps to 2.05%, and nominal rates of three-year and five-year term deposits by 15 bps to 2.45% and 2.5%, respectively.

Chart 7

BOC's NIM Remained Stable in 2022

Peer Comparison: Reported Net Interest Margin



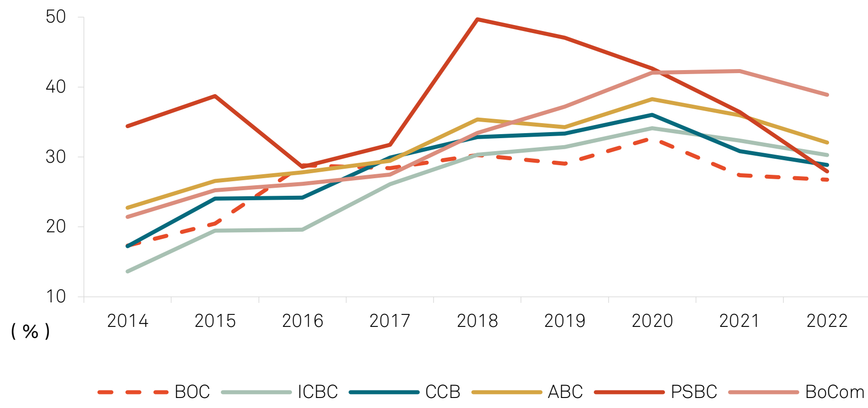
Sources: Public information of banks, collected and adjusted by S&P Global (China) Ratings.

BOC has maintained good asset quality, with credit cost decreasing steadily. In 2022, new provisioning accounted for 26.75% of pre-provision operating profits, down by around 0.65 percentage points YoY. Over 2020-2022, the bank's average credit cost (as measured by loan provisioning/average gross customer loans) was about 0.66%. Its 2022 credit cost was 0.56%, down 10 bps YoY.

Chart 8

BOC's Impairment Charges Decreased in 2022

Peer Comparison: New Provisioning/Pre-provision Operating Profits



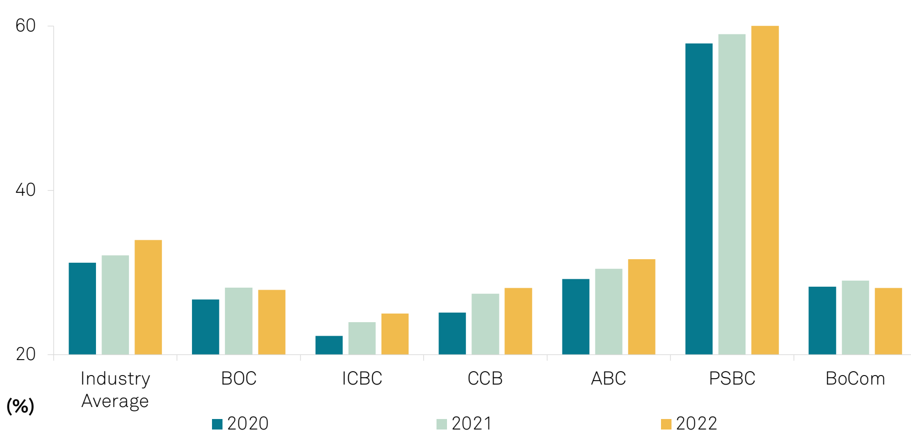
Sources: Public information of banks, collected and adjusted by S&P Global (China) Ratings.

BOC's cost-to-income ratio is better than the industry average and consistent with the mega bank average. Its average cost-to-income ratio from 2020 to 2022 was around 27.59%. In 2022, its cost-to-income ratio was 27.88%, down by 0.29 percentage points YoY and 6 percentage points lower than commercial bank average. We expect the bank to continue maintaining effective cost control.

Chart 9

BOC's Cost-to-Income Ratio is Better than the Industry Average

Peer Comparison: Cost-to-Income Ratio



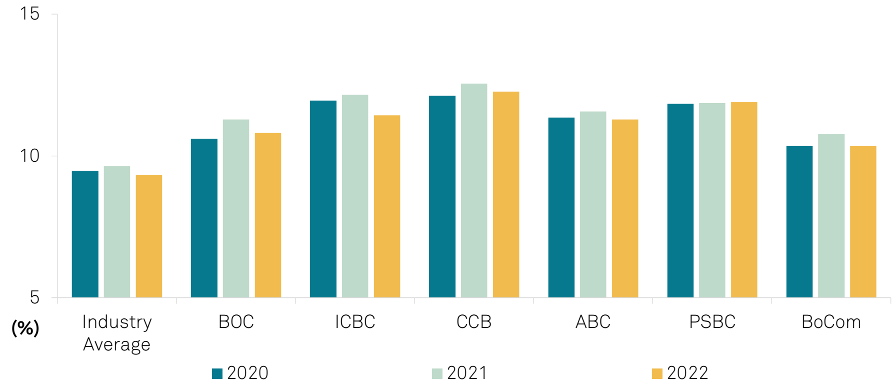
Sources: CBIRC, public information of banks, collected & adjusted by S&P Global (China) Ratings.

Thanks to effective cost control, great economies of scale and stable credit cost, BOC's profitability is higher than the industry average. In 2022, the bank's return on equity was 10.81% and it reported annualized return on equity of 11.14% in the first quarter of 2023, better than the commercial bank average of 9.33% and 10.32%, respectively.

Chart 10

BOC's Profitability is Above Industry Average

Peer Comparison: Reported Return on Equity



Sources: CBIRC, public information of banks, collected & adjusted by S&P Global (China) Ratings.

Risk Position

BOC's asset quality performance is broadly in line with that of its mega-bank peers. Its average non-performing loan ("NPL") ratio from 2020 to 2022 was 1.37%, and its average special mention loan ("SML") ratio over the same period was 1.52%. Both were consistent with the mega bank average. As of the end of 2022, its NPL ratio and SML ratio were 1.32% and 1.35%, 31 bps and 90 bps lower than the industry average, respectively. As of the end of March 2023, BOC's NPL ratio was 1.18%, down 0.14 percentage points from the beginning of this year.

BOC's asset quality metrics are in line with its mega bank peers. As one of China's biggest commercial banks, we believe its asset quality provides a broad reflection of credit risks in the wider real economy.

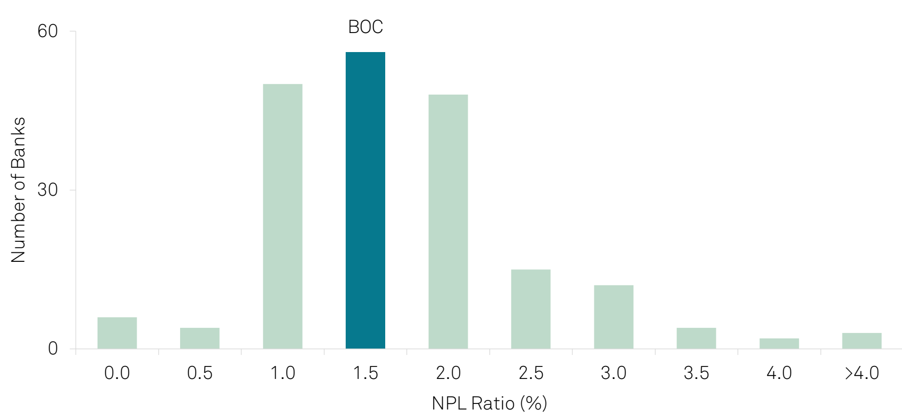
The bank has maintained healthy asset quality, with credit cost decreasing steadily.

Therefore, there is no notching adjustment for its risk position.

Chart 11

BOC's NPL Ratio is Consistent with Industry Average

Industry Distribution: NPL Ratio of 200 Major Banks in China as of End of 2022

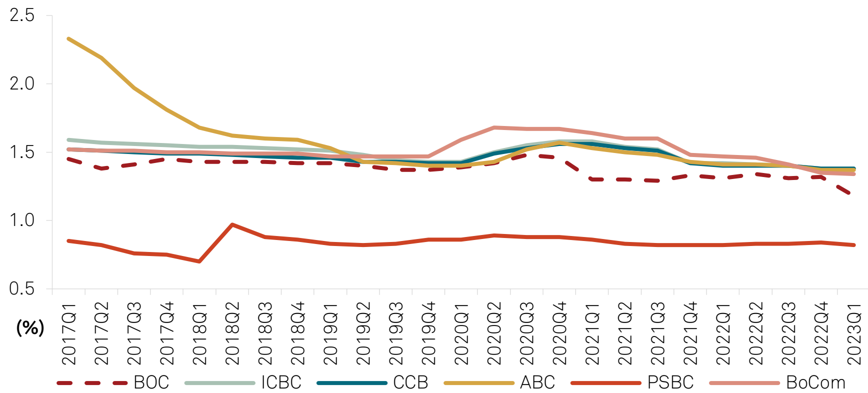


Sources: Public information of banks, collected and adjusted by S&P Global (China) Ratings.

Chart 12

BOC's NPL Ratio is Relatively Low Compared to Its Mega Bank Peers

Peer Comparison: NPL Ratio



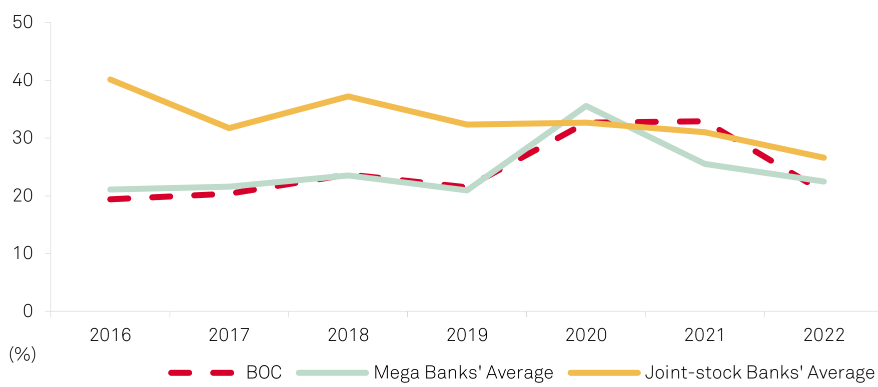
Sources: Public information of banks, collected and adjusted by S&P Global (China) Ratings.

BOC's migration rate of SMLs to NPLs dropped remarkably in 2022, easing pressure on asset quality. Impacted by the macro environment, the ratio increased from 21% in 2019 to 33% in 2020 and 2021 but decreased to 21% in 2022.

Chart 13

BOC's SML Migration Ratio Decreased to Pre-2019 Level

Peer Comparison: Migration Ratio of SMLs



Note: Downward migration ratio of SMLs = downward migration amount of SMLs at the beginning of the period / (SMLs at the beginning of the period - decrease of SMLs within the period) * 100%.

Sources: Public information of banks, collected and adjusted by S&P Global (China) Ratings.

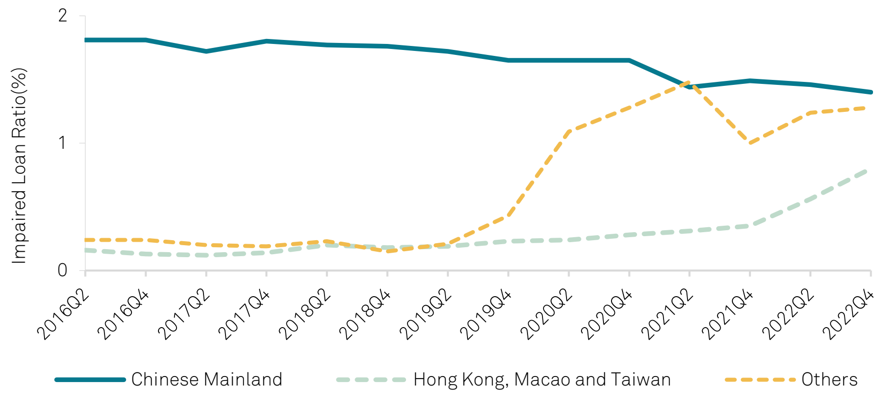
We expect BOC to weather macro economic challenges and maintain stable asset quality. Factors which contribute positively to its asset quality stability include good geographical and industry diversification, good asset quality outside the Chinese mainland, and a large portfolio of large high-quality corporate borrowers. Negative factors which may weigh on its asset quality include exposure to micro-and-small enterprises ("MSEs"), large high-risk high-leverage privately-owned enterprises, high-risk real estate developers, and weaker LGFVs.

The asset quality performance of BOC's overseas portfolio, particularly its Hong Kong portfolio, is better than its domestic loan book. As of the end of 2022, its impaired loan ratio in Hong Kong, Macao and Taiwan was 0.8%, up 0.45 percentage points YoY and lower than its overall impaired loan ratio of 1.33%. in particular, BOC's loans in Hong Kong, Macao and Taiwan accounted for 11.2% of its gross loans, with an impaired loan ratio of only 0.35% despite the pandemic. The impaired loan ratio of its international lending (excluding Hong Kong, Macao and Taiwan) increased 0.28 percentage points YoY to 1.28% at the end of 2022.

Chart 14

BOC's Asset Quality Performance Outside Chinese Mainland is Better Compared to Its Overall Loan Book

BOC: Impaired Loan Ratios by Regions



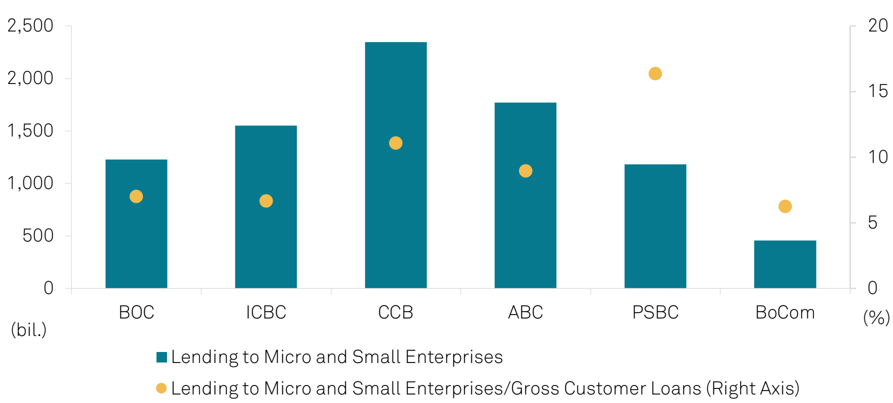
Source: BOC, collected and adjusted by S&P Global (China) Ratings.

BOC has increased its MSE loans in accordance with government requirements in recent years. Because of the limited size of its MSE portfolio, we believe the bank has sufficient profitability to absorb any credit cost pressure from MSE loans. As of the end of 2022, BOC's loans to MSEs were 1.23 trillion RMB, up 39% YoY and accounting for 7% of its gross loan portfolio.

Chart 15

BOC's MSE Exposure is Comparable to Its Peers

Peer Comparison: Lending to MSEs as of End of 2022



Sources: Public information of banks, collected & adjusted by S&P Global (China) Ratings.

We expect BOC's retail loan book to maintain stable asset quality performance. As of the end of 2022, 36.6% of the bank's loan book was retail loans. Mortgages accounted for about 76.72% of retail loans, and 28% of its total loan book. The mortgage impairment ratio in the Chinese mainland was only 0.47%, up 0.2 percentage points slightly YoY. Thanks to the good granularity of its mortgage portfolio and the bank's conservative underwriting standards, we expect BOC's mortgage loan book to maintain very good asset quality. Meanwhile, the bank's credit card business accounts for 8% of its retail loan book. 98% of BOC's credit card exposure is to mainland China borrowers. The impaired loan ratio of its credit card business was 2.02% as of the end of 2022, down 3 bps YoY.

The NPL ratio of BOC's loans to property developers has increased, following the liquidity difficulties across the property development industry since 2021. However, BOCs overall exposure to mainland real estate companies remains limited, and we expect any eventual credit losses resulting from the real estate downturn to be controllable. As of the end of 2022, BOC's loans to the real estate sector accounted for 7.77% of its total loan book (up by around 0.4 percentage points YoY). Of these loans, 4.42% were corporate real estate loans issued in mainland China with a NPL ratio of 7.23% (up by 1.78 percentage points YoY).

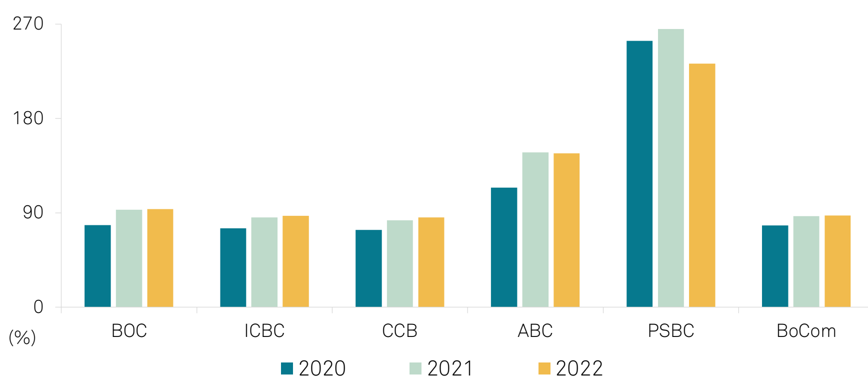
Bank of China has good capital resilience to deal with potential shocks that may arise from the real estate market and weak LGFVs. According to our stress tests, assuming a 30% rise in NPL ratios for corporate real estate loans and construction loans (assuming a 30% bad debt recovery rate), the bank is still able to maintain a Tier 1 capital adequacy ratio above 12%, meeting the regulatory minimum capital requirements for systemically important banks.

BOC has adequate NPL coverage from its reserves, helping the bank to safeguard against macroeconomic challenges. As of the end of 2022, its reserve coverage ratio was 188.73%, increasing by 1.68 percentage points YoY. Its loan loss reserve for NPL and SML was 93.56%, up 0.49 percentage points YoY. As of the end of March 2023, the bank's reserve coverage ratio was 202.56%, increasing by 13.83 percentage points from the beginning of the year.

Chart 16

BOC's Reserve Coverage Remained Stable in Recent Years

Peer Comparison: Loan Loss Reserve/(NPL+SML)



Source: Public information of banks, collected and adjusted by S&P Global (China) Ratings.

We expect the credit risk of BOC's investment portfolio to remain controllable despite the increasing default risk in the domestic bond market. As of the end of 2022, the bank's investment asset balance was 6.45 trillion RMB, about 95% of which was bonds investments, mostly consist of bonds issued by central and regional governments, the central bank and policy banks. Stage 2 and stage 3 bonds only accounted for 0.1% of BOC's investment portfolio.

Funding and Liquidity

BOC has a very stable funding structure thanks to its large and sticky corporate and retail deposit bases in China. It funds the majority of its business with customer deposits. As of the end of 2022, around 77% of its liabilities were customer deposits, and its use of wholesale funding represented about 20% of its total liabilities. The bank also has one of the lowest wholesale funding costs among domestic commercial banks.

BOC has a very stable and large deposit base across the country and benefits from "flight to quality" when market liquidity tightens.

Therefore, we apply a two-notch uplift for its funding and liquidity.

It has a balanced deposit structure. As of the end of 2022, 45% of its deposits were retail deposits; in addition, 46% of its deposits were low-cost demand deposits.

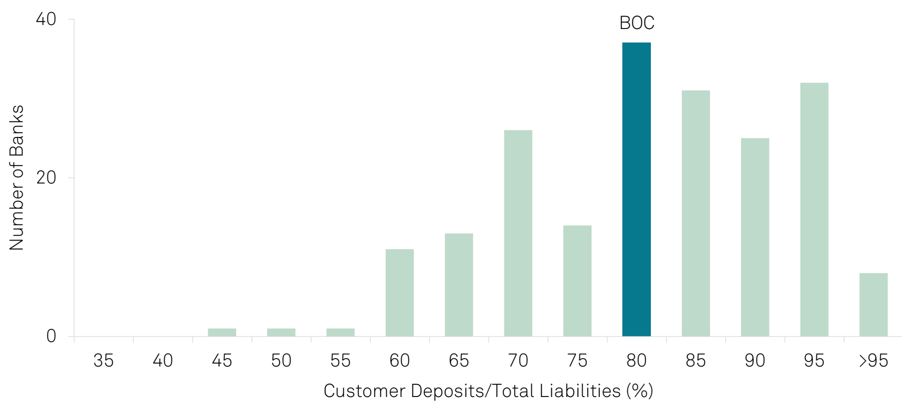
BOC has a very good liquidity profile. In the fourth quarter of 2022, the bank's average daily liquidity coverage ratio was 133.54% and its net stable funding ratio 122.47%, both much higher than the minimum regulatory requirement of 100%. And the ratio for the first quarter of 2023 was 135.17%.

As a state-owned mega bank, in our view, BOC also benefits from the phenomenon of "flight to quality" when general market confidence in the domestic banking sector weakens. Therefore, we believe BOC and its mega bank peers have a stronger and more stable funding and liquidity profile than smaller banks which are more vulnerable to swings in market confidence.

Chart 17

BOC Funds Majority of Its Business with Customer Deposits

Industry Distribution: Customer Deposits/Total Liabilities of 200 Major Banks in China as of End of 2022

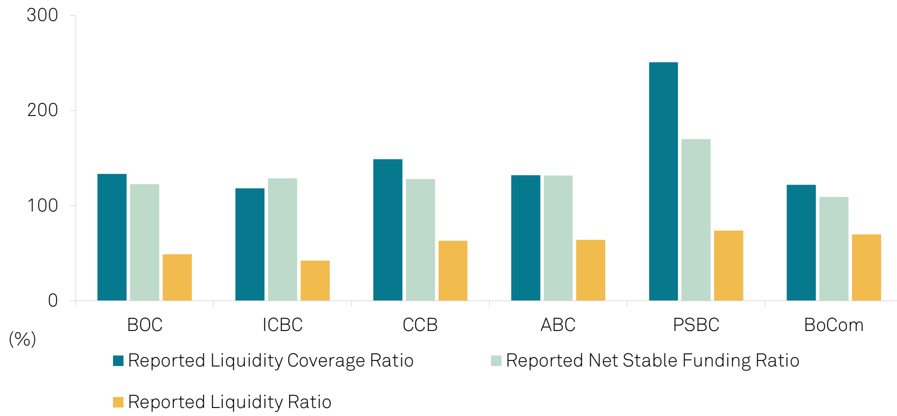


Sources: Public information of banks, collected and adjusted by S&P Global (China) Ratings.

Chart 18

Similar to Its Mega Bank Peers, BOC Has Good Liquidity Ratios

Peer Comparison: Liquidity Related Ratios as of End of 2022



Sources: Public information of banks, collected and adjusted by S&P Global (China) Ratings.

BOC's stand-alone credit profile is aa$_{spc}$, five notches higher than the commercial bank anchor of bbb+. This reflects the bank's leading business position and very stable funding base.

Issuer Credit Rating

External Support

In our opinion, as the fourth largest commercial bank in China, BOC is of critical importance to the central government for its role in maintaining the country's financial stability. Together with other state-owned mega banks, BOC is of critical importance to the government in its execution of major economic and financial policy initiatives. Since 2021, the bank has been included in the fourth bucket of the list of domestic systematically important banks, along with four other banks, ICBC, CCB and ABC. BOC is also a Global Systemically Important Bank (Bucket 2).

As the fourth largest bank, BOC is of critical importance to the central government due to its role in maintaining financial stability.

BOC has close ties with the central government. As of the end of 2022, the central government held about 64% of the bank's shares through Central Huijin Investment Ltd. We view the government's stake in mega banks as strategic and long-term. In addition, the central government also effectively appoints or nominates the majority of the bank's board of directors and senior management.

The extremely high likelihood of government support results in a two-notch uplift from its SACP of aa$_{spc}$ and we assign it an ICR of AAA$_{spc}$.

Overall, we believe that the likelihood of BOC receiving extraordinary government support is extremely high, and we assign an ICR of AAA$_{spc}$ to BOC, representing a two-notch uplift from its SACP of aa$_{spc}$.

Appendix 1: Key Financial Data

BOC -- Key Financial Data

	2019	2020	2021	2022	2022.03
Business Position					
Total assets (bil)	22,769.74	24,402.66	26,722.41	28,913.86	30,385.69
Year-over-year growth of total assets (%)	7.06	7.17	9.51	8.20	Not applicable
Gross customer loans (bil)	13,068.79	14,216.48	15,712.57	17,554.32	18,581.73
Year-over-year growth of gross customer loans (%)	10.57	8.78	10.52	11.72	Not applicable
Customer deposits (bil)	15,817.55	16,879.17	18,142.89	20,201.83	21,918.12
Year-over-year growth of customer deposits (%)	6.28	6.71	7.49	11.35	Not applicable
Operating income (bil)	549.18	565.53	605.56	618.01	165.81
Year-over-year growth of operating income (%)	8.94	2.98	7.08	2.06	Not applicable
Net income (bil)	201.89	205.10	227.34	237.50	61.73
Year-over-year growth of net income (%)	4.91	1.59	10.85	4.47	Not applicable
Net fees and commissions income/operating income (%)	13.44	13.35	13.45	11.69	15.88
Capital and Earnings					
Reported regulatory capital adequacy ratio (%)	15.59	16.22	16.53	17.52	17.53
Reported regulatory Tier 1 capital adequacy ratio (%)	12.79	13.19	13.32	14.11	13.79
Reported net interest margin (%)	1.89	1.85	1.75	1.76	Not available
Cost-to-income ratio (%)	28.00	26.73	28.17	27.88	24.63
Asset provisioning/pre-provision operating profits (%)	29.05	32.68	27.40	26.75	29.45
Loan provisioning/average gross customer loans (%)	0.79	0.76	0.66	0.56	Not applicable
Return on average assets (%)	0.92	0.87	0.89	0.85	Not applicable
Reported return on equity (%)	11.45	10.61	11.28	10.81	11.14
Risk Position					
Non-performing loan ratio (%)	1.37	1.46	1.33	1.32	1.18
(Non-performing loans + special mention loans)/gross customer loans (%)	3.59	3.33	2.68	2.67	Not available
Overdue loans/gross customer loans (%)	1.24	1.26	1.07	1.09	Not available
Loan loss reserves/gross customer loans (%)	2.49	2.59	2.49	2.50	Not available
Reserve coverage ratio (%)	182.86	177.84	187.05	188.73	202.56
Loan loss reserves/ (non-performing loans + special mention loans) (%)	69.71	78.12	93.07	93.56	Not available
Net write-offs/average gross customer loans (%)	0.63	0.42	0.49	0.30	Not applicable
Funding and Liquidity					
Customer loans/customer deposits (%)	82.62	84.22	86.60	86.89	84.78
Customer deposits/total liabilities (%)	76.07	75.90	74.44	76.68	78.93
Wholesale funding /total liabilities (%)	20.53	20.14	22.35	19.80	17.94
Retail deposits/customer deposits (%)	44.19	44.97	44.57	45.25	Not available
Liquidity coverage ratio (%)	136.36	139.79	127.61	133.54	135.17
Net stable funding ratio (%)	124.46	123.50	122.21	122.47	Not available

Note 1: In our view, BOC has a clear business model and sound financial management. We haven't conducted any material adjustments to its financial data.

Note 2: BOC's annual financial reports from 2019 to 2020 were audited by Ernst & Young Hua Ming. BOC's 2021 to 2022 annual financial report was audited by PricewaterhouseCoopers Zhongtian. All are standard unqualified opinions.

Note 3: Return on average assets = net income / [(total assets at the beginning of the year + total assets as of the end of the year)/2].

Note 4: Wholesale funding=borrowing from central government + borrowing and deposits from other financial institutions + financial assets sold for repurchase + transactional monetary liabilities + bonds payable.

Sources: BOC, collected and adjusted by S&P Global (China) Ratings.

Appendix 2: Rating History of BOC by S&P Global (China) Ratings

Issuer Credit Ratings	Outlook	Rating Date	Analysts	Related Reports
AAA_{spc}	Stable	2021-07-15	Longtai Chen, Xiaochen Luan, Zheng Li	Credit Rating Report: Bank of China Limited, July 15, 2021
AAA_{spc}	Stable	2021-11-5	Longtai Chen, Xiaochen Luan, Zheng Li	Credit Rating Report: Bank of China Limited, November 5, 2021
AAA_{spc}	Stable	2022-06-09	Longtai Chen, Xiaochen Luan, Zheng Li, Jiancheng Yang	Credit Rating Report: Bank of China Limited, June 9, 2022
AAA_{spc}	Stable	2022-07-21	Longtai Chen, Xiaochen Luan, Jiancheng Yang	Credit Rating Report: Bank of China Limited, July 21, 2022
AAA_{spc}	Stable	2022-11-04	Xiaochen Luan, Jiancheng Yang	Credit Rating Report: Bank of China Limited, November 4, 2022
AAA_{spc}	Stable	2023-07-28	Xiaochen Luan, Xuefei Zou, Qiwei Chen	Current Report

Note: These ratings are conducted based on S&P Global (China) Ratings Financial Institutions Methodology, and no quantitative model is used.