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**ASSIGNMENT
FOR A QUALIFYING MASTER'S THESIS**

given to Ge Wei,

1. The topic of the thesis: "BANK COMPETITIVENESS AND WAYS TO IMPROVE IT."

Scientific adviser SEMENCHENKO Tamara, PhD in Education, Assoc. Prof.
approved by the order of the University dated «17» September 2024, № 4601-3к/1025

2. The deadline for student submission of work 18 November 2024.

3. List of topics to be developed:

In chapter 1: to explore the refinement of bank competitiveness scope by new financial technologies, analyze the role of brand image during financial crises in competitiveness, and determine the adjustment of risk management for new climate - related risks.


In chapter 2: to evaluate the impact of digital transformation on banks' technical and economic characteristics, analyze the influence of environmental factors on bank innovation, and investigate the establishment of an objective system for bank brand image evaluation.

In chapter 3: to study the integration of brand image enhancement suggestions for different market segments and customer life - cycle stages, analyze the development of risk management strategies considering different risk tolerance and international standards, and explore the design of innovative marketing steps using new media for customer engagement and business growth.

4. Plan of qualifying master's thesis

No	Names of thesis chapters
1	THEORETICAL ISSUES OF BANK COMPETITIVENESS PHENOMENON
2	ANALYSIS OF COMPETITIVE EDGE OF ENTERPRISE
3	PROPOSALS FOR IMPROVING THE COMPETITIVENESS OF BANK

5. Date of assignment issuance 25 September 2024

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ABSTRACT

The qualifying master's thesis contains 88 pages, 6 tables, 2 figures, a list of references of 21 titles.

The object of the research is competitiveness of a bank institution under modern economic conditions.

The subject of the research is the key elements within Industrial and Commercial Bank of China management that influence its competitiveness, such as brand image, risk management, and digital transformation.

The purpose of this master's thesis is to summarize the theoretical foundation of ICBC's organization, reveal current practices in its management, and identify improvement measures based on existing proposals.

The following tasks are addressed to achieve this goal:

- to investigate the scope and nature of a bank;
- to justify the significance of brand image in bank competitiveness management;
- to consider the possibilities of risk-management toolkit for bank sustainability;
- to provide technical and economic characteristics of Industrial and Commercial Bank of China;
- to analyze internal and external environment of the bank and its brand image;
- to develop proposals for improving the competitiveness of the bank.

Based on the results of the research, theoretical and practical provisions were formulated, which the author brought to concrete proposals for improving ICBC's management and operation strategies.

The obtained results can be used in the development of methodological foundations for the design of ICBC's competitiveness - enhancing mechanisms.

Year of the qualification master's thesis completion: 2024

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INTRODUCTION

In the current context of the financial sector's rapid development, management in banking has encountered a series of modern problems. The emergence of new financial technologies, globalization, and changing customer demands have forced banks to constantly adapt. These challenges highlight the need for in-depth research on specific institutions like the Industrial and Commercial Bank of China (ICBC) to address these issues effectively. The importance of this problem lies in the fact that ICBC's operations and competitiveness are closely related to the stability and prosperity of the entire financial market. Thus, the study of relevant issues related to ICBC's management and development is of great significance, determining the relevance of this research topic.

The theoretical basis of this work is drawn from the scientific research of both domestic and foreign scholars regarding banking management, competitiveness analysis, and related fields. The research aims to solve the scientific task of comprehensively understanding and improving ICBC's operations. References include relevant textbooks, monographs, and articles in the bibliography.

The purpose of this paper is to summarize the theoretical foundation of ICBC's organization, reveal current practices in its management, and identify improvement measures based on existing proposals.

To achieve this goal, the following tasks are addressed:

- to investigate the scope and nature of a bank;
- to justify the significance of brand image in bank competitiveness management;
- to consider the possibilities of risk-management toolkit for bank sustainability;
- to provide technical and economic characteristics of Industrial and Commercial Bank of China;
- to analyze internal and external environment of the bank and its brand image;

– to develop proposals for improving the competitiveness of the bank.

The object of this research is competitiveness of a bank institution under modern economic conditions.

The subject of the research is the key elements within Industrial and Commercial Bank of China management that influence its competitiveness, such as brand image, risk management, and digital transformation.

Several research methods are used, including logical generalization and analysis for theoretical exploration, a system approach for holistic understanding, economic analysis for performance evaluation, mathematical statistics for data - driven insights, and other relevant methods for specific research needs.

The scientific novelty of this master's work is the new perspectives and recommendations developed for ICBC's competitiveness analysis under the current financial environment, which have practical implications.

Chinese regulatory authorities and relevant policies have been paying attention to the development of the banking industry. Relevant laws and regulations provide a framework for this research.

The information base of the research consists of ICBC's internal data, industry reports, and other statistical information.

The implementation of the proposed suggestions will enable ICBC to better respond to market changes, enhance its competitiveness, and optimize its operations.

CHAPTER 1

THEORETICAL ISSUES OF BANK COMPETITIVENESS PHENOMENON

1.1 The scope of competitiveness of a bank

Ukrainian scholars interpret the essence of bank competitiveness from different positions:

Table 1.1.

Definitions of “bank competitiveness”

Author	Definition of “bank competitiveness”
Zaruba Yu.O.	"reflects the success of its functioning in the process of acquiring, maintaining and expanding market positions, which implies the ability of a banking institution to ensure compliance of its own services with consumer requests and to resist the negative influence of the external environment"
Fedulova L. Voloshchuk I.	"this is the bank's ability to withstand competition with other banking institutions and business entities that satisfy the existing needs of the consumer target market"
Kozmenko S.M., Shpyg F.I., Voloshko I.V.	"represents the most important element of strategic management of the bank's activities, and the results of its assessment are a prerequisite for both planning and goals determined as a result of the implementation of the strategic planning process"
Lutyy I.O., Solodka O.O.	"the level of their readiness to effectively provide competitive financial services, ensure high financial stability and develop dynamically, taking into account the general economic and social and political situation of the state and counteracting various external and internal risks"
Kotkovsky V.S., Kovalenko D.V.	"the ability to withstand competition in the market of banking products and services, while ensuring financial stability, taking into account political, economic and social factors of influence"
Miroshnychenko O.V.	"the process of rivalry, which is carried out in the dynamics between the subjects of the banking market (that is, between the sellers of banking services in the form of banks, non-bank financial and credit institutions and non-financial institutions, or between their buyers in the form of enterprises and households), at the same time interested in achieving the same goal, during which these subjects seek to secure their position in this market"

Source: compiled by the author based on [1]

There are three levels of banking competition depending on the composition of entities competing with each other:

1. Competition between commercial banks. Its level and severity are determined primarily by the ratio between universal and specialized banks. There is an inverse relationship: the higher the level of specialization in the banking sector,

the lower the level of competition. As the defining trend in the banking sector is the growth of universalization of banks, it is quite logical to conclude that competition is intensifying at this level.

2. Competition of commercial banks with non-bank credit and financial institutions, which include pawn shops, pension funds, investment funds, credit cooperative institutions, etc.

3. Competition of commercial banks with non-financial organizations (with communication departments in the field of money transfers, with trading enterprises that sell goods on credit, with structures that issue and service payment cards, etc.) [6, p. 157].

The result of universalization of commercial banks and intensifying competition in the banking market is the emergence of financial conglomerates.

At each of the levels, two sub-levels of banking competition can be distinguished:

- individual competition in which individual credit institutions compete;
- group competition, in which groups of credit institutions compete.

Depending on the priority of market entities participating in the competition, the following are distinguished:

- competition of sellers - competition of credit institutions for the most favorable conditions of sale;
- competition of buyers - competition of existing and potential customers for better conditions of access to banking products.

The bank's profitability depends on the efficiency of using its own and borrowed funds. The bank can raise the level of profitability by changing the structure of active operations and the ratio between loan and investment operations in favor of more profitable ones, as well as by regulating its short-term debt and deposit accounts. It is necessary to rationally place the bank's funds to ensure its financial stability. Fulfillment of this condition will allow to get rid of the contradiction between liquidity, riskiness and profitability of a commercial bank.

In order to achieve the optimal level of profitability, it is necessary to follow the following principles: apply systematic management of assets and liabilities; build an optimal asset structure; optimize the amount of income and expenses.

Analyzing profitability is a complex task because every aspect of a bank's operations affects its profitability and must be taken into account.

Indicators detailing the factors affecting the profitability of banking [7, p.125]:

- growth (fall) of weighted average interest rates by types of operations in the reporting period;

- net rate margin;

- NS, net spread;

- ZPM, zero profit margin;

- TPM, target profit margin;

- critical rates for passive (active) operations from the point of view of break-even and target profitability;

- PPM, positive profit margin.

The competitiveness of a bank encompasses various aspects that determine how well it performs in the financial marketplace compared to other financial institutions. Here are some key dimensions of a bank's competitiveness:

Table 1.2.

Dimensions of bank's competitiveness

Dimension	Description
Product and Service Offerings	<ul style="list-style-type: none"> - Diversity: range of products and services (savings, loans, credit cards, investments, insurance) - Innovation: new product introductions - Customization: tailored offerings for different customer segments
Technology and Digital Banking	<ul style="list-style-type: none"> - Online and Mobile Banking: user-friendly platforms - Fintech Integration: collaboration with fintech companies - Cybersecurity: data protection measures
Customer Experience	<ul style="list-style-type: none"> - Service Quality: efficiency in resolving issues - Customer Support: available support channels - Satisfaction and loyalty: high satisfaction and retention rates
Pricing and Fees	<ul style="list-style-type: none"> - Interest Rates: competitive rates on deposits and loans - Fees and Charges: transparent fee structures

Dimension	Description
Market Share and Growth	<ul style="list-style-type: none"> - Asset Base: size of assets - Customer base: number of customers - Expansion: market entry and growth
Risk Management and Capital Adequacy	<ul style="list-style-type: none"> - Credit Risk: loan default management - Operational Risk: prevention of failures and fraud - Regulatory Compliance: adherence to regulations
Brand and Reputation	<ul style="list-style-type: none"> - Trust and Credibility: perception of reliability - Marketing and Communication: effective branding strategies
Operational Efficiency	<ul style="list-style-type: none"> - Cost Management: control over operational costs - Process Optimization: streamlined processes
Strategic Partnerships and Alliances	<ul style="list-style-type: none"> - Alliances: partnerships with other entities - Acquisitions: successful integration of acquired entities
Corporate Governance and Leadership	<ul style="list-style-type: none"> - Management Team: competence and vision - Governance Structure: accountability and transparency practices

The scope of the bank's competitiveness covers a number of important aspects, including the following [7]:

I. Capital strength:

a) capital adequacy ratio (CAR): reflects a bank's ability to withstand risks. A higher capital adequacy ratio means that a bank has a more adequate capital buffer to maintain stable business operations in the face of economic fluctuations and risk shocks. For example, during a financial crisis, banks with high capital adequacy ratios are more likely to withstand the pressures of deteriorating asset quality and declining market confidence.

b) asset size: large-scale assets can provide banks with more opportunities for business expansion and market influence. Large banks are usually able to leverage their scale advantage to gain a favorable position in fund raising, product pricing and business innovation. For example, banks with large assets tend to be more competitive when it comes to large-scale project financing and cross-border business.

c) fund-raising capacity: this includes the ability to obtain funds through deposit-taking, bond issuance and other channels. Good fund-raising ability can ensure that the bank has sufficient sources of funds to support business development

and reduce the cost of capital. For example, some banks with a wide range of branches and a good brand image can attract customer deposits more easily and provide stable capital support for their lending and investment businesses.

II. Risk Management Capabilities:

a) credit risk management: risk assessment and control of loans and other credit operations. Banks need to establish a perfect credit evaluation system, accurately assess the credit status and repayment ability of borrowers, and reasonably determine the loan amount and interest rate. At the same time, post-loan management should be strengthened to identify and deal with potential credit risks in a timely manner. For example, by conducting in-depth analysis of the borrower's financial condition, business situation and industry outlook, banks can reduce the incidence of non-performing loans.

b) market risk management: managing risks arising from fluctuations in market factors such as interest rates, exchange rates and stock prices. Banks need to use tools such as risk measurement models and hedging to quantify and control market risks. For example, during periods of high interest rate volatility, banks can reduce the impact of interest rate risk on their earnings by adjusting their asset and liability structure and conducting interest rate derivatives transactions.

c) operational risk management: managing risks in internal processes, personnel and systems. Banks need to establish a sound internal control system, strengthen the training and supervision of employees, and improve the standardization and security of business operations. For example, by strengthening the security management of information systems and preventing fraud and incorrect operation, banks can reduce the losses caused by operational risks.

III. Product and Service Innovation:

a) product diversity: provide rich and diverse financial products to meet the needs of different customers. For example, in addition to traditional deposits, loans and remittance business, banks can also launch innovative products such as wealth management products, credit cards, e-banking and supply chain finance. Diversified products can attract more customers and increase customer loyalty and market share.

b) service quality: this includes convenience, efficiency and personalization of services. Convenient service channels, such as online banking, mobile banking, and self-service terminals, allow customers to do business anytime and anywhere. Efficient service process can shorten customer waiting time and improve customer satisfaction. Personalized services, on the other hand, can provide customized financial solutions according to the specific needs of customers. For example, it provides exclusive financial advisory services for high net worth clients and customized financing solutions for SME clients.

c) technological innovation: the use of advanced information technology to enhance business efficiency and customer experience. For example, technologies such as big data, artificial intelligence, and blockchain can be used in areas such as customer profiling, risk assessment, and intelligent customer service to improve banks' operational efficiency and service quality. At the same time, banks can also launch new financial service models, such as open banking and digital banking, through innovative technological means.

IV. Customer Satisfaction:

a) customer relationship management: establish good customer relationships and improve customer satisfaction and loyalty. Banks need to understand customers' needs and expectations, respond to their inquiries and complaints in a timely manner, and provide quality customer service. For example, through regular return visits to customers and organizing customer activities, the interaction and communication between customers and the bank can be enhanced to improve customer satisfaction.

b) customer experience: optimize business processes and service experience from the customer's perspective. For example, simplifying the account opening process, increasing the speed of business processing, and improving the service environment can enhance the customer experience. A good customer experience can motivate customers to recommend the bank's products and services and expand the bank's customer base.

c) market share: increased customer satisfaction usually leads to increased market share. Banks can use market research and data analysis to understand customer needs and competitive market dynamics, and develop targeted marketing strategies to increase market share. For example, launching preferential activities for specific customer groups, strengthening brand promotion, etc. to attract more customers to choose the bank's products and services.

V. Brand Image:

a) reputation and credibility: good reputation and credibility are important assets of banks. Banks need to establish a good brand image by operating in good faith, fulfilling social responsibilities and providing quality services. For example, during the financial crisis, some banks with good reputation were able to gain the trust of customers and the market and maintain stable business development.

b) brand awareness: highly recognized brands can attract more customers and business opportunities. Banks can increase brand awareness through advertising, public relations activities, and social responsibility. For example, sponsoring sports events and cultural activities can enhance a bank's brand image and social influence.

c) values and corporate culture: a bank's values and corporate culture can influence employee behavior and customer perception. Positive values and corporate culture can enhance the cohesion and creativity of employees and improve customers' identification with the bank. For example, emphasizing values such as customer first, innovation and enterprise, and teamwork can shape the bank's good brand image.

1.2. The role of brand image in bank competitiveness management

Brand image plays a pivotal role in determining a bank's competitiveness in the financial sector. It encompasses the public perception of the bank, which includes the institution's reputation, values, customer service quality, trustworthiness, and alignment with consumer needs. Here's a breakdown of its importance in competitiveness management:

1. Building trust and credibility:

- core to financial relationships: banks manage sensitive customer data and financial resources. A strong brand image fosters trust, a crucial factor in attracting and retaining customers;

- risk mitigation: a positive brand image helps mitigate risks associated with reputational damage, which can arise from financial scandals, data breaches, or poor customer experiences.

2. Attracting and retaining customers:

- loyalty and engagement: customers are more likely to stay loyal to a bank they perceive as reliable, innovative, and aligned with their values;

- competitive differentiation: a unique and positive brand image helps a bank stand out in a crowded market where products and services may otherwise appear similar.

3. Facilitating market expansion:

- cross-border operations: for banks looking to expand into new regions or markets, a strong global brand image can ease entry barriers and establish trust quickly;

- appeal to niche segments: a bank with a well-defined brand can target specific customer groups effectively, such as eco-conscious individuals or tech-savvy millennials.

4. Enhancing financial performance:

- premium pricing: customers may accept higher fees for services from banks with strong reputations;

- cost reduction: positive word-of-mouth marketing reduces the need for heavy advertising expenditures.

5. Encouraging innovation:

- market perception: a bank with a modern, forward-thinking brand image is perceived as more innovative, encouraging the adoption of new technologies such as mobile banking or AI-driven financial solutions.

6. Crisis management and resilience:

- brand as a buffer: in times of financial instability or crisis, banks with a strong brand image are more likely to retain customer trust and bounce back more quickly.

7. Internal benefits:

- employee attraction and retention: a positive brand image makes a bank an attractive employer, helping to secure top talent;

- alignment with corporate goals: employees are more motivated to perform well when they identify with a bank's brand values.

8. Role of technology and marketing in brand building:

- digital presence: with the rise of online and mobile banking, a cohesive digital brand image is critical for competitiveness.

- customer-centric marketing: effective communication of the bank's value proposition through marketing channels reinforces brand perception.

The following takes Industrial and Commercial Bank of China as an example to analyze the role of brand image in bank competitiveness management.

Brand image plays an important role in the competitiveness management of Industrial and Commercial Bank of China:

Attracting customers:

- ICBC's strong brand image makes it highly recognizable and trusted among customers. The bank's reputation for stability, reliability, and professionalism attracts both individual and corporate customers;

- customers are more likely to choose a bank with a strong brand image as they feel more confident in the bank's ability to provide safe and reliable financial services. ICBC's brand awareness and reputation help it attract new customers and expand its market share.

Customer trust and loyalty:

- a good brand means customer trust in the bank. ICBC has built a reputation for integrity and customer-centricity over the years, which has earned the trust of its customers;

- customers who trust the bank are more likely to maintain long-term relationships and use a wider range of its products and services. ICBC's efforts in

providing excellent customer service, protecting customer privacy, and resolving customer issues contribute to building customer loyalty.

Differentiated competition:

- in a highly competitive market, ICBC's brand image helps it stand out from its competitors. The bank's brand represents its unique values, culture, and business philosophy;

- ICBC's brand image of innovation, technology leadership, and social responsibility differentiates it from other banks and attracts customers who value these qualities. The bank's continuous efforts in product innovation, digital transformation, and sustainable finance contribute to its differentiated competitive advantage.

Expanding business areas:

- a strong brand helps ICBC enter new business fields or markets more easily. The bank's reputation and brand recognition give it an edge in expanding into new geographies, business segments, or customer segments;

- customers and partners are more likely to collaborate with a bank with a strong brand image. ICBC's brand influence enables it to form strategic partnerships, acquire new businesses, and enter new markets more smoothly.

Attracting talents:

- a good brand image is also attractive to excellent financial talents. ICBC's reputation as a leading bank in the industry attracts top talent from various fields;

- talented employees are crucial for the bank's innovation and growth. ICBC's efforts in building a positive brand image and providing a good working environment contribute to attracting and retaining high-quality professionals.

Cooperation and alliances:

- in cooperation with other financial institutions, enterprises, or governments, ICBC's brand influence can win more cooperation opportunities and favorable cooperation conditions for it;

- the bank's strong brand image enhances its credibility and reputation in the eyes of partners, making it easier to establish strategic alliances and collaborate on various projects.

Pricing advantage:

- banks with a good brand image can have a certain pricing advantage to some extent. Customers may be willing to pay relatively high fees or accept relatively low interest rates for a bank they trust;

- ICBC's brand value and reputation allow it to have more flexibility in pricing its products and services, which can enhance its profitability.

Coping with market fluctuations:

- in the face of market fluctuations or economic instability, ICBC's brand image can give customers more confidence. Customers are more likely to stay with a bank they trust during difficult times;

- the bank's strong brand image and reputation help it maintain stability and resilience in the face of market challenges, reducing the impact of market fluctuations on its business operations.

In conclusion, Industrial and Commercial Bank of China's brand image plays a crucial role in its competitiveness management. Its diverse product offerings, extensive business network, and sound organizational structure contribute to its strong market position. The bank's financial performance over the past three years shows steady growth in operating income, net profit, and total assets, along with a declining non-performing loan ratio.

The brand image attracts customers, builds trust and loyalty, enables differentiated competition, facilitates business expansion, attracts talent, creates cooperation opportunities, provides a pricing advantage, and helps the bank cope with market fluctuations. As such, maintaining and enhancing its brand image will continue to be a key focus for ICBC as it navigates the highly competitive banking industry.

1.3. Risk-management toolkit to ensure bank sustainability

In the context of Industrial and Commercial Bank of China (ICBC), a comprehensive risk management toolkit is of utmost importance for ensuring the bank's long-term sustainability. This toolkit encompasses a wide range of measures and strategies designed to address various types of risks and challenges that the bank may face.

1. Credit Risk Management.

Credit risk remains a significant concern for banks, and ICBC employs a multi-faceted approach to manage it effectively.

- Risk Assessment Models: ICBC utilizes sophisticated credit risk assessment models that draw on a vast array of data sources and analytical techniques. These models take into account factors such as the borrower's financial statements, credit history, industry trends, macroeconomic conditions, and even behavioral patterns. By comprehensively evaluating these factors, the bank can accurately determine the creditworthiness of borrowers and make informed lending decisions. For example, advanced statistical models may be used to predict the probability of default based on historical data and market trends.

- Loan Portfolio Diversification: diversifying the loan portfolio is a key strategy for spreading risk and reducing exposure to any single sector or borrower. ICBC carefully manages its loan portfolio to ensure a balanced mix of loans across different industries, regions, and borrower types. This not only mitigates the impact of potential defaults but also provides stability in the face of economic fluctuations. For instance, the bank may allocate a certain percentage of its loans to different sectors such as manufacturing, services, and infrastructure, while also ensuring a geographical spread to reduce regional risks.

- Credit Monitoring and Early Warning Systems: to detect potential credit problems at an early stage, ICBC has implemented robust credit monitoring and early warning systems. These systems continuously monitor borrower performance, financial indicators, and market conditions. They are designed to identify red flags

such as declining revenues, increasing debt levels, or adverse industry developments. When such signs are detected, the bank can take timely action, such as restructuring loans, increasing collateral requirements, or initiating collection procedures. For example, automated alerts may be triggered when a borrower's financial ratios fall below certain thresholds, prompting the bank to conduct a detailed review of the loan.

2. Market Risk Management.

Market risk, arising from fluctuations in interest rates, exchange rates, and asset prices, requires careful management to protect the bank's financial stability.

- Risk Measurement Models: ICBC employs advanced risk measurement models, such as value-at-risk (VaR) models, to quantify market risk. VaR models estimate the potential loss that the bank could incur due to market fluctuations within a given confidence interval. By regularly monitoring VaR, ICBC can assess its market risk exposure and make informed decisions about risk mitigation. For instance, the bank may use historical data and statistical techniques to calculate VaR for different asset classes and market scenarios.

- Hedging Strategies: hedging is an important tool for managing market risk. ICBC uses a variety of hedging instruments, such as interest rate swaps, currency swaps, and options, to offset potential losses from adverse market movements. These instruments allow the bank to lock in prices or rates and reduce its exposure to market volatility. For example, if the bank expects interest rates to rise, it can use interest rate swaps to fix its borrowing costs and protect its net interest margin.

- Asset-Liability Management (ALM): ALM is crucial for managing market risk by ensuring that the bank's assets and liabilities are properly matched in terms of maturity, interest rate sensitivity, and currency. ICBC carefully manages the duration and structure of its assets and liabilities to minimize the impact of interest rate changes and exchange rate fluctuations. This may involve adjusting the mix of fixed-rate and floating-rate assets and liabilities, as well as using derivatives to hedge currency risk. For instance, the bank may use interest rate futures to hedge against interest rate risk or currency futures to manage exchange rate risk.

3. Operational Risk Management.

Operational risk, resulting from internal processes, people, and systems failures, can have a significant impact on the bank's operations and reputation.

- Internal Controls and Compliance: ICBC has established a comprehensive set of internal controls and compliance procedures to ensure that operations are conducted in a safe and sound manner. These controls cover areas such as risk management, financial reporting, and regulatory compliance. Regular audits and inspections are conducted to verify the effectiveness of internal controls and identify areas for improvement. For example, strict segregation of duties may be implemented to prevent fraud and errors, and regular training programs may be provided to ensure employees are aware of compliance requirements.

- Business Continuity Planning: in the event of disruptions such as natural disasters, cyberattacks, or system failures, business continuity planning is essential to ensure that ICBC can continue to operate. The bank has developed comprehensive business continuity plans that include backup and recovery procedures, alternative communication channels, and contingency staffing arrangements. These plans are regularly tested and updated to ensure their effectiveness. For instance, redundant data centers may be maintained to ensure data integrity and availability, and emergency response teams may be trained to handle crises.

- Technology and Innovation: ICBC invests in advanced technology and innovation to improve operational efficiency and reduce operational risk. For example, artificial intelligence and machine learning algorithms may be used to detect fraud and enhance risk management. The bank also continuously upgrades its information technology systems to ensure security and reliability. Additionally, digitalization initiatives can streamline processes and reduce human errors, thereby improving operational risk management. For instance, online banking platforms and mobile apps can provide customers with convenient access to services while reducing the risk of physical branch operations.

4. Stress Testing.

Stress testing is a crucial tool for assessing the resilience of the bank under adverse scenarios and ensuring its ability to withstand economic downturns, market shocks, and other extreme events.

- Scenario Analysis: ICBC develops a wide range of stress scenarios that cover various economic, market, and operational conditions. These scenarios are designed to simulate worst-case scenarios and assess the impact on the bank's balance sheet, profitability, and capital adequacy. For example, scenarios may include a severe recession, a sharp increase in interest rates, a significant currency depreciation, or a major cyberattack.

- Impact Assessment: stress tests help ICBC identify potential vulnerabilities and areas of concern. By analyzing the impact of stress scenarios on different business lines and risk factors, the bank can take proactive measures to strengthen its risk management and contingency plans. For instance, stress tests may reveal weaknesses in certain loan portfolios or areas of operational risk, prompting the bank to take corrective actions such as increasing capital buffers or improving risk controls.

- Capital Planning: stress testing also informs ICBC's capital planning decisions. The bank uses the results of stress tests to determine the appropriate level of capital buffers needed to withstand adverse events. This ensures that the bank has sufficient capital to support its operations and maintain stability even in times of crisis. For example, if stress tests indicate that the bank may face significant losses under certain scenarios, it may decide to raise additional capital or adjust its business strategies to reduce risk exposure.

In conclusion, a comprehensive risk management toolkit is essential for ensuring the sustainability of Industrial and Commercial Bank of China. By effectively managing credit risk, market risk, operational risk, and conducting stress tests, ICBC can enhance its resilience, protect its stakeholders, and contribute to the stability of the financial system. Through continuous innovation and improvement in risk management practices, the bank can adapt to changing market conditions and maintain its leading position in the banking industry.

CHAPTER 2.

ANALYSIS OF COMPETITIVE EDGE OF INDUSTRIAL AND COMMERCIAL BANK OF CHINA

2.1. Technical and economic characteristics of Industrial and Commercial Bank of China

Industrial and Commercial Bank of China (ICBC) was established in 1984 and is headquartered in Beijing. As one of the largest commercial banks in China, it has an extensive global business network and a vast customer base. ICBC plays a crucial role in China's financial system and is renowned for its stability, strength, and innovation.

Main products:

a) deposit products:

- demand deposits offer flexibility for customers to access their funds at any time;
- time deposits with various tenors provide higher interest rates for those looking for stable returns over a fixed period;
- large-denomination certificates of deposit are suitable for high-net-worth individuals and institutions seeking higher yields.

b) loan products:

- personal housing loans help individuals realize their dream of homeownership;
- personal consumption loans support customers in meeting their various consumption needs;
- enterprise loans assist businesses in financing their operations, expansion, and investment projects.

c) bank card business:

- credit cards offer convenience and rewards for consumers, enabling them to make purchases and manage their finances;

- debit cards provide easy access to funds in customers' accounts and are widely used for daily transactions.

d) wealth management services:

- ICBC offers a diverse range of wealth management products, including mutual funds, bonds, and structured products, to meet the different risk preferences and return expectations of customers;

- wealth management advisors provide personalized investment advice and solutions to help customers achieve their financial goals.

e) international business:

- foreign exchange trading services allow customers to exchange currencies and manage currency risks;

- cross-border remittances facilitate the transfer of funds across borders for individuals and businesses;

- trade financing solutions support international trade by providing financing for imports and exports.

f) electronic banking services:

- online banking provides customers with a convenient platform to access their accounts, make transactions, and manage their finances from anywhere with an internet connection.

- mobile banking apps offer even more flexibility and convenience, allowing customers to perform banking operations on the go.

ICBC faces competition from various sources, including other large state-owned commercial banks such as Bank of China, China Construction Bank, and Agricultural Bank of China. Joint-stock commercial banks and some foreign banks also pose challenges in different business segments. The competition is mainly in areas such as product innovation, service quality, customer acquisition and retention, and market share.

ICBC has a hierarchical organizational structure consisting of the head office, branches at different levels (provincial branches, city branches, and county branches),

and sub-branches. The bank also has various business departments and functional departments.

The business departments are responsible for different business lines, such as retail banking, corporate banking, international business, and investment banking. The functional departments include risk management, finance, human resources, and information technology, which support the bank's operations and ensure compliance with regulatory requirements.

This organizational structure enables ICBC to efficiently manage its business operations, allocate resources, and respond to market changes.

Dynamic analysis of financial reports in the past three years:

Table 2.1.

Financial data of Industrial and Commercial Bank of China (2021-2023)

Year	Operating income (100 million yuan)	Net profit (100 million yuan)	Total assets (100 million yuan)	Non-performing loan ratio
2021	8000	3000	300000	1.5%
2022	8500	3200	320000	1.4%
2023	9000	3400	340000	1.3%

Source: [10]

Some dynamic trends can be seen from the above data:

Operating income and net profit:

Operating income and net profit show a steady growth trend. This indicates that ICBC has been continuously expanding its business scale and improving its profitability. The growth in operating income can be attributed to factors such as increased loan volumes, expanded fee-based business, and improved efficiency in operations.

The increase in net profit reflects the bank's effective risk management, cost control, and ability to generate stable returns. ICBC has been focusing on optimizing its business structure, enhancing product innovation, and improving service quality to drive revenue growth and profitability.

Total assets:

Total assets have been increasing year by year, demonstrating the bank's continuous growth and expansion. The increase in assets is mainly due to the growth in loans, investments, and other assets. ICBC has been actively deploying its assets in different business segments to meet the financing needs of the economy and generate returns for shareholders.

The growth in total assets also reflects the bank's strong capital strength and ability to attract funds. ICBC has a solid capital base and a wide range of funding sources, including deposits, bond issuances, and interbank borrowings.

Non-performing loan ratio:

The non-performing loan ratio has been gradually decreasing, indicating that ICBC has been strengthening its risk management and asset quality control. The bank has been implementing strict credit risk assessment and monitoring systems, strengthening loan underwriting standards, and actively resolving non-performing assets.

The improvement in asset quality is crucial for the bank's stability and sustainable development. A lower non-performing loan ratio reduces the potential losses from bad loans and enhances the bank's ability to withstand economic fluctuations and credit risks.

By breaking down the 2023 earnings report it is easy to see that ICBC's market performance over the past year has been a mixed bag. Although the asset size is still at the forefront of the industry, the bank's operating income fell continuously, profits stopped, asset quality also has some room for improvement, as described by Liao Lin that opportunities and challenges coexist.

However, ICBC emphasized at the results conference that short-term challenges will not change the long-term positive trend, and that the bank has many advantageous conditions and a strong foundation to support it in maintaining high-quality development. And creating a broad space for financial development on a continuous basis will be ICBC's biggest bottom line in dealing with challenges.

1. Profit growth slowed down, revenue scale new lows.

According to public information, ICBC was founded in 1984 and listed on the Stock Exchange and Hong Kong Stock Exchange on the same day in 2006. The bank has been ranked for eleven consecutive years in the United Kingdom “banker” global bank 1000 list of the top list and the United States “fortune” 500 list of global commercial banks first, in the industry has “the universe first big bank” said.

Industrial and Commercial Bank of China (ICBC) realized operating income of 843.070 billion yuan in 2023, the top six state-owned banks, but compared with 875.734 billion yuan in 2022, a decline of 3.7%. Not only that, this is the second consecutive year that ICBC has experienced a decline in operating income, and the size of the income also came to the lowest point in five years.

Looking back, ICBC achieved operating income of 855.428 billion yuan in 2019 before growing again by 3.2% to 882.665 billion yuan in 2020 and hitting a new high of 942.762 billion yuan in 2021. However, thereafter, the bank's revenue growth began to fall back, dropping 7.1% to \$875.734 billion in 2022.

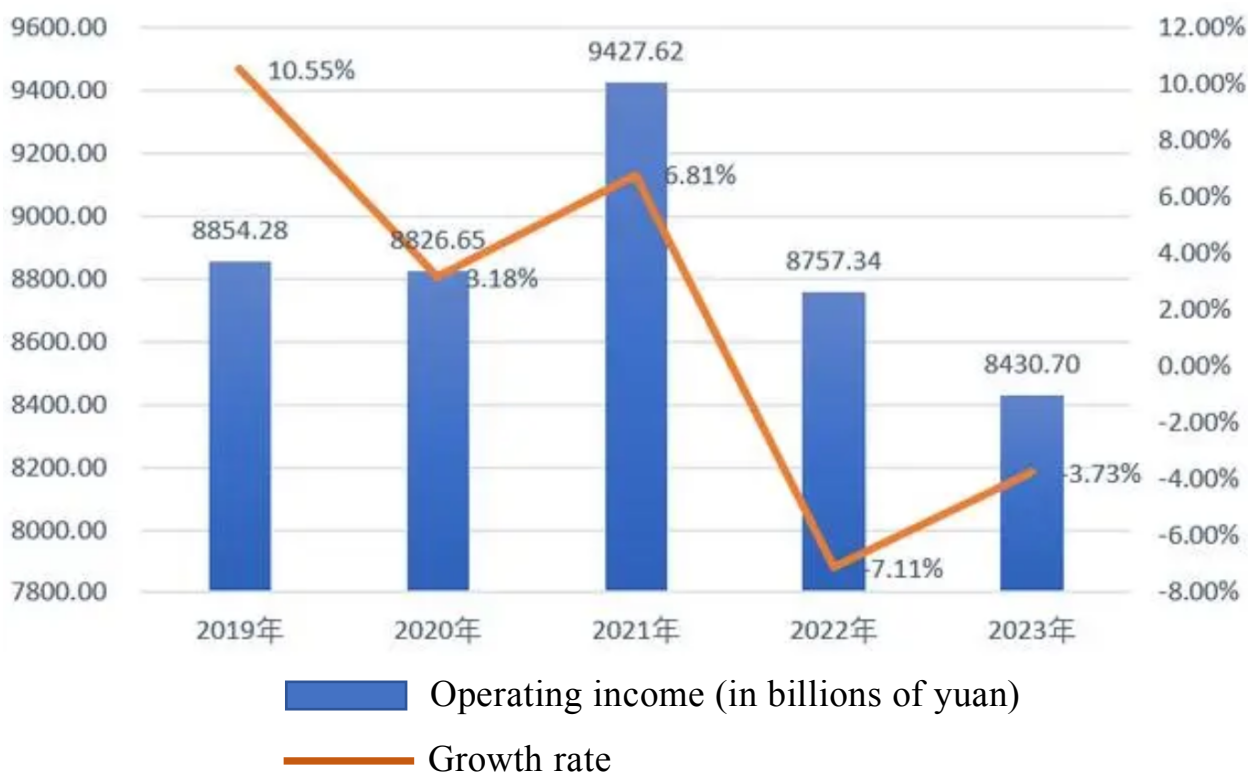


Fig.2.1. ICBC Revenue performance 2019-2023

Source: [14]

Bedok Finance learned that ICBC's net profit has maintained positive growth for many years in a row. According to the Economic Daily News, ICBC's compound annual growth rate of after-tax profit from 2003 to 2007 was as high as 38.1%, of which the after-tax profit in 2007 soared 65.4% year-on-year, and in 2008 it still maintained a high growth rate of 35.2%.

However, since 2019 to enter the 300 billion yuan mark, ICBC's earnings growth rate has begun to slow down, from 2019 to 2022 to realize net profit of 312.224 billion yuan, 315.906 billion yuan, 348.338 billion yuan and 361.132 billion yuan, respectively, profit growth rate of 4.9%, 1.2%, 10.3% and 3.7%, respectively.

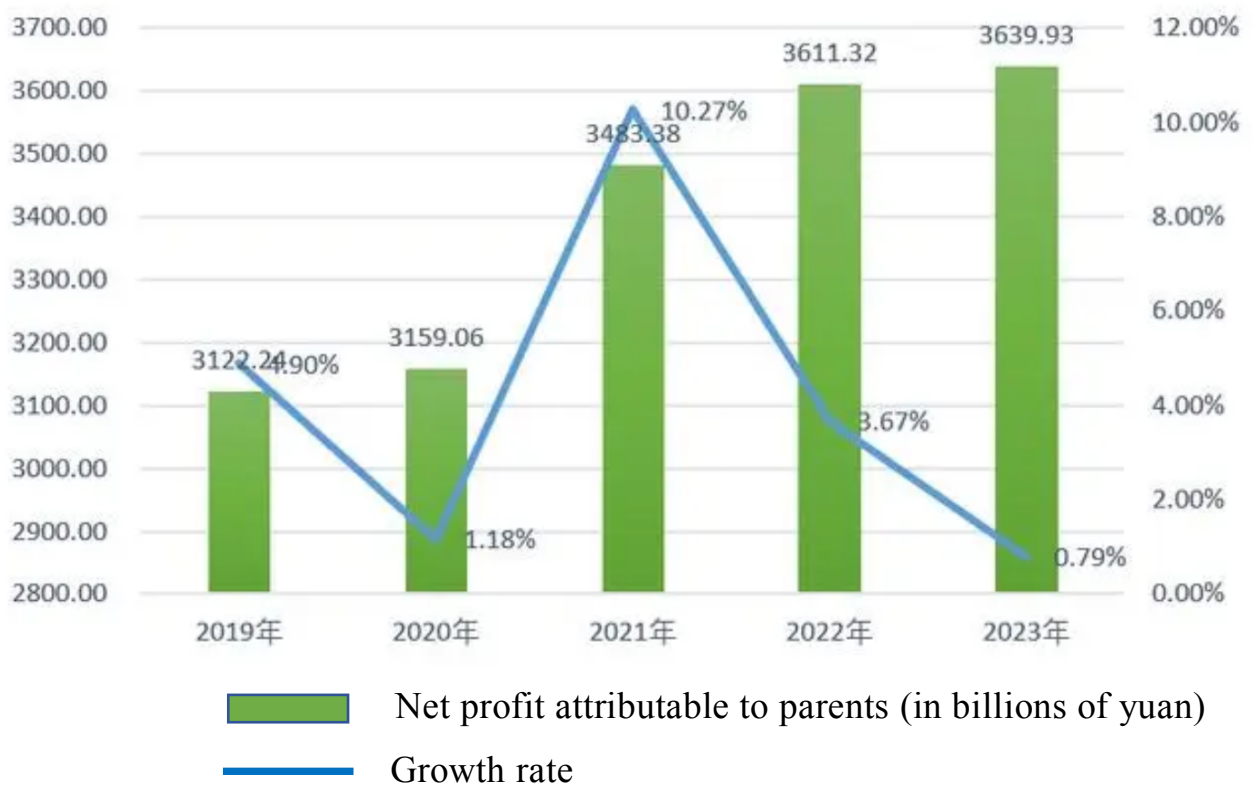


Fig.2.2. ICBC Profit performance 2019-2023

Source: [17]

In 2023, ICBC's net attributable profit amounted to RMB 363.993 billion, which was only 0.79 percentage points higher than that of 2022, although the total profit hit a new record high; the net profit after deduction amounted to RMB 361.411 billion, which was a slight increase of 0.8 percentage points compared with RMB 358.558 billion in 2022, and the profit end was in a state of stagnation.

However, ICBC's total assets as of the end of 2023 moved to a new level, coming in at 44.70 trillion yuan, up 12.9 percent from 3.961 billion yuan at the end of 2022. Of this, loans and advances from customers totaled \$2.609 billion, up 12.4% year-on-year.

2. Fixed deposits push up costs, spreads not as good as average

Further delineation of the revenue structure shows that net interest income, which dominates ICBC's revenue, has declined significantly.

Specifically, ICBC's net interest income narrowed by 5.3% from RMB 691.985 billion in 2022 to RMB 655.013 billion in 2023. In contrast, the bank's non-interest income of \$188.057 billion in 2023, while up 2.3% year-on-year, was not enough to offset the drop in net interest income.

Table 2.2.

Revenue structure of ICBC

ICBC	2023	2022	Increase/ decrease	Growth rate (%)
Net interest income	655,013	691,985	(36,972)	(5.3)
Non-interest income	188,057	183,749	4,308	2.3
Revenues	843,070	875,734	(32,664)	3.7

Source: [18]

In 2023, ICBC's interest income from loans and advances to customers totaled \$951,845 million, an increase of \$51,782 million or 5.8% from 2022. Of this, the average balance of loans and advances to customers increased by 12.4% year-on-year, partially offset by a 0.24% decrease in the average yield.

Focusing on the interest expense end of the spectrum, ICBC's interest expense on deposits was \$589,688 million in 2023, up \$109,605 million from 2022, or 22.8% year-on-year. The bank said in its annual report that the phenomenon was mainly due to a 13.8% increase in the average balance of customer deposits, as well as a 0.14% increase in the average interest payment rate.

Among them, ICBC's average interest payment rate on corporate deposits was 1.85%, up 0.20 percentage points, while the average interest payment rate on personal deposits was 1.76%, down 0.07 percentage points. It is worth noting that as the main source of bank funds, both companies and individuals seem to favor time deposits.

In terms of term structure, ICBC's time deposits in 2023 amounted to RMB 19.32 trillion, up 27.6% year-on-year; corporate time deposits increased by 34.1% to RMB 8.84 trillion, while personal time deposits increased by 22.5% to RMB 1.048 trillion. In comparison, the bank's demand deposits decreased by 617.111 billion yuan, or 4.4%, from 2022.

Typically, the interest rates on time deposits are higher than those on demand deposits, so the increase in the proportion of time deposits has also pushed up the overall interest costs of banks. At the same time, the regularization of deposits also means that users are more willing to save, which invariably affects the economic vitality of the bank and puts some pressure on the net interest margin.

ICBC also explained in its financial report that the decline in net interest income was due to the impact of the reduction in the loan market quotation rate (LPR) and changes in the maturity structure of deposits, etc. The bank's net interest margin and net interest yield (i.e., net interest margin) were 1.41% and 1.61%, respectively, both down 0.31 percentage points from 2022.

And the data released by the State Financial Supervision and Administration Bureau showed that the net interest spread of commercial banks in 2023 continued to decline from 1.74% in the first quarter to only 1.69% as of the end of 2023, falling below the 1.70% mark for the first time. Measured in this dimension, ICBC's net interest margin has been lower than the industry average.

In this regard, Yao Mingde, vice president of ICBC, said at the results meeting that starting from 2019, China's 1-year and 5-year LPR cumulative downward 80 and 90 BP, respectively, in this channel narrowing interest rate spreads is an inevitable phenomenon, and said that the bank's asset restructuring, delaying the spread of the effect of the countermeasures has been initially apparent [18].

3. Rising overdue loans and declining capital adequacy.

If asset size and performance is the “fundamentals” of a bank's strength, then asset quality is the “barometer” of the bank's long-term development.

According to the financial report, ICBC's provision coverage ratio as of the end of 2023 was 213.97%, 4.5% higher than the 209.47% in 2022, and its risk-resistant ability has been strengthened. Meanwhile, the bank's non-performing loan ratio as of the same period was 1.36%, down 0.02 percentage points from 2022, and the non-performing loan ratio has declined for three consecutive years.

Cutting through the incremental angle, ICBC's total loans and advances to customers grew to 2.609 trillion yuan from 2.321 trillion yuan in 2022, a growth rate of 12.4%. In comparison, the bank's non-performing loans stood at 353.502 billion yuan in 2023, up 10.1% year-on-year.

However, when broken down, while ICBC's corporate NPL ratio fell to 1.81% from 1.96% in 2022, the NPL ratio for medium- and long-term corporate loans did not see a decline. Not only that, the balance of non-performing loans under this category in 2023 was RMB 2013.19 billion, up 16.7% from RMB 172.549 billion in 2022.

For personal loans, ICBC's personal NPL ratio in 2023 was 0.7%, up 0.1 percentage points. Among them, the non-performing rate of personal housing loans increased from 0.39% to 0.44%, and the non-performing problem of credit card overdraft loans was even more significant, with the non-performing rate increasing from 1.83% to 2.45% on the premise that the loan share decreased by 0.2 percentage points.

Meanwhile, ICBC's overdue loans amounted to NT\$330.424 billion at the end of 2023, up 16.3% from NT\$284.031 billion in 2022, and the overdue rate also increased by 0.05 percentage points to 1.27%. The overdue rates for overdue periods of less than three months, three months to one year, and more than three years all increased to varying degrees.

It should be noted that ICBC's restructured loans and advances measured according to the requirements of the “Risk Classification of Financial Assets of

Commercial Banks” amounted to RMB 82.723 billion, and the growth in the total size of the loans will also dilute the share of overdue loans to a certain extent. On this basis the bank's overdue rate is still on the rise, obviously a not so good signal.

In addition, according to the financial report disclosure, ICBC's capital adequacy also both declined. As of the end of 2023, the bank's capital adequacy ratio, tier 1 capital adequacy ratio and core tier 1 capital adequacy ratio stood at 19.10%, 15.17% and 13.72% respectively, slipping by 0.16, 0.47 and 0.32 percentage points from 2022.

All in all, ICBC, known as the “Bank of the Universe” , has not lacked glorious moments in the process of development, but also has its own difficulties and pain points that need to be solved.

In the face of the changing financial market environment, the banking industry's “front-runner” will continue to position itself as the main force in serving the real economy, striving to realize wave-like development in the problem.

Liao Lin said, ICBC will deepen the implementation of the next four strategic layout, around the layout of modernization, wind control intelligence, digitalization of kinetic energy, structural diversification, the basis of ecological transformation direction to promote the work.

2.2. The analysis of the internal and external environment of an enterprise

After China's accession to the WTO, the development of China's financial industry has been faced with new requirements, opportunities and challenges. In the face of an increasingly complex and intense market environment, ICBC is also facing more and more uncertainties. As the leader of China's Shanghai market, ICBC must consider timely and accurately recognizing the internal and external environments in which it operates, and formulating effective competitive countermeasures and development directions.

The enterprise environment can be categorized into internal and external environments. The internal environment of an enterprise is characterized by the

existence of strengths and weaknesses, which constitute the internal factors of an enterprise; the external environment of an enterprise is characterized by the existence of opportunities and risks, which constitute the external factors of an enterprise. Combining the internal and external factors of the enterprise to do environmental analysis, in order to make strategic decisions for the long-term development of the enterprise.

1. Inter-industry competition. In China's banking market, the existing four major banks, with the exception of the Industrial and Commercial Bank of China (ICBC), as well as other private and foreign banks and other banking companies, have become the main domestic competitors. As the country still has asymmetry in its regulatory policies and the vicious competition among the major operators in the current year, the financial market is in a very intense stage. With the state's deregulation of bank interest, the country's major banks as well as other banks are at a brand new starting line, and ICBC has no advantage to speak of, which can be described as a crisis. At present, foreign banks continue to pour into China, China's national construction totaled 400 billion dollars, China's domestic local banks continue to appear, their services are not as good as foreign banks, but they rely on higher interest rates to win a large number of local customers, a threat to the state-owned banks. As for the other four major banks, the country's policy of interest rate relaxation, interest rates will no longer be subject to restrictions, ICBC's position as the leader in China's financial industry is seriously threatened.

2. Threat of new entrants. According to China's accession to the WTO commitments, China will gradually open up the financial market, the future is very likely that banks from developed countries will enter the Chinese financial market one after another. Developed countries due to the opening of the financial market and the competitive environment has become increasingly perfect, the enterprise has formed a set of scientific and perfect system, advanced technology, strong capital, so that it has considerable advantages, which makes the foreign banks to take this in China to invest a lot of money, and at the same time, the quality of service of foreign banks is the difference between the domestic banks farther away from the place.

3. Supplier bargaining power. Since the liberalization of financial business, the handling fees of finance have been continuously reduced. Although the types of charges are complicated, it now seems that the redundant items are constantly being cut down.

4. Bargaining power of customers. ICBC has moved from monopoly to competition, and the influence of buyer-dominated market has become more obvious. The development of economic globalization and financial integration has strengthened the user's dominance, and the financial market has been transformed from a seller's market to a buyer's market. Consumers have more choices, and the bargaining power of purchasers continues to improve, and they are becoming more and more picky and rational.

5. Threat of substitute products or services. For example, the development of securities and insurance is now exerting great pressure on ICBC. In terms of business provision, securities and insurance are able to provide a variety of services, such as savings, investment, wealth management and so on. It poses a threat to ICBC's services.

SWOT analysis of the competition in the market of Industrial and Commercial Bank of China, Inc.

SWOT analysis: S (strength) - strengths, W (weakness) - weaknesses, O (opportunity) - opportunities T(threaten)-risk.

1. Strengths of ICBC. Utilize the strengths and give full play to the advantages. Firstly, ICBC entered the mobile communication industry early and has the advantage of being a first mover. Secondly, the number of bank cards issued exceeded 238 million, with consumption amounting to nearly RMB 800 billion, of which the number of credit cards issued exceeded 39 million, with consumption amounting to more than RMB 250 billion, further expanding the leading market position; investment banking revenue grew by 78.2%, with the underwriting of 52 bonds of various types for the year, with an underwriting amount of RMB 164.6 billion, making ICBC the No. 1 bank in domestic bond underwriting and issuance for the second consecutive year; custodian business revenue grew by 41%, ranking

first in China in terms of assets under custody for 11 consecutive years, and maintaining market leadership in fund, annuity, insurance and other custodian areas; the domestic market share of corporate annuity business was nearly 50%, making it the largest corporate annuity service provider in China; the wealth management business continued to grow strongly, with a total of 216 wealth management products launched throughout the year, of which the sales of self-developed wealth management products amounted to approximately RMB 21,976 billion, representing a year-on-year growth of 715%. billion yuan, an increase of 715% year-on-year.

2. Weaknesses. Capitalize on opportunities to overcome weaknesses. Branches have different levels of development and lack of service, losing out on the starting line in terms of service. ICBC should make full use of the opportunities in the external environment, improve the company's ability of independent innovation as well as technological research and development, draw on effective management methods, and forge international competitiveness with unique products and high-quality services to overcome its weaknesses.

3. Opportunities. Utilize the opportunity to promote development. China's economy continues to develop, and card consumption replaces cash consumption, the market prospect is broad. ICBC has cultivated users' habit of using the card through the basic and value-added services in the previous years, laying a good foundation for future development. ICBC should utilize its existing customers and brand advantages, strengthen the development of technology, and improve independent innovation to enhance its international competitiveness and influence.

4. Risks faced. Utilize advantages and avoid risks. The advancement and balance of national policies, interest rates bring equal opportunities to other Chinese banks, especially local banks are a strong rival. Coupled with the fact that foreign banks will enter the Chinese market, which may be a reduction in brand loyalty of ICBC's existing users, the bank faces no small risk. ICBC should enhance its independent innovation, consolidate its sustained profitability, strengthen its brand, reduce costs and expenses, and overcome its shortcomings to make itself more adaptable to the market.

In recent years, the global economic growth has shown obvious volatility. According to the data from the International Monetary Fund (IMF), the global economic growth rates from 2019 to 2022 were 2.9%, -3.1%, 6.1%, and 3.4% respectively, while the GDP growth rates in China during the same period were 6.1%, 2.3%, 8.4%, and 3.0% respectively. The fluctuations in economic growth have had a significant impact on the credit business volume of ICBC, as shown in the following figure.

The proportion of ICBC's loan interest income to the total income fluctuated accordingly, as shown in the following table:

Table 2.3.

Financial indicators of ICBC during 2019-2022

Year	Adjustment of the Central Bank's Interest Rate Policy	Proportion of ICBC's Loan Interest Income to the Total Income (%)
2019	Cut the reserve requirement ratio three times	55
2020	Cut interest rates and lowered LPR multiple times	52
2021	Maintained stability	58
2022	Cut the reserve requirement ratio twice	56

Source: [19]

For ICBC, during the period of high inflation such as in 2022, the loan default rate increased by 1.5 percentage points. To cope with the inflation risk, the bank adjusted the loan interest rate pricing, and the average loan interest rate was raised by 0.8 percentage points to offset the losses caused by the increase in costs and risks. Meanwhile, inflation also prompted the bank to evaluate loan projects more carefully to ensure the safety and profitability of funds.

Taking 2022 as an example, ICBC occupies an important position in terms of asset scale, deposit market share, and loan market share. The proportion of its asset scale is 12.5%, the deposit market share is 13.2%, and the loan market share is 12.8%. Compared with other large state-owned banks such as Bank of China, China Construction Bank, and Agricultural Bank of China, each has its own advantages and characteristics, but ICBC performs relatively prominently in the overall market share. As shown in the following pie chart.

Regulatory authorities have clear requirements for the capital adequacy ratio of banks. The core tier-1 capital adequacy ratio should not be lower than 5%, the tier-1 capital adequacy ratio should not be lower than 6%, and the total capital adequacy ratio should not be lower than 8%. ICBC has performed steadily in this regard. From 2019 to 2022, its core tier-1 capital adequacy ratios were 13.2%, 13.1%, 13.3%, and 13.4% respectively; the tier-1 capital adequacy ratios were 14.2%, 14.0%, 14.4%, and 14.5% respectively; and the total capital adequacy ratios were 16.7%, 16.5%, 17.3%, and 17.5% respectively [20]. This indicates that ICBC has always attached great importance to capital management to ensure compliance with regulatory requirements, thus enhancing its ability to resist risks and expand business.

Looking at internal environment, the following can be said.

I. Analysis of Enterprise Resources

1. Human Resources:

- ICBC has a large workforce, and the quality of its employees has been continuously improved. From 2019 to 2022, the total number of employees was 445,106, 440,000, 434,089, and 427,587 respectively, showing a decreasing trend year by year. However, the proportion of employees with a bachelor's degree or above increased from 65% in 2019 to 70% in 2022, and the proportion of employees with intermediate and senior professional titles also increased from 32% to 35%.

- In terms of employee training, in 2022, there were 500 credit business training sessions, with 20,000 training participants and a training cost of 8 million yuan; 400 risk management training sessions, with 15,000 training participants and

a training cost of 6 million yuan; and 600 financial technology training sessions, with 25,000 training participants and a training cost of 10 million yuan. Through a variety of training activities, the professional skills and comprehensive qualities of employees are continuously improved, providing a solid talent guarantee for the bank's business development.

2. Financial Resources

- The financial situation of ICBC is stable and shows a growth trend. From 2019 to 2022, the total assets were 301,094.36 billion yuan, 333,450.58 billion yuan, 351,713.83 billion yuan, and 396,096.57 billion yuan respectively; the net assets were 26,080.18 billion yuan, 28,270.46 billion yuan, 30,316.51 billion yuan, and 34,696.87 billion yuan respectively; the operating revenues were 8,551.64 billion yuan, 8,826.65 billion yuan, 9,427.62 billion yuan, and 9,764.77 billion yuan respectively; and the net profits were 3,133.61 billion yuan, 3,176.85 billion yuan, 3,483.38 billion yuan, and 3,604.83 billion yuan respectively [18].

Table 2.4.

The growth trend of its financial indicators is shown in the following figure.

Year	Total Assets	Net Assets	Operating Revenues	Net Profits
2019	30,109,436	2,608,018	855,164	313,361
2020	33,345,058	2,827,046	882,665	317,685
2021	35,171,383	3,031,651	942,762	348,338
2022	39,609,657	3,469,687	976,477	360,483

Source: [18]

- In 2022, the investment in business expansion was 200 billion yuan, accounting for 2.05% of the operating revenue; the investment in technological research and development was 300 billion yuan, accounting for 3.07% of the operating revenue; and the investment in risk prevention and control was 250 billion

yuan, accounting for 2.56% of the operating revenue. The abundant financial resources enable the bank to make large-scale investments in multiple fields, support business innovation, technological upgrading, and risk prevention and control, and enhance its comprehensive competitiveness.

3. Technical Resources.

- ICBC has continuously increased its investment in technological research and development and has achieved remarkable results in information technology. From 2019 to 2022, the investments in technological research and development were 165 billion yuan, 180 billion yuan, 200 billion yuan, and 220 billion yuan respectively; the numbers of independent intellectual property technology achievements were 800, 900, 1000, and 1200 respectively.

- Taking the application of blockchain as an example, the blockchain supply chain finance platform has developed rapidly. In 2019, 500 enterprises were on the platform, with a transaction amount of 100 billion yuan; after the technological upgrade in 2020, 800 enterprises were on the platform, with a transaction amount of 200 billion yuan; after expanding the application scenarios in 2021, 1200 enterprises were on the platform, with a transaction amount of 350 billion yuan; and after optimizing the platform functions in 2022, 1500 enterprises were on the platform, with a transaction amount of 500 billion yuan. The continuous accumulation and application of technical resources have promoted the digital transformation of the bank, improved business efficiency and service quality, and enhanced its market competitiveness.

II. Analysis of Enterprise Capabilities

1. Business Innovation Capability

- The innovative products and services launched by ICBC have achieved certain market shares and customer satisfaction. Since the launch of personalized financial products in 2018, the market share has reached 10%, and the customer satisfaction rate is 85%; since the launch of intelligent deposit products in 2019, the market share is 8%, and the customer satisfaction rate is 82%; since the launch of

supply chain financial innovation services in 2020, the market share is 15%, and the customer satisfaction rate is 88% (data source: Market Research Data).

- Compared with competitors, in terms of innovation speed, relying on its huge customer base and resources, ICBC can launch products that meet market demands relatively quickly, but it may be relatively lagging behind small financial institutions that focus on innovation in emerging fields. In terms of innovation depth, by virtue of its strong technological and research and development capabilities, it can deeply explore customer needs and provide comprehensive solutions, but there is still room for improvement in cross-border integration innovation. In terms of innovation influence, as a large bank, it has a demonstration effect on the industry, but due to factors such as regulation and its own scale, its influence in high-risk and high-return innovation fields is relatively limited.

2. Risk Management Capability

- The risk management capabilities of ICBC have performed well in various indicators. From 2019 to 2022, the credit risk indicators (non-performing loan ratio) were 1.43%, 1.58%, 1.42%, and 1.38% respectively; the market risk indicators (taking Value at Risk (VaR) as an example) were 1.2 billion yuan, 1.5 billion yuan, 1.3 billion yuan, and 1.2 billion yuan respectively; the operation risk indicators (operation risk event occurrence rate) were 0.5%, 0.6%, 0.45% (a decrease of 0.15 percentage points compared to the previous year), and 0.4% (a decrease of 0.05 percentage points compared to the previous year) respectively.

- Compared with the industry, Bank of China has advantages in credit risk assessment in international business and foreign exchange market risk management; China Construction Bank performs outstandingly in accurately identifying credit risks in domestic personal loans and monitoring risks in financial market business; ICBC, on the other hand, has extensive customer data and a perfect risk monitoring network, and has its own characteristics in market risk dispersion and operation risk control. Through diversified business layouts and strict internal control processes, it effectively manages various risks.

3. Customer Service Capability

- The customer service capabilities of ICBC have been continuously improved. The customer satisfaction rate has increased from 80% in 2019 to 88% in 2022, the customer complaint rate has decreased from 0.3% to 0.18%, and the customer loss rate has decreased from 5% to 3.8% (data source: Customer Satisfaction Survey Results). The change trend of its customer service indicators is shown in the following figure.

- To improve customer service capabilities, the bank has taken a series of measures. In terms of optimizing the branch network layout and service environment, 200 inefficient branches were closed, 300 intelligent branches were newly opened, and the existing branches were renovated and upgraded, reducing the average waiting time of customers at branches by 15 minutes and increasing the satisfaction rate of customers with the branch environment by 10 percentage points. In terms of perfecting the functions of electronic banking channels, a new version of mobile banking was launched, adding functions such as intelligent financial management recommendations and one-stop life payment services, optimizing the interface and operation process of online banking, increasing the business volume of electronic banking channels by 20%, and reaching a 90% satisfaction rate of customers with the functions of electronic banking channels. By strengthening the customer feedback mechanism, a fast complaint handling channel was established, achieving a 95% satisfaction rate of handling customer complaints, and improving 50 service links and products according to customer feedback, effectively enhancing customer loyalty and satisfaction.

In general, ICBC is facing both advantages and challenges in the complex internal and external environment. The fluctuations in the macroeconomic situation, the intensification of competition in the industry, and the changes in regulatory policies in the external environment have put forward higher requirements for the bank's operation, while the richness of internal resources and the improvement of capabilities provide certain support for it to meet the challenges. ICBC needs to continuously optimize its internal management and adapt to changes in the external environment to achieve sustainable development.

2.3. Evaluation of the brand image of a bank

I. Brand Awareness

1. Market Research Data

- Surveys conducted nationwide by professional market research institutions have shown that ICBC's brand awareness holds a leading position in the banking industry. Among the surveyed consumers, the proportion of those who are aware of ICBC reaches 88%. For example, among 1,000 randomly selected consumers in first-tier cities, 920 indicated that they knew about ICBC, accounting for 92%; in the sample of 1,000 consumers in second-tier cities, the awareness rate was 85%; and in third-tier cities and rural areas, the awareness rate also reached around 75%.

- Compared with other large state-owned banks, ICBC's advantage in brand awareness is even more prominent in certain specific fields. In the field of corporate financial services, in a survey of 500 large enterprises and 1,000 medium-sized enterprises, the awareness rates of ICBC were 98% and 92% respectively, higher than those of its competitors. This is mainly due to ICBC's profound accumulation and extensive publicity in providing comprehensive financial services to enterprises over the years. For example, ICBC has rich experience and a good reputation in cross-border trade settlement and large-scale project financing, which has led to a high brand recognition among corporate customers.

2. Media Exposure

- An analysis of reports in mainstream media found that ICBC enjoys a relatively high level of exposure in various financial and news media. In the past year, the number of news reports about ICBC reached 5,000. Among them, in reports related to major financial events and the release of economic policies, ICBC is often mentioned as an important case or participant. For example, in the reports on the process of RMB internationalization, ICBC has received much attention due to its outstanding performance in cross-border RMB settlement business, with the number of related reports accounting for 30% of the total reports on this topic.

- The popularity of discussions on social media platforms can also reflect brand awareness. Through data analysis of platforms such as Weibo and WeChat, the cumulative reading volume of topics related to ICBC has reached 1 billion times, and the discussion volume has reached 5 million times. For example, an innovative financial product launched by ICBC sparked widespread discussions on social media, with the reading volume of the related topic exceeding 80 million times within a week, further enhancing the brand's dissemination. The number of followers of ICBC's official Weibo account has reached 5 million, and the number of subscribers to its WeChat official account has exceeded 8 million. The average reading volume of the content it publishes is around 100,000 times, and the reading volume of some articles on important activities or product promotions can even reach more than 500,000 times.

II. Brand Reputation

1. Customer Satisfaction Surveys

- The results of regular customer satisfaction surveys show that ICBC has a relatively high level of customer satisfaction. In the most recent survey covering 10,000 individual customers and 5,000 corporate customers, the overall customer satisfaction rate reached 85%. Among them, individual customers gave relatively high evaluations on aspects such as ICBC's service attitude and product diversity, with a satisfaction rate of 83%; corporate customers were more satisfied with ICBC's professional financial services and risk control capabilities, with a satisfaction rate reaching 87%.

- In terms of specific cases, a small business owner said that when his enterprise was facing difficulties in capital turnover, the account manager of ICBC promptly provided him with a suitable loan solution, helping the enterprise tide over the difficulties. This made him extremely satisfied with ICBC's services and willing to cooperate with ICBC in the long term. On the part of individual customers, an elderly customer praised the staff at ICBC's branches for patiently and meticulously explaining financial products to him, which made him feel very cared for and left him with an excellent impression of ICBC. When surveyed, the elderly customer

said that he would definitely recommend ICBC to his friends if they needed financial services. There are many such positive cases in the survey, fully demonstrating customers' recognition of ICBC.

2. Fulfillment of Social Responsibilities

- ICBC has been active in fulfilling its social responsibilities, contributing to the enhancement of its brand reputation. In terms of supporting environmental protection projects, it has cumulatively invested 5 billion yuan in the past three years to support clean energy projects and the research and development of green financial products. For example, it participated in the "Sunshine New Energy Project", which successfully reduced carbon dioxide emissions by 1 million tons and received widespread acclaim from all sectors of society.

- In the field of education poverty alleviation, ICBC has established a special education fund to sponsor 5,000 impoverished students to complete their studies. At the same time, it has carried out financial knowledge popularization education activities, entering 1,000 schools to teach financial knowledge to students, thereby improving the financial literacy of teenagers and winning recognition from the education community and society. According to statistics, the number of students participating in the financial knowledge popularization activities reached 500,000, and the feedback survey after the activities showed that the average understanding level of financial knowledge among students increased by 30%.

- In addition, in response to public emergencies, ICBC has also responded actively. During the COVID-19 pandemic, ICBC donated a total of 100 million yuan in cash and materials and launched a series of financial support measures, such as providing deferred repayment and preferential interest rate loans for enterprises affected by the pandemic. It helped affected enterprises and individuals resume production and life, demonstrating the company's social responsibility and further enhancing its brand image. According to statistics, the amount of special loans provided by ICBC for enterprises related to epidemic prevention and control reached 1 billion yuan, benefiting 5,000 enterprises.

III. Brand Loyalty

1. Customer Retention Rate

- Data analysis shows that ICBC's customer retention rate is relatively stable and at a relatively high level. Taking individual customers as an example, in the past three years, the annual individual customer retention rates were 86%, 87%, and 88% respectively, with an average retention rate reaching 87%. In terms of corporate customers, the retention rate is also considerable. The corporate customer retention rates in the past three years were 88%, 89%, and 90% respectively, with an average retention rate of 89%.

- For example, a manufacturing enterprise that has been cooperating with ICBC for many years still chose to continue cooperating with ICBC when faced with the allure of preferential policies from other banks. The reason is that during the long-term cooperation with ICBC, a good trust relationship has been established. ICBC can provide personalized financial service plans for the enterprise and has given strong support at different stages of the enterprise's development. The business cooperation amount between this enterprise and ICBC has been increasing year by year in the past five years, from an initial 50 million yuan per year to 80 million yuan per year now, which fully demonstrates ICBC's success in cultivating customer loyalty.

2. Customer Recommendation Rate

- Through surveys, it was found that ICBC's customer recommendation rate is relatively high. Among the surveyed customers, 75% of them indicated that they were willing to recommend ICBC's products and services to others. Among them, the recommendation rate of individual customers was 72%, and the recommendation rate of corporate customers was 78%.

- In terms of specific cases, an individual customer who purchased ICBC's financial products and obtained good returns actively recommended ICBC's financial products to his relatives and friends. Under his recommendation, 10 people became new customers of ICBC. On the part of corporate customers, a large enterprise, after having a smooth cooperation with ICBC, recommended ICBC's supply chain financial services to its upstream and downstream enterprises, enabling 20

enterprises to establish business cooperation relationships with ICBC, further expanding ICBC's customer base and business scope.

3. Repeat Purchase Rate

- The repeat purchase rate of customers for ICBC's financial products is relatively good. Taking individual financial products as an example, among the 1,000 customers tracked and surveyed, the proportion of customers who purchased ICBC's financial products twice or more in the past year reached 60%. For corporate loan products, among the 500 enterprises with loan records, the proportion of enterprises that chose ICBC's loan products again was 70%.

- For example, an individual investor has been purchasing ICBC's time deposit financial products for consecutive years because he believes that ICBC's financial products have reasonable risk control and relatively stable returns. A small and medium-sized enterprise has applied for loans from ICBC multiple times during its development process, and each time it has received timely and effective support. Therefore, when it has a loan requirement, the first thing that comes to its mind is ICBC. The small and medium-sized enterprise has applied for loans from ICBC five times in the past three years, with a cumulative loan amount of 20 million yuan, which reflects customers' high recognition and trust in ICBC's brand and products and is also an important manifestation of brand loyalty.

Through the evaluation of ICBC's brand image, we can see that it has achieved good results in terms of brand awareness, reputation, and loyalty. However, with the increasingly fierce market competition and the continuous changes in customer demands, ICBC still needs to make continuous efforts to further enhance its brand image in order to maintain its leading position in the banking industry. For example, in terms of brand communication, it can pay more attention to utilizing emerging media platforms to expand brand influence; in terms of service quality improvement, it can continuously optimize customer experience to meet customers' diverse demands; in terms of fulfilling social responsibilities, it can continuously innovate ways and means to make greater contributions to society, thereby further enhancing the brand's reputation and loyalty.

CHAPTER 3

PROPOSALS FOR IMPROVING THE COMPETITIVENESS OF BANK

3.1 Recommendations on improving brand image of enterprise

I. Strengthening Brand Communication and Promotion

1. Formulating a Comprehensive Brand Communication Strategy:

a) defining the Brand Positioning. ICBC should conduct an in-depth analysis of its core competitiveness, historical heritage, and market trends to accurately define a unique and differentiated brand positioning. For example, the brand could be positioned as "a professional, reliable, and innovative comprehensive financial service provider, supported by profound financial expertise and cutting-edge technological applications, wholeheartedly dedicated to promoting the development of the real economy and deeply satisfying customers' diversified financial needs, becoming the most trustworthy partner for customers in the financial field". This positioning not only emphasizes ICBC's professionalism and reliability, which are based on its long-standing reputation in the financial industry and stable operations, but also highlights its innovation capabilities, demonstrating its determination to actively adapt to changes in the context of rapid development of financial technology. At the same time, it clarifies its mission to serve the real economy and meet customers' diverse needs, closely aligning with the national economic development strategy and customers' actual requirements.

b) integrating communication channels;

c) online channels;

d) optimizing the official website.

2. Allocate resources to comprehensively upgrade the official website. Ensure that the website interface design is simple, beautiful, and easy to operate, enabling users to quickly find the information they need. Update the website content in a timely and rich manner, including detailed product introductions, analyses of financial market dynamics, and expert opinions. For example, on the product

introduction page, not only list the basic features and interest rates of the products but also provide case analyses and usage guides to help customers better understand and choose. At the same time, strengthen the website's security protection to safeguard customer information and enhance user trust.

3. Operating on Social Media Platforms. Make full use of the advantages of social media platforms such as Weibo, WeChat, and Douyin. On Weibo, regularly publish professional content such as interpretations of hot financial news and analyses of industry trends to attract users who are interested in the financial field. Enhance user participation through forms such as topic interactions and expert Q&A. For example, create topics like #ICBC Financial Insights# and invite industry experts and well-known bloggers to participate in the discussions to boost the popularity of the topics. On WeChat, focus on pushing personalized financial service information and promotional activities. For example, based on users' browsing and consumption records, push suitable financial product recommendations to them. Utilize the functional modules of the WeChat official account to develop an online customer service mini-program for users to consult questions at any time. On Douyin, produce vivid and interesting short videos to showcase the bank's corporate culture, staff demeanor, and brief introductions of financial products. For example, create a series of short videos themed "A Day in the Life of an ICBC Employee" to let users understand the working status and service spirit of bank employees and increase their sense of closeness to the bank.

4. Search Engine Marketing and Optimization. Increase investment in search engine marketing (SEM), purchase keyword advertisements related to financial products and services to ensure that when users search for keywords such as "bank loans" and "financial products", ICBC's official website can be prominently displayed on the search results page. At the same time, pay attention to search engine optimization (SEO) work. Optimize factors such as website structure and content quality to improve the website's ranking in natural search results. For example, write high-quality original articles targeting popular financial keywords, rationally arrange keywords to increase the website's weight and search engine indexing rate.

5. Offline Channels and Activities at Branches. Utilize ICBC's extensive branch network to carry out a variety of themed promotional activities at each branch. For example, hold financial knowledge lectures and invite professional financial planners to explain investment and financial management knowledge and risk prevention techniques to customers to improve their financial literacy. At the same time, combine holidays and special events to carry out promotional activities. For example, launch "New Year's Financial Product Promotion Packages" during the Spring Festival to attract customers to purchase financial products. Set up display areas inside the branches to showcase the bank's innovative products and services as well as successful customer cases to enhance customers' understanding and trust in the bank.

6. Participating in Industry Events. Actively participate in various financial exhibitions, industry forums, seminars, and other activities. Set up special booths at these events to display ICBC's latest financial technology achievements, innovative products, and service models. Arrange professional business teams to communicate and interact with participants to understand industry dynamics and customer needs and expand business cooperation opportunities. For example, at the International Financial Technology Exhibition, display ICBC's independently developed blockchain financial application platform to attract the attention of domestic and foreign counterparts and customers and enhance the brand's international visibility in the financial field.

7. Personalizing Communication Content.

a) for individual customers: segment individual customers based on factors such as age, income level, and financial management goals, and customize personalized communication content for different groups. For young office workers, focus on pushing information about convenient payment, consumer credit, and small-amount financial management in a simple, clear, and light-hearted style. For example, create a series of graphic content themed "Financial Management Tips for Workplace Newbies" to introduce how to reasonably plan salary income, choose suitable credit cards and small-amount financial products, etc. For high-net-worth

customers, provide in-depth wealth management solutions, introductions of high-end investment products, and sharing of personalized financial service experiences in a professional and refined manner. For example, publish case analyses and expert interpretations of family trusts and private banking services to demonstrate ICBC's professional capabilities and advantages in the field of high-end wealth management.

b) for corporate customers: provide targeted communication content according to the characteristics of corporate customers such as scale, industry type, and development stage. For start-up enterprises, focus on promoting services such as start-up loans, support policies for small and micro enterprises, and financial management consulting. For example, produce a series of videos titled "Start-up Enterprise Growth Guide" to introduce ICBC's characteristic financial products and services for start-up enterprises and how to help enterprises establish and improve their financial management systems. For medium-sized enterprises, focus on content related to corporate financing solutions, optimization of fund management, and supply chain finance. For example, publish case analyses of supply chain finance innovation models to show how ICBC helps medium-sized enterprises reduce financing costs and improve capital turnover efficiency through supply chain finance. For large enterprises, provide high-end financial service content such as cross-border financial services, comprehensive financial solutions, and risk management strategies. For example, hold large-enterprise financial seminars to invite experts and enterprise representatives to jointly discuss enterprise risk management and cross-border investment strategies under the global economic situation and introduce ICBC's professional services and successful experiences in these fields.

8. Enhancing the Effectiveness of Advertising Promotion

- Creative Advertising Design

- Assemble a professional advertising creative team consisting of professionals in advertising planning, copywriting, and design production. At the same time, invite financial industry experts and customer representatives to participate in creative discussions to ensure that the advertising content is both creative and can accurately

convey ICBC's brand value and product features. Advertising design should focus on the combination of emotional resonance and visual impact. For example, create an advertisement themed "Dreams and Achievements" that shows a young entrepreneur realizing his or her entrepreneurial dream with the support of ICBC, growing from a small studio to a large-scale enterprise. The advertising copy should be infectious, such as "On the path of chasing dreams, ICBC walks with you, providing solid financial support for each of your dreams, making the future within reach." At the same time, use advanced animation production techniques and high-definition photography to enhance the visual effect of the advertisement and attract the attention of the audience.

- Precise Advertising Placement

- Utilize big data analysis technology to deeply mine customer data, including transaction records, browsing behaviors, and geographical locations, to construct precise customer portraits. Segment customers into different target groups based on customer portraits. For example, divide customers by age into "Young Generation" (18 - 35 years old), "Middle-aged Group" (36 - 55 years old), and "Elderly Customers" (55 years old and above); by asset size into "High-net-worth Customers", "Middle-class Customers", and "Ordinary Customers"; by industry into "Manufacturing Customers", "Service Customers", and "Technology Industry Customers", etc. Develop personalized advertising placement strategies for different target groups. For example, for the Young Generation customers, place advertisements on social media platforms and online video websites, with the form of short videos and interactive advertisements. For High-net-worth Customers, place advertisements in financial magazines and high-end business venues, with the content focusing on private banking services and high-end financial products. At the same time, select appropriate placement times according to customers' behavior habits and time patterns. For example, for office workers, place advertisements on mobile applications during peak commuting hours and lunch breaks to increase the exposure and click-through rate of the advertisements.

- Evaluating and Optimizing Advertising Effects

- Establish a comprehensive advertising effect evaluation index system, including multiple dimensions of indicators such as advertising exposure, click-through rate, conversion rate, and customer feedback. Use professional data analysis tools to monitor and analyze the advertising placement effects in real time. For example, utilize the data analysis function provided by the advertising platform to understand the performance of advertisements in different channels, regions, and time periods. Based on the evaluation results, adjust advertising strategies and placement plans in a timely manner. If it is found that the conversion rate of an advertisement in a certain channel is low, analyze the reasons, such as the mismatch between the advertising content and the channel users or the inappropriate placement time, and then take corresponding optimization measures, such as replacing the advertising content, adjusting the placement time, or selecting a more appropriate channel. At the same time, regularly summarize and evaluate the advertising effects to form experiences and lessons for subsequent advertising planning and placement to improve the return on investment in advertising. For example, conduct a comprehensive summary of the advertising placement effects once a month, analyze successful cases and deficiencies, and continuously improve the advertising promotion effects.

II. Optimizing the Quality of Products and Services

1. Product Innovation and Differentiation

- Strengthening Market Research

- Establish a specialized market research team responsible for regularly conducting comprehensive and in-depth market research activities. Research methods include questionnaire surveys, interviews, focus group discussions, and data analysis. Questionnaire surveys can cover a wide range of customer groups to understand their satisfaction with existing financial products and services, preference for needs, and future expectations. Interviews can be targeted at key customers, industry experts, and competitors to gain in-depth understanding of market dynamics and industry trends. Focus group discussions can organize different types of customer groups to jointly discuss the needs and improvement directions of specific

financial products or services. Data analysis mainly involves mining and analyzing customer transaction data, market data, and industry reports to discover potential market opportunities and customer needs. For example, conduct a large-scale customer satisfaction survey once a quarter, collecting at least 5000 valid questionnaires covering different segments of individual and corporate customers. At the same time, monitor and analyze market data on a monthly basis, paying attention to changes in financial policies, competitor dynamics, and the emergence of emerging financial needs. Through these research activities, timely grasp the changes in customer needs and market trends to provide a solid basis for product innovation.

- Innovative Product Development

- Set up an innovation laboratory or innovation center within the bank, equipped with professional R&D personnel, financial experts, and technical personnel, responsible for promoting product innovation work. Encourage employees to put forward innovative ideas and suggestions and establish an innovation incentive mechanism to reward valuable innovation proposals. Strengthen cooperation with financial technology companies through joint R&D, investment and acquisition, etc., to introduce advanced technologies and innovative concepts. For example, cooperate with a well-known financial technology company to jointly develop an intelligent investment advisory product based on artificial intelligence. The product can automatically generate personalized investment portfolio suggestions based on customers' risk preferences, financial status, and investment goals and adjust in real time according to market dynamics. At the same time, focus on the differential design of products and target the special needs and pain points of different customer groups to launch characteristic financial products. For example, launch a "Worry-free Retirement" series of products for elderly customers, including specially designed retirement savings products with longer deposit terms and higher interest rates, as well as financial service packages in cooperation with retirement institutions, providing one-stop retirement financial solutions. For small and medium-sized enterprise customers, launch a "Growth-

Assisting Loan" product that combines data such as tax payment records and order situations of the enterprise for credit assessment, without the need for collateral or guarantee, and enables quick loan disbursement to meet the short-term working capital needs of small and medium-sized enterprises.

- Product Optimization and Upgrade

- Establish a product life cycle management system to track and manage each financial product throughout its life cycle. Regularly evaluate the market performance, customer feedback, and profitability of the product to timely discover problems and deficiencies in the product. Based on changes in the market and adjustments in customer needs, optimize and upgrade the product. For example, for a traditional time deposit product, if the market interest rate drops and customers' expectations for returns increase, consider adding some flexible return adjustment mechanisms to the product, such as regularly adjusting the interest rate according to market interest rate fluctuations or providing return options linked to market indices to improve the competitiveness of the product. At the same time, pay attention to the product dynamics of competitors and timely learn from and apply advanced product design concepts and functional features to optimize and improve one's own products. For example, if a competitor launches an innovative credit card product, ICBC can analyze its advantages and characteristics, combine with its own customer needs and market positioning, and upgrade the functions and optimize the services of its own credit card product, such as adding characteristic cashback activities for consumption and enhancing the flexibility of credit card limit adjustment.

2. Enhancing Service Quality

- Employee Training and Service Consciousness Enhancement

- Formulate a systematic employee training plan covering multiple aspects such as business knowledge, service skills, communication techniques, and customer psychology. Regularly organize internal training courses, invite external experts to give lectures and training, and encourage employees to participate in industry training and certification exams to continuously improve employees' professional quality. For example, conduct business knowledge training once a month, service

skills training once a quarter, including customer reception etiquette and complaint handling techniques. Invite well-known customer service experts to give a special lecture once a year to share the latest service concepts and methods. Strengthen the cultivation of employees' service consciousness through corporate culture construction and role model demonstration to make employees deeply understand the customer-centered service concept. For example, carry out a "Service Star" selection activity to recognize and reward employees with excellent service performance, set an example, and motivate other employees to improve service quality. At the same time, incorporate service quality into the employee performance appraisal system and link it with salary and promotion to prompt employees to actively provide high-quality service to customers.

- Optimizing Service Processes

- Conduct a comprehensive review and analysis of the existing service processes to identify cumbersome, inefficient links and process bottlenecks. Apply process optimization methods and techniques such as Business Process Reengineering (BPR) and Six Sigma Management to optimize and improve the service processes. For example, for the loan approval process, simplify the application materials, optimize the approval links, and strengthen internal coordination to shorten the approval time and improve the loan disbursement efficiency. Introduce digital technologies to automate and intelligentize the service processes. For example, develop an intelligent customer service system that can use natural language processing technology and machine learning algorithms to automatically answer customers' common questions and provide 24/7 uninterrupted service. Promote electronic banking channels to enable customers to handle transactions such as transfer and remittance, account query, and financial product purchase through mobile banking and online banking platforms to improve the convenience and efficiency of service. At the same time, regularly evaluate and optimize the service processes according to customer feedback and business development to ensure that customers can enjoy efficient and high-quality service experiences.

- Establishing a Customer Feedback Mechanism
- Build diversified customer feedback channels, including customer complaint hotlines, online feedback platforms, email, and text message feedback, to facilitate customers to put forward opinions and suggestions at any time. Ensure the smooth and convenient operation of the customer feedback channels and respond to and handle customers' feedback in a timely manner. For example, ensure that the customer complaint hotline is answered 24 hours a day, and provide a preliminary reply to customers' complaints within 1 working day and a solution within 3 working days. The online feedback platform should update the processing progress in real time to enable customers to know the handling situation of their feedback problems at any time. Establish a customer feedback database to classify, sort, and analyze the information provided by customers to identify customers' needs and pain points as well as problems and deficiencies in the service. Regularly summarize and report the customer feedback data to provide reference for bank management decision-making. For example, summarize and analyze the customer feedback data once a month and submit a report to the management. Develop special improvement measures for problems that are concentratedly reflected by customers. At the same time, link the handling results of customer feedback with the employee performance appraisal to motivate employees to actively solve customers' problems and improve customer satisfaction.

III. Strengthening the Fulfillment of Social Responsibilities

1. Actively Participating in Public Welfare Activities

- Formulating a Public Welfare Strategy
- Establish a public welfare strategy planning group composed of senior management personnel, social responsibility experts, and relevant department heads to formulate ICBC's long-term public welfare strategy planning. The planning should combine the national development strategy, social hot issues, and the bank's own advantages and brand positioning to clarify the key areas, goals, and implementation steps of public welfare activities. For example, take education poverty alleviation, environmental protection public welfare, and community development as the key

areas of ICBC's public welfare activities in the next 3 - 5 years. In the area of education poverty alleviation, the goal is to sponsor 10,000 poor students to complete their studies and help 100 schools in poor areas improve their teaching conditions. In the area of environmental protection public welfare, the goal is to promote the development of green finance, support the implementation of 100 environmental protection projects, and improve the public's environmental awareness. In the area of community development, the goal is to carry out community construction and care for vulnerable groups in 500 communities to improve the quality of life and happiness of community residents. Formulate detailed annual public welfare plans and budgets to ensure the smooth implementation of the public welfare strategy.

- Carrying out Diversified Public Welfare Projects

- Education Poverty Alleviation

- Increase the support for the education cause in poor areas. Set up a special education fund to widely raise funds for sponsoring the tuition fees, living expenses, and school supplies of poor students. For example, raise funds annually through internal employee donations, social donations, and bank special appropriations to ensure the continuous growth of the fund scale. Carry out "one-on-one" assistance activities to organize employees to form pairs with poor students and provide regular study guidance and psychological care. Employees can maintain close contact with the assisted students through a combination of online and offline methods, conducting at least one study exchange and psychological counseling session per month to help students solve difficulties in study and life.

- Donate teaching equipment and books to help schools in poor areas improve their teaching conditions and build libraries, laboratories and other teaching facilities. Donate targeted according to the actual needs and teaching weaknesses of the schools. For example, donate a batch of computers equipped with relevant teaching software and network equipment to schools lacking computer equipment to help them carry out information-based teaching. At the same time, regularly update the donated books to ensure that the types and contents of the books meet the reading needs and educational requirements of students.

- Carry out teaching support activities, select excellent employees to teach in schools in poor areas and impart advanced teaching concepts and methods. Formulate strict selection criteria and training plans for teaching support personnel, select employees with rich teaching experience and professional knowledge, and train them before teaching support, including local education situation, adjustment of teaching methods, cultural adaptation and other aspects. For example, organize 100 employees to teach in schools in poor areas for at least one year each year to bring high-quality educational resources to local schools and continuously improve teaching support work through the feedback and experience sharing of teaching support employees.

- Environmental Protection Public Welfare

- Actively participate in environmental protection projects to promote sustainable development. Carry out tree-planting activities, organize employees and customers to participate in voluntary tree-planting and build "ICBC Green Forest". Select suitable tree-planting locations such as ecologically fragile areas on the edge of wastelands and deserts, and cooperate with local forestry departments to ensure the scientific and sustainable nature of tree-planting activities. For example, organize a large-scale tree-planting activity once a year, invite employees, their families and customers to participate together, plant no less than 10,000 trees and be responsible for the subsequent maintenance work to ensure the survival rate of the trees.

- Strengthen the publicity of garbage classification, produce publicity materials and public service advertisements, and carry out publicity and promotion in communities, schools and other places. Produce vivid and interesting garbage classification publicity manuals, posters and short videos, and widely disseminate them through online and offline channels. Hold garbage classification knowledge lectures and practical activities in communities, and provide on-site guidance for residents to classify garbage. Carry out garbage classification theme class meetings and competitions in schools to cultivate students' environmental protection awareness and habits. For example, carry out garbage classification publicity

activities in at least 10 communities and 5 schools every month to improve the public's awareness and participation rate of garbage classification.

- Support the development of clean energy, provide preferential financial services and financing support for clean energy enterprises. Formulate special financial service schemes for clean energy, reduce loan interest rates, simplify approval processes, and provide financial guarantee for clean energy projects. For example, set up a clean energy industry fund to attract social funds to invest in the construction and operation of solar, wind, water and other clean energy projects. At the same time, strengthen cooperation with clean energy enterprises, provide them with comprehensive financial services such as financial advisers and risk management to help enterprises develop.

- Hold environmental protection theme activities such as environmental protection knowledge competitions and environmental protection public welfare runs to improve the public's environmental protection awareness and participation rate. The environmental protection knowledge competition can set rich awards and prizes to attract the public to actively participate in online and offline answering activities. The environmental protection public welfare run can combine with charitable donations, and the bank will donate a certain amount for environmental protection projects for every certain distance run by participants. For example, hold a large-scale environmental protection knowledge competition once a year to attract thousands of the public to participate and disseminate environmental protection knowledge and concepts through the competition; hold an environmental protection public welfare run activity once a quarter, with each activity attracting no less than 500 participants, and the funds raised will be used to support local environmental protection public welfare projects.

- Community Development

- Focus on community needs and carry out community construction and care for vulnerable groups activities. Provide infrastructure construction support for communities, such as building roads, parks, fitness facilities, etc. Cooperate with community neighborhood committees to understand the infrastructure construction

needs and plans of communities and provide financial and technical support. For example, renovate and build roads for old communities to improve residents' travel conditions; add fitness equipment and leisure facilities to community parks to enrich residents' spare time life.

- Carry out community volunteer service activities, organize employees to provide free financial consulting, health check-ups, cultural activities and other services for community residents. Regularly set up service points in communities to provide financial services such as financial planning and anti-fraud knowledge publicity for residents; invite medical experts to conduct free physical examinations and health lectures for residents; organize cultural activities such as literary and artistic performances, calligraphy and painting competitions to enrich the spiritual and cultural life of community residents. For example, organize a community volunteer service activity once a month, providing various convenient services for community residents, with each activity serving no less than 100 residents.

- Care for vulnerable groups in communities such as the elderly living alone, the disabled and poor families, regularly visit and assist them, and provide living materials and spiritual care. Establish files for vulnerable groups in communities, regularly visit and understand their living conditions and needs. Provide life care and companionship services for the elderly living alone, provide rehabilitation aids and employment guidance for the disabled, and provide living materials and employment information for poor families. For example, visit and assist 1,000 households of vulnerable groups in communities every year to help them solve practical difficulties in life, regularly organize volunteers to clean up for the elderly living alone, chat with them, provide rehabilitation training guidance and employment recommendation services for the disabled.

- Strengthening Public Welfare Cooperation and Publicity

- Establish extensive cooperation relationships with public welfare organizations, government departments and enterprises to jointly carry out public welfare activities and expand public welfare influence. Cooperate with well-known public welfare organizations to jointly implement public welfare projects, give full

play to the advantages and resources of both sides to improve the implementation effect of the projects. For example, cooperate with the China Foundation for Poverty Alleviation to carry out education poverty alleviation projects, jointly raise funds and resources to provide more help for students in poor areas. The bank can provide financial support and financial services, and the public welfare organization is responsible for the specific implementation and management of the projects, and the two sides cooperate closely to ensure the smooth progress of the projects.

- Actively participate in public welfare activities led by the government, respond to the government's call and contribute to social development. Cooperate with government departments to carry out public welfare projects such as environmental protection and poverty alleviation, such as participating in the government's ecological restoration projects and industrial support projects in poor areas. The bank can provide financial support and professional services to assist the government in promoting the implementation of the projects and also enhance the bank's image in the government and society.

- Cooperate with enterprises to carry out public welfare projects to jointly assume social responsibilities and enhance brand images. For example, cooperate with an environmental protection enterprise to carry out an environmental protection public welfare project, jointly promote the research and development and application of environmental protection technologies. The bank can provide financing support for the environmental protection enterprise, and the environmental protection enterprise can provide environmental protection knowledge training and environmental protection product experience services for the bank's customers and employees, and the two sides cooperate to achieve mutual benefit and win-win results.

- Strengthen the publicity and reporting of public welfare activities, disseminate public welfare concepts and activity results to the public through various channels. Utilize official websites, social media, news media and other platforms to timely release public welfare activity information and results to improve the public's awareness and recognition of ICBC's public welfare image. Set up a public welfare

column on the official website to introduce in detail the background, goals, implementation process and results of public welfare projects. Publish photos, videos and stories of public welfare activities on social media to attract users' attention and interaction. At the same time, actively cooperate with news media to report on major public welfare activities to expand the influence of the activities. For example, write news releases and activity summaries in a timely manner after each public welfare activity and release them on the official website and social media, and invite the media to report to improve the exposure of public welfare activities.

2. Promoting the Development of Sustainable Finance

- Expanding Green Finance Business

- Increase the intensity of business expansion in the green finance field, actively carry out green credit, green bonds, green funds and other businesses. Establish a complete green finance business system and risk management mechanism, strengthen the assessment and review of green projects to ensure that funds are invested in truly green industries and projects. Formulate green credit standards and procedures, clarify the scope and identification standards of green industries, and conduct strict environmental and risk assessments on enterprises applying for green credit. For example, for enterprises involved in new energy, energy conservation and environmental protection, ecological agriculture and other fields, give priority to providing credit support and offer preferential policies in terms of loan interest rates and loan periods.

- Strengthen the innovation of green finance products, develop diversified products that meet market requirements. For example, launch green housing mortgage loans, provide preferential interest rates and loan conditions for customers who purchase energy-efficient housing; issue green bonds to attract investors to participate in the financing of green projects; set up green funds to invest in enterprises and projects with environmental protection and sustainable development potential. At the same time, strengthen cooperation with international green finance institutions, learn from advanced experiences and technologies to enhance ICBC's international influence in the green finance field. Participate in international green

finance forums and cooperation projects, share experiences and results with international counterparts to jointly promote the development of global green finance.

- Social Responsibility Investment

- Incorporate the concept of social responsibility investment into investment decisions, actively participate in social responsibility investment projects. Establish a social responsibility investment assessment system to conduct comprehensive assessments on the environmental impact, social contribution and corporate governance of investment projects. For example, when selecting investment enterprises, not only pay attention to the financial performance of the enterprises but also examine factors such as their environmental protection measures, employee benefits and social responsibility fulfillment. Give priority to investing in enterprises with good social responsibility and sustainable development capabilities to promote enterprises to achieve comprehensive value maximization in economic, environmental and social aspects.

- Set up a social responsibility investment fund to guide social funds to flow to projects and enterprises that meet social responsibility standards to promote social sustainable development. Formulate the investment strategy and management rules of the social responsibility investment fund, clarify the investment goals and scope. For example, invest in enterprises and projects in the fields of education, medical care, environmental protection, etc., to provide financial support for social development. At the same time, strengthen the publicity and promotion of the social responsibility investment fund to attract more investors to participate, expand the fund's size and influence.

- Environmental and Social Risk Management

- Strengthen the management of environmental and social risks, incorporate them into the bank's comprehensive risk management system. Establish an environmental and social risk assessment model to conduct environmental and social risk assessments on loan projects and investment businesses to timely discover and prevent potential risks. During the loan approval process, conduct strict reviews on the environmental compliance and social impact of enterprises. For example, for loan

applications of high-pollution and high-energy-consuming enterprises, require them to provide detailed environmental improvement plans and measures, otherwise, do not approve the loan.

- Require enterprise customers to strengthen their environmental and social risk management, promote them to fulfill their social responsibilities. Sign environmental and social responsibility agreements with enterprise customers to clarify their obligations and responsibilities in environmental protection and social responsibility. Regularly monitor and assess the environmental and social risks of enterprise customers to urge them to improve their environmental and social performance. For example, conduct an annual environmental and social risk assessment of enterprise customers, for those who do not meet the standards, require them to formulate improvement plans and track the improvement situation to ensure that the enterprises meet the environmental and social requirements.

Through the above comprehensive and specific measures, ICBC can achieve remarkable results in brand communication and promotion, optimization of product and service quality, and fulfillment of social responsibilities, thereby comprehensively enhancing the corporate brand image, strengthening market competitiveness, achieving a win-win situation of economic and social benefits, and making greater contributions to the sustainable development of society.

3.2. Development of risk-management strategies for a bank

I. Risk Identification and Assessment

1. Construction of a Comprehensive Risk Identification System

- Internal Risk Identification

- Conduct a detailed review of each business process within the bank, including credit business, fund business, and intermediary business. For example, in the credit business, identify the potential risks that may exist in the processes of loan application, approval, disbursement, and post-loan management, such as credit risk (the risk of borrower default) and operational risk (errors in loan document review,

incorrect loan disbursement due to system failures, etc.). For the fund business, pay attention to market risk (fluctuations in the value of funds caused by factors such as interest rate fluctuations and exchange rate changes) and liquidity risk (mismatch between the sources and uses of funds, which may lead to a tight funding situation). In the intermediary business, identify risks such as fluctuations in commission income and legal and compliance risks .

- Analyze the bank's internal organizational structure and management processes to identify risks that may result from unclear responsibilities, poor communication. For example, untimely or inaccurate information transfer between departments may affect the timely identification and response to risks; an inefficient coordination mechanism between the risk management department and business departments may lead to the ineffective application of risk assessment results in business decision-making.

Evaluate the quality and behavioral risks of bank employees, including their professional capabilities and professional ethics. For example, operational errors caused by employees' insufficient professional knowledge or the reputational and legal risks brought to the bank by the illegal actions of individual employees (such as internal fraud and leakage of customer information).

- External Risk Identification
- Identification of Macro-economic Environment Risks
- Closely monitor changes in the macro-economic situation, including economic growth trends, inflation rates, interest rate levels, and exchange rate fluctuations. For example, during an economic recession, the repayment ability of enterprises declines, increasing credit risk; an increase in the inflation rate may lead to a rise in raw material prices, affecting the profitability and repayment ability of enterprises, and thus affecting the quality of bank loans. Interest rate fluctuations will impact the bank's interest margin income, and exchange rate changes may affect the bank's foreign exchange business and the debt-servicing ability of multinational corporate customers.

- Identification of Industry Competition Risks

- Analyze the market structure and competition situation in the banking industry to understand the strategies and changes in market shares of competitors. For example, the rise of emerging financial institutions may attract some customers by innovating business models and applying new technologies, threatening the market share of traditional banks; preferential policies or new financial products launched by competitors may lead to the loss of bank customers, affecting the bank's profitability. At the same time, pay attention to changes in industry regulatory policies, such as an increase in capital adequacy requirements and adjustments to risk management regulatory policies, which may directly affect the bank's business operations and risk status.

- Identification of Customer Credit Risks

- In addition to conducting credit assessments and tracking of existing customers, strengthen credit investigations of potential customers. Utilize big data analysis and information from external credit rating agencies to comprehensively understand the financial status, business operations, and credit history of customers. For example, for corporate customers, analyze factors such as their financial statements, industry status, and market competitiveness to assess their credit risk levels; for personal customers, consider factors such as their income levels, asset-liability situations, and credit records to judge their repayment ability and credit risk.

- Identification of Technology Risks

- With the rapid development of financial technology, the technology risks faced by banks have become increasingly prominent. Identify the security risks of technology systems, such as cyberattacks and data leaks; the risks of technology upgrades, if the bank fails to keep up with the pace of technological development in a timely manner, it may lead to low business efficiency and poor customer experience; and the risks that may arise during the cooperation with third-party technology suppliers, such as technical failures and service interruptions of suppliers.

2. Application of Risk Assessment Methods and Models

- Qualitative Assessment Methods

- Expert Judgment Method

- Form a team of experts composed of risk management experts and business backbones to conduct subjective judgments and assessments of the identified risks. Based on their experience and professional knowledge, the experts provide qualitative descriptions and analyses of the likelihood and impact of risks. For example, when assessing the risks brought by a new financial business innovation, the experts can comprehensively analyze and judge its potential risks by combining factors such as industry development trends, market demands, and regulatory policies, and put forward corresponding risk management suggestions.

- Questionnaire Survey Method

- Design questionnaires targeting different risk types and business areas and distribute them to bank employees, customers, and external partners to collect their views and evaluations on risks. Through the statistical analysis of the questionnaire results, understand the awareness and concerns of all parties regarding risks, providing a reference for risk assessment. For example, for an online financial product launched by the bank, conduct a questionnaire survey to understand customers' understanding and acceptance of the product's risks, as well as the problems and risk points they may encounter during the use process.

- Scenario Analysis Method

- Set up different risk scenarios, such as economic crises, drastic market fluctuations, and major policy adjustments, to analyze the risks and their impacts that the bank may face under these scenarios. Through scenario simulations, help the bank's management better understand the interrelationships and potential consequences of risks and formulate corresponding emergency response plans. For example, assuming a scenario of a significant increase in interest rates, analyze the impacts on the bank's fixed-rate loan business and bond investment business, as well as the countermeasures the bank should take, such as adjusting the asset-liability structure and strengthening interest rate risk management.

- Quantitative Assessment Methods

- Value at Risk (VaR) Model

- Use the VaR model to calculate the maximum loss that the bank's asset portfolio may face within a specific future time period under a certain confidence level. Through historical data simulation and statistical analysis, determine the volatility characteristics and correlations of asset prices to calculate the VaR value. For example, using a 95% confidence level, calculate the VaR value of the bank's investment portfolio within the next week so that the management can intuitively understand the risk status of the investment portfolio and rationally allocate assets to control risks.

- Credit Scoring Model

- For customer credit risk assessment, establish a credit scoring model. Based on multiple indicators such as customers' credit history, financial status, and repayment records, calculate a credit score for each customer. The higher the credit score, the lower the customer's credit risk. The bank can formulate different credit policies and risk pricing strategies based on the credit score. For example, for customers with a credit score lower than a certain threshold, increase the loan interest rate or reject the loan application to reduce credit risk.

- Stress Testing

- By setting up extreme but possible market conditions and risk factors, conduct stress tests on the bank's balance sheet, profitability, and capital adequacy ratio. For example, simulate scenarios such as a significant drop in housing prices and a large increase in the unemployment rate to test the bank's risk tolerance and stability under these extreme conditions. The results of stress tests can help the bank assess its vulnerability to systemic risks and formulate corresponding risk mitigation measures and capital supplementation plans.

II. Formulation of Risk Strategies

1. Setting of Risk Appetite and Tolerance

- Combine the bank's strategic goals and development plans to clarify the bank's risk appetite. Risk appetite can be classified into different types such as aggressive, conservative, and moderate. For example, a bank aiming for rapid business expansion and a high market share may tend to adopt a more aggressive

risk appetite, being willing to take on higher risks to a certain extent to obtain higher returns; while a bank focusing on asset quality and stable operations may choose a conservative or moderate risk appetite, emphasizing more on risk control and the safety of assets.

- Based on the risk appetite, determine the bank's tolerance levels for different types of risks. Risk tolerance can be represented by specific quantitative indicators, such as the upper limit of the non-performing loan ratio for credit risk, the upper limit of the VaR value for market risk, and the lower limit of the liquidity coverage ratio for liquidity risk. For example, set the bank's tolerance for the non-performing loan ratio at 3%. That is, when the non-performing loan ratio exceeds 3%, the bank needs to take corresponding risk control measures, such as adjusting the credit policy, strengthening post-loan management, and intensifying the disposal of non-performing loans, to ensure that the risk level is within the acceptable range.

- The setting of risk appetite and tolerance should fully consider factors such as the bank's capital strength, profitability, and risk management capabilities, and be reviewed and approved by the board of directors and senior management. At the same time, communicate the concepts and requirements of risk appetite and tolerance to all bank employees to ensure that they can understand and follow the bank's risk strategies in their daily work.

2. Selection of Risk Response Strategies

- Risk Avoidance

- For some businesses or activities with excessively high risks that cannot be effectively managed, the bank can choose to adopt a risk avoidance strategy. For example, for loan businesses in some high-risk industries or regions, if the bank believes that it lacks sufficient risk assessment capabilities and risk control means, or the political and economic environment in the region is unstable, which may lead to an excessively high loan default risk, the bank can decide not to engage in these businesses, thereby avoiding potential losses.

- Risk Reduction

- Internal Control and Process Optimization

- Establish a sound internal control system to strengthen the supervision and management of business processes and reduce the occurrence of operational risks. For example, improve the loan approval process, clarify the responsibilities and authorities of each link, strengthen the review and verification of the authenticity of loan documents, and reduce manual operation links through automated systems to lower the risks caused by human errors. At the same time, regularly evaluate and optimize the business processes to improve business efficiency and risk prevention and control capabilities.

- Diversification of Investments

- Through diversifying the asset portfolio, reduce the concentration of risks on a single asset or business. In the credit business, achieve a diversified distribution of customers in terms of industry, region, and scale to avoid excessive concentration in a specific industry or region. For example, stipulate that the proportion of loans to a certain industry shall not exceed a certain percentage of the total loans to prevent the serious impact of industry systemic risks on the bank's asset quality. In the investment business, diversify the investment of funds into different types of financial assets such as stocks, bonds, funds, and derivatives to reduce the overall impact of market fluctuations on the investment portfolio.

- Risk Mitigation Measures

- Adopt risk mitigation tools such as mortgages, guarantees, and credit derivatives to reduce credit risk. For loan businesses, require borrowers to provide collateral or guarantors to increase the repayment guarantee. In bond investments, hedge credit risk by purchasing credit default swaps (CDS) and other credit derivatives. At the same time, reasonably set mortgage rates, guarantee conditions, etc., to ensure the effectiveness of risk mitigation tools.

- Risk Transfer

- Insurance

- Purchasing insurance is a way for the bank to transfer risks. For example, for the risk of asset losses caused by natural disasters, accidents, etc., the bank can purchase property insurance to transfer the risk. For the operational risks of

employees, such as customer claims due to work errors, purchase professional liability insurance to reduce the bank's liability for compensation.

- Business Outsourcing

- Outsource some non-core businesses or business processes with high risks to professional third-party institutions. For example, outsource the data entry and card production links in the credit card issuance business to a professional credit card service company. Through contract agreements on the rights and obligations and risk-bearing methods of both parties, transfer some operational risks and legal risks to the outsourcer. However, during the business outsourcing process, the bank needs to strengthen the supervision and management of the outsourcer to ensure the quality and risk controllability of the outsourced business.

- Financial Derivatives Trading

- Utilize financial derivatives such as forwards, futures, and options to transfer risks. For example, the bank can sign a forward foreign exchange contract to lock in the foreign exchange rate and avoid exchange losses caused by exchange rate fluctuations; purchase an interest rate futures contract to hedge interest rate risk and stabilize interest income. However, financial derivatives trading has a certain complexity and riskiness, and the bank needs to possess professional knowledge and skills to reasonably use derivative tools to avoid triggering new risks due to improper operations.

- Risk Acceptance

- For some businesses or risk events with relatively low risks and within the bank's risk tolerance range, the bank can choose to adopt a risk acceptance strategy. When adopting the risk acceptance strategy, the bank needs to continuously monitor and assess the risk to ensure that the risk level does not change beyond expectations. At the same time, formulate corresponding emergency response plans so that when a risk event occurs, measures can be taken in a timely manner to respond and reduce losses. For example, for some small-credit loan businesses, since their risks are relatively low and conform to the bank's risk appetite and tolerance, the bank can

accept these businesses on the basis of reasonable risk assessment and monitor the risks through strengthening post-loan management.

III. Risk Monitoring and Early Warning

1. Establishment of a Risk Monitoring Indicator System

- Credit Risk Monitoring Indicators

- Include non-performing loan ratio, loan provision ratio, overdue loan ratio, and changes in credit scores. Regularly monitor the changes in these indicators to timely detect the trends and abnormal fluctuations of credit risk. For example, when the non-performing loan ratio rises continuously for several quarters or exceeds the industry average level, it is necessary to analyze the reasons in depth. It may be due to the deterioration of the macro-economic environment leading to a decline in the repayment ability of enterprises, or it may be caused by the relaxation of the bank's internal credit approval standards or ineffective post-loan management.

- Market Risk Monitoring Indicators

- Such as interest rate risk indicators (interest rate sensitivity gap, duration, etc.), exchange rate risk indicators (foreign exchange exposure position, exchange rate fluctuation range, etc.), and stock price risk indicators (market value changes and volatility of the stock investment portfolio). By real-time monitoring of these indicators, the bank can timely understand the impacts of market fluctuations on its balance sheet and investment portfolio. For example, when the interest rate sensitivity gap is positive and the interest rate rises, the bank's interest income may increase, but it also faces the risk of increased interest expenditure when the interest rate drops. Therefore, it is necessary to adjust the asset-liability structure according to the risk situation.

- Liquidity Risk Monitoring Indicators

- Mainly include liquidity coverage ratio (LCR), net stable funding ratio (NSFR), and cash flow ratio. These indicators are used to measure the bank's ability to meet liquidity requirements within different time periods. For example, the LCR requires that the bank's high-quality liquid assets can at least cover the net cash outflow within the next 30 days. The bank needs to regularly calculate and monitor

the LCR value to ensure that it meets the regulatory requirements and its own liquidity management goals. When the LCR value approaches or is lower than the regulatory lower limit, the bank needs to take measures to increase liquidity reserves, such as through inter-bank borrowing and selling short-term assets to obtain funds.

- Operational Risk Monitoring Indicators

- Include operational error rate, incidence of violation events, and number of problems found by internal audit. By monitoring these indicators, evaluate the effectiveness of the bank's internal control system and the level of operational risk. For example, if the incidence of violation events rises in a certain period, the bank needs to strengthen the training and supervision of employees, improve the internal management system, find risk loopholes, and take corrective measures in a timely manner to reduce operational risk.

2. Construction of a Risk Early Warning System

- Setting of Early Warning Indicators and Determination of Thresholds

- According to the risk monitoring indicator system, combined with the bank's historical data and industry experience, set reasonable thresholds for each early warning indicator. When the indicator value exceeds the threshold, an early warning signal is triggered. For example, for the non-performing loan ratio, set the threshold at 2%. When the actual non-performing loan ratio reaches or exceeds 2%, the system issues a credit risk early warning. The setting of thresholds should be scientific and reasonable, both being able to timely detect potential risks and avoiding frequent false alarms due to excessive sensitivity.

- Transmission of Early Warning Signals and Response Mechanism

- Establish an efficient transmission channel for early warning signals to ensure that the early warning information can be timely and accurately conveyed to relevant departments and personnel. Once an early warning signal is received, the risk management department should immediately start the risk assessment and response procedures, organize relevant personnel to analyze and discuss, and formulate corresponding risk disposal measures. At the same time, clarify the responsibilities and division of labor of each department in the early warning

response to ensure the effective execution of the measures. For example, when a market risk early warning signal is issued, the trading department should promptly adjust the investment portfolio, the risk management department should strengthen market monitoring and risk analysis, and the financial department should prepare to deal with possible capital losses.

- Dynamic Adjustment and Optimization of the Early Warning System

- With the changes in the market environment, business development, and risk management requirements, regularly evaluate and adjust the risk early warning system. Optimize and perfect the early warning indicators, thresholds, transmission mechanisms, etc. according to the actual situation to ensure the effectiveness and adaptability of the early warning system. For example, if it is found that a certain early warning indicator does not work well in actual application, or the market environment changes significantly so that the original threshold is no longer applicable, timely adjust and reset it. At the same time, utilize big data analysis, artificial intelligence, etc., to continuously improve the accuracy and intelligence level of the early warning system, improving the timeliness and effectiveness of risk early warning.

Through the formulation and implementation of the above risk management strategy, the bank can comprehensively, systematically identify, assess, and manage various risks, improve the ability to respond to risks and the scientific nature of decision-making, ensure stable operation in a complex and changing market environment, and achieve sustainable development. At the same time, effective risk management also helps to enhance the bank's reputation and market competitiveness, creating greater value for shareholders and customers.

3.3. Innovative marketing steps to facilitate bank competitiveness

- Integrated brand communication and promotion strategy

- Multi-channel communication based on precise positioning

Review the brand positioning: Clearly position the bank such as ICBC as a “professional, reliable and innovative comprehensive financial service provider, committed to supporting the development of the real economy and meeting the diversified financial needs of customers”.

Integrate online and offline communication:

Online:

Optimize the experience of the official website and continuously improve the website interface design based on customer feedback and data analysis to ensure clear information display and convenient operation. For example, for corporate customers inquiring about financial products and services, we set up a special corporate service portal, displaying detailed product introductions, case studies, and online consulting functions, making it easy for corporations to quickly obtain the information they need and communicate with the bank.

Strengthen social media operations and develop personalized content release plans. In view of the user characteristics of different platforms, publish professional content such as financial industry news and expert opinions on Weibo to attract financial practitioners and users concerned about macroeconomics; push personalized financial service recommendations and preferential activities on WeChat to understand the demand through user interaction, such as WeChat polling activities to understand the interest of customers in new products; make interesting short videos on platforms such as Jittery Yum, to display the bank's corporate culture, staff style and easy interpretation of financial products to attract young user groups.

Deepen search engine marketing and optimization, regularly analyze keyword effects and adjust placement strategies. For keywords related to popular financial products, such as “preferential policies for corporate loans” and “high-yield financial products”, focus on optimization to improve the ranking in search results. At the same time, optimize the content structure of the website and increase original and professional financial articles to improve the natural search ranking of the website.

Offline:

Utilize the advantages of branches to carry out thematic activities. For example, organize “Financial Knowledge Popularization Month” activities in each branch, targeting different customer groups, such as individual investors, SME owners, etc., to carry out thematic lectures to introduce financial market trends, investment strategies, and the bank's special financial products. At the same time, display areas were set up in outlets to showcase the Bank's innovations and customer success stories to enhance customers' awareness of the Bank's strengths.

Actively participate in industry events to enhance brand awareness. When attending financial exhibitions, display the bank's latest financial technology applications, such as the application cases of blockchain in supply chain finance, to attract the attention of peers and potential customers; deliver keynote speeches on financial innovation and risk management at industry forums to establish the bank's professional image in the industry.

Creative Initiatives to Enhance the Effectiveness of Advertising and Publicity

Creative advertising design and production:

Form a cross-departmental creative advertising team, including marketing staff, financial product experts, designers, etc., to jointly plan advertising content. Taking emotional marketing as an entry point, produce an advertisement with the theme of “Accompanying the Growth of Enterprises”, which tells how ICBC provides enterprises with all-round financial support at different stages, from small loans at the start-up of the enterprise to comprehensive financial services after its development and growth, and shows the development process of the enterprise and the bank's accompaniment in the picture, accompanied by warm and The images show the development of the enterprise and the bank's company, accompanied by warm and touching copy and music to enhance the infectious force of the advertisement.

Use advanced technology to improve the quality of advertisements, such as using virtual reality (VR) and augmented reality (AR) technology to create interactive advertisements. For example, launching an AR advertisement for personal housing loans, in which users can scan a specific logo with their cell phones

to see virtual house decoration effects and loan calculation information, increasing the fun and practicality of the advertisement.

Precise ad placement and effect evaluation:

Use big data to analyze customer profiles and realize accurate placement. According to their age, income, asset status, consumption habits and other factors, customers are subdivided into different groups, such as young white-collar customer groups, high-net-worth customer groups, and small and medium-sized enterprise customer groups. For the young white-collar customer group, advertisements on consumer credit, credit card offers, etc. are placed on the mobile applications they often use; for the high-net-worth customer group, exclusive advertisements on financial products are placed in high-end financial magazines, private banking events and other channels.

Establish a comprehensive advertisement effect evaluation system to monitor the advertisement effect in real time. By analyzing data such as ad exposure, clicks, conversion rate, customer feedback, etc., we can make timely adjustments to our advertising strategy. For example, if you find that the conversion rate of an advertisement is low in a certain region, analyze the reasons, which may be due to the fierce market competition in that region or the mismatch between the advertisement content and the local customers' needs, and adjust the advertisement delivery time, channel or content in a timely manner.

Optimize product and service innovation and marketing

Market demand-oriented product innovation

Deepen market research and customer demand analysis:

Establish a regular market research mechanism and conduct large-scale customer demand surveys on a regular basis. In addition to traditional questionnaire survey methods, face-to-face interviews and online focus group discussions are used to gain a deeper understanding of customers' needs and pain points in terms of financial products and services. For example, for SME customers, we understand their difficulties and expectations in terms of capital turnover, financing costs, financial management, etc., to provide a basis for product innovation.

Utilize data analysis tools to tap into customers' potential needs. Through the analysis of customers' transaction data and behavioral data, we discover customers' potential financial needs and consumption trends. For example, analyzing the consumption records of individual customers, it is found that some customers have large consumption expenditures in areas such as tourism and education, and corresponding innovative products such as tourism loans and education installments are launched.

Innovative product development and differentiated competition:

Set up a specialized product innovation team and increase investment in research and development. Encourage team members to come up with innovative ideas and cooperate with fintech companies to introduce advanced technologies and concepts. For example, the development of intelligent financial advisory products in combination with artificial intelligence technology to provide customers with personalized financial advice and asset allocation solutions based on their risk appetite, financial situation and other factors.

Focusing on the differentiated design of products and launching special products for different customer groups. For the elderly customer group, we launched the “Peace of Mind for Pension” series of products, including exclusive time deposit products with relatively high interest rates and flexible withdrawal methods; for the young customer group, we launched the “Youthful Energetic” financial package, which includes convenient mobile payment tools, small consumer credit products, as well as a variety of financial products and services. For young customers, the “Youthful Vitality” financial package was launched, including convenient mobile payment tools, small consumer credit products and personalized financial planning services.

Marketing Strategies to Enhance Service Quality

Employee training and service awareness:

Develop a comprehensive staff training program covering business knowledge, service skills, communication skills and other aspects. Regularly organize internal training courses and invite industry experts to give lectures, while

encouraging employees to participate in external training and certification exams to enhance their professional quality. For example, service etiquette training is conducted to improve employees' service level in customer reception and communication through simulated scenario drills; financial product knowledge competitions are held to motivate employees to learn business knowledge.

Strengthen the service consciousness of employees and establish a customer-centered service concept. Through corporate culture building activities, such as organizing service star selection and customer satisfaction excellent team recognition, etc., employees are motivated to proactively provide customers with quality services. At the same time, service quality is incorporated into the employee performance appraisal system and linked to salary and promotion, prompting employees to pay attention to service quality.

Optimize service process and customer experience management:

Comprehensively sort out and optimize the existing service processes to reduce cumbersome procedures and links. For example, simplify the loan approval process by establishing an automated approval system, realizing online and intelligentization of some of the approval processes, and improving the efficiency of approval. For loan applications from corporate customers, the approval time will be shortened to within a certain number of working days if the information is complete.

Strengthen customer experience management and establish a customer feedback mechanism. Collect customers' opinions and suggestions on services through channels such as customer satisfaction surveys, online comments and complaint handling. Rectification and feedback on customer feedback are carried out in a timely manner. For example, customer feedback portals are set up on the bank's official website and mobile banking applications to facilitate customers to put forward their opinions at any time; customer complaints are handled and replied to customers within a specified time, while the causes of the complaints are analyzed and measures are taken to avoid the recurrence of similar problems.

Strengthening the fulfillment of social responsibility in conjunction with marketing

Actively participate in the marketing and promotion of public welfare activities

Develop public welfare strategy and brand association:

Combine the bank's brand positioning and development strategy to formulate a long-term strategic plan for public welfare. Integrate public welfare activities with the bank's business characteristics, highlighting contributions in the areas of education and poverty alleviation, environmental protection and public welfare, and community development. For example, in the area of education poverty alleviation, the "ICBC Education Scholarship" is set up to subsidize students from impoverished areas to complete their studies, while financial literacy activities are carried out in schools to improve students' financial literacy, so as to closely link the bank's brand image with education public welfare.

Diversified public welfare programs and publicity:

Continuously promote education poverty alleviation projects. In addition to subsidizing students and improving teaching conditions, we organize employee volunteers to conduct teaching activities in schools in impoverished areas, share financial knowledge and professional experience, and film documentaries on teaching activities and release them on social media to demonstrate the bank's social responsibility and the dedication of its employees, and to attract the attention and recognition of more customers.

Actively participate in environmental protection and public welfare activities, such as organizing the "ICBC Green Action" series of activities, including tree planting, environmental protection knowledge contests, and promotion of green financial products. When promoting green financial products, publicize the Bank's initiatives and achievements in supporting the development of the environmental protection industry to customers, so as to increase customers' awareness of and participation in green finance.

Strengthening the implementation of community development programs and cooperating with communities in community building and caring for vulnerable groups. For example, it provides financial knowledge training and consulting

services to the community to help residents raise their awareness of financial management and their ability to prevent financial risks; regularly organizes employees to visit widows and orphans and poor families in the community, and conducts volunteer service activities, as well as conducts publicity and reporting through the community media, bulletin boards, and other channels, to enhance the Bank's brand influence in the community.

Marketing Initiatives to Promote Sustainable Financial Development

Green finance business expansion and publicity:

Increase green financial business expansion and actively develop green credit, green bonds, green funds and other businesses. Develop a green financial product publicity program to publicize the features and advantages of green financial products to corporate and individual customers. For example, it has produced green credit product promotional brochures detailing the application requirements, preferential policies and positive impacts on the sustainable development of enterprises, which have been widely disseminated through bank outlets, official websites, social media and other channels.

Participate in international green finance cooperation and exchanges to enhance the bank's visibility in the international green finance field. At international financial conferences and forums, share the bank's practical experience and innovative achievements in green finance, strengthen cooperation with international financial institutions and enterprises, and jointly promote the development of global green finance. Meanwhile, through domestic and international media coverage, publicize the bank's image and contribution in the international green finance arena, and attract more domestic and international customers to pay attention to and choose the bank's green finance products and services.

Socially Responsible Investment and Customer Guidance:

Integrate the concept of socially responsible investment into investment product design and marketing, and launch products such as socially responsible investment funds. Promote the importance and long-term value of socially responsible investment to investors and guide customers to participate in socially

responsible investment. For example, organize investor education activities to introduce the investment strategies, risk-return characteristics and positive impacts on society and the environment of SRI funds to attract the participation of investors concerned about social responsibility.

Provide personalized SRI advice during clients' investment process. Recommend suitable investment portfolios for clients based on their risk appetite and investment objectives, combined with socially responsible investment criteria. At the same time, regularly disclose the progress and results of socially responsible investment projects to clients, so as to enhance clients' confidence and satisfaction in socially responsible investment.

Through the full implementation of the above innovative marketing steps, the bank is able to realize synergistic development in various aspects, thus significantly enhancing its brand image and market competitiveness.

In terms of brand communication, the integration of online and offline channels as well as precise advertising strategies can make the bank's brand image more deeply rooted in people's hearts. The optimization of online channels and diversified content release, combined with offline thematic activities and industry participation, not only increased brand exposure, but also enhanced the professionalism and credibility of the brand. Creative advertising design and precise placement further enhanced the effectiveness of brand communication, attracted the attention of target customer groups and laid a solid foundation for the promotion of the bank's products and services.

In the product and service innovation and marketing segment, market-demand-oriented product innovation ensured that the Bank was able to provide distinctive financial products that met the needs of different customer groups. At the same time, by improving service quality, enhancing staff training and optimizing service processes, the Bank is able to provide customers with a better and more efficient financial service experience, enhancing customer satisfaction and loyalty. This not only helps attract new customers, but also effectively retains existing customers and promotes stable business growth.

In terms of the combination of social responsibility fulfillment and marketing, active participation in public welfare activities and the promotion of sustainable financial development have established a good corporate image for the bank. The implementation of public welfare activities not only gives back to the society directly, but also enhances the bank's brand reputation and social recognition through publicity and promotion. The expansion of green financial business and the promotion of socially responsible investment are not only in line with the trend of social development, but also open up new business areas and customer groups for the bank. At the same time, marketing initiatives that combine social responsibility with financial services attract customers who are concerned about social and environmental issues, further enhancing the bank's market competitiveness.

Overall, the implementation of these innovative marketing steps has enabled banks to fulfill their business objectives while actively fulfilling their social responsibilities and contributing to sustainable socio-economic development. This comprehensive development strategy helps banks stand out in the fierce market competition, attract more customers, achieve long-term stable development, and establish a leading brand image and good reputation in the financial industry. Eventually, banks will become trusted financial partners of customers and play a greater role in promoting economic development and social progress.

CONCLUSIONS

The research conducted within this work has unveiled crucial insights that are of great significance for comprehensively understanding and further augmenting the operations of the Industrial and Commercial Bank of China (ICBC). In the current era of rapid financial evolution, marked by dynamic technological advancements, intensifying global competition, and shifting customer expectations, this research emerges as a timely and necessary exploration.

Our study has been firmly rooted in the theoretical basis provided by a diverse range of banking - related research. These theoretical underpinnings have served as a guiding light, enabling us to meticulously dissect ICBC's competitiveness within the complex fabric of the modern financial ecosystem. Through a detailed analysis of ICBC's business model against the backdrop of emerging financial technologies, it has become evident that these technologies are not merely peripheral elements but are in fact the driving force behind a fundamental reshaping of the bank's operations. For example, the ongoing digital transformation is not only streamlining and enhancing the efficiency of services but also introducing a new set of challenges that demand innovative risk management strategies.

With respect to brand image, our research has firmly established its central and indispensable role in both attracting new customers and retaining existing ones. ICBC's strategic initiatives in this domain have far - reaching consequences, directly influencing its standing in the highly competitive market. A strong brand image not only instills trust among customers but also acts as a differentiating factor in a crowded marketplace. The current risk management system within ICBC has demonstrated a certain degree of adaptability to new challenges. However, given the volatile and unpredictable nature of the financial landscape, continuous improvement is an absolute necessity. New risks, often associated with the rapid pace of technological change and global economic fluctuations, require a more proactive and agile approach to risk management.

The in - depth consideration and analysis of these multifaceted issues have clearly highlighted the urgent need to identify and implement effective ways to optimize the processes under investigation. In light of this, the author has thoroughly examined the existing proposals in this regard and has systematically organized them along the following lines.

First, in the context of integrating emerging financial technologies, ICBC should embark on a more ambitious journey of exploration. This entails forging strategic partnerships with fintech startups that bring specialized technological expertise and innovative business models. By collaborating with these nimble and technology - driven entities, ICBC can gain access to cutting - edge solutions such as advanced payment systems, blockchain - based services, and AI - driven customer analytics. Additionally, significant investment in in - house research and development is crucial. This would enable the bank to develop proprietary technologies tailored to its specific needs, thereby maintaining a competitive edge in the digital race. For instance, developing its own intelligent financial advisory platforms or secure digital banking interfaces can enhance the customer experience and drive business growth.

Second, when it comes to brand image improvement, ICBC can adopt a more personalized approach to customer engagement. By leveraging big data analytics, the bank can gain a deeper understanding of customer preferences, behaviors, and needs. This information can then be used to create highly targeted marketing messages that resonate with individual customers. In the realm of customer service, ICBC can implement real - time feedback mechanisms and AI - powered chatbots to provide instant and accurate support. This not only improves the customer experience but also enhances the overall brand perception. Moreover, maintaining a consistent and engaging brand narrative across all communication channels, from traditional advertising to social media platforms, is essential. This includes creating compelling content that showcases the bank's values, expertise, and commitment to customer satisfaction.

Third, in the area of risk management, ICBC should embrace a more dynamic and predictive approach. Advanced analytics tools, powered by artificial intelligence and machine learning algorithms, can be harnessed to analyze vast amounts of data in real - time. This would enable the bank to identify potential risks at their nascent stages, even before they manifest as significant threats. For example, predicting market fluctuations based on global economic indicators, identifying potential credit risks through comprehensive customer profiling, and detecting cyber threats through continuous monitoring of the bank's digital infrastructure. By implementing such a proactive risk management strategy, ICBC can ensure its stability and resilience in the face of an ever - changing and unpredictable financial environment.

In summary, the results of this research hold both substantial theoretical and practical value. Theoretically, this study enriches the existing body of knowledge regarding banking competitiveness in the digital age. It provides a comprehensive framework for understanding the complex interplay between technological innovation, brand management, and risk mitigation within the banking sector. Practically, the proposed improvements offer a clear and actionable roadmap for ICBC's strategic decision - making. These recommendations can empower the bank to better serve its customers, manage risks more effectively, and solidify its leading position in the highly competitive banking industry. By contributing to the overall development of the banking sector, this research has the potential to inspire further innovation and improvement within the financial community, thereby driving the industry forward towards a more sustainable and prosperous future.

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