

The Use of Information Technology in the Strategy of Internationalization Of Banking

Yi Yao¹, Vladimir Grigoriev²

1032208710@pfur.ru¹, pluton67@mail.ru²

¹Department of National Economy, Peoples' Friendship University of Russia (RUDN) Moscow, Russia¹

²Senior Lecturer of Institute of World Economy and Business, Peoples' Friendship University of Russia (RUDN) Moscow, Russia²

Abstract: The internationalization of banking is impossible without the intensive introduction of the latest achievements of scientific and technological progress in banking. The relevance of the topic is due to the need to optimize the management of information resources in the banking sector. In terms of their importance, automated information systems nowadays occupy one of the leading places in the banking sector. It is impossible to imagine a single modern bank that would not use computer technology. The rapid growth of scientific and technological progress and new information technologies have a significant impact on the overall assessment of the bank's attractiveness. The development of the technological process allows not only to increase the speed of processing documents and conducting cash transactions, but also to expand the clientele. In turn, the development of information technologies can significantly reduce the distance between the producer and consumer of banking services, increase the competition of banks in the international market and contribute to the development of banking services.

Keywords: Information Technology, World Economy, Internationalization Strategies, Banking, Transnational Banks, Financial Globalization.

1 THEORETICAL APPROACHES TO THE CONCEPT OF BANKING INTERNATIONALIZATION

The banking sector is a key actor in the financial industry. Therefore, the internationalization of commercial banks is an important part of financial globalization and the development of the modern world economy. The internationalization of the banking sector is developing on the basis of entrepreneurship. The theory of the internationalization of entrepreneurship was first proposed by the American economist in international relations Raymond Vernon in 1966. He suggested that the internationalization of entrepreneurship is a process from the development of a new product and its sale on the national market, followed by export to international markets^[1].

The internationalization of the banking business is a transition to the management of bank property abroad: the creation of branches, the acquisition of a significant share in foreign banks, international mergers, acquisitions and the creation of bank holdings with foreign banks.

The internationalization of the banking business is manifested in the internationalization of banking operations, products and technologies due to the growth of foreign direct investment of banks.

The internationalization of the banking business is manifested in the following^[1]:

- international development of traditional banking services, including international settlements, trade and export financing, foreign exchange transactions;
- international activities in the field of non-traditional banking services, including overseas investment, leasing, factoring, forfeiting, securities and insurance.

Thus, in accordance with international rules, banks are engaged directly or indirectly in the provision of international financial services in the international financial market ^[2]. The internationalization of banking is expressed in the creation of a global distribution system by opening international branches, providing international banking services. Internationalization of banks includes the following elements ^[3]:

- 1) Internationalization of management. Banks in the international market must comply with the rules and laws of international banking, international accounting standards, follow the standards for identifying and assessing risks, conducting international audits, personnel management with the requirements of international banking.
- 2) Internationalization of personnel. The composition and structure of bank employees of the largest transnational banks should be international.
- 3) Internationalization of capital. Attracting foreign investors, issuing shares and long-term bonds on the international market.
- 4) Internationalization of the banking network. Creation of international financial institutions, cooperation with foreign companies, shareholding, mergers, acquisitions
- 5) Customers in the international market. The bank is obliged to have numerous clients in various countries and regions of the world.

1.1 Methods

In the study, the authors used some methods such as analysis and synthesis, induction and deduction, historical and logical, abstraction and concretization.

2 OPERATIONS OF CHINESE BANKS IN INTERNATIONAL MARKETS

After joining the WTO, China provided the country's banking sector with access to the world economy, which made it possible to increase the pace of development of the Chinese financial system and become a leader in international business. With the growth of financial services and the provision of Chinese multinational banks, the integration process in China and abroad is accelerating. The growth of assets, the volume of transnational settlement transactions in RMB and the volume of joint operations in China and abroad have increased significantly in

recent years. In China, there is a clear hierarchy in all areas of life. The banking sector has three distinct levels^[4]:

Table I. Levels of the banking sector in China ^[2]

Rank	Types of banks	Tasks
Rank 1	The Central Bank of China (People's Bank of China), political banks (China Development Bank, Agricultural Development Bank of China and China Exim Bank).	The main task of this level is to distribute and control financial flows, control monetary funds, and issue money.
Rank 2	The four banks that support the banking system are called the "Big Four": 1) Industrial and Commercial Bank of China (ICBC); 2) China Construction Bank Corporation (CCB); 3) The Agricultural Bank of China; 4) Bank of China.	These banks are considered the most reliable. The Big Four have the most assets and make up the entire Chinese banking system. They are widely known in many countries around the world, as well as in the Russian Federation.
Rank 3	Private organizations with little income and their own assets. These are small non-profit financial organizations and post offices.	Service for legal entities and individuals

The activities and development of large Chinese banks are influenced by the following aspects:

- China is confidently moving towards the construction of a trading power, therefore, the development of international business is underway;
- the national currency of China has become more often used in international settlements;
- the active internationalization of Chinese enterprises continues;
- Chinese banks are diversifying their risks and opening up new opportunities to increase profits by entering international markets.

With the strengthening of China's economy, the competition between national banks is getting fiercer. As a result, the income of Chinese banks in the national market is decreasing. Banks will start looking for additional income from activities in international markets^[11].

Over the past 10 years, more than 15 Chinese banks have successfully consolidated their presence in international markets.

The process of internationalization of Chinese banks takes place through the introduction of innovations, an increase in the level of professionalism in the banking business, and the expansion of the scale of banks' activities in international markets.

The internationalization of banks has various organizational forms, such as the opening of representative offices of banks, the creation of agencies, subsidiary credit organizations, branches of credit organizations on the territory of other states. Thus, the transnational activities of banks can be carried out in two ways: (1) the opening of new financial institutions and (2) international mergers and acquisitions of financial institutions. The activities of banks

in international markets depend on the possibilities and prospects of international operations, the host country, and internationalization strategies^[12].

3 THE CURRENT STATE OF ICBC IN THE INTERNATIONAL MARKET

Industrial and Commercial Bank of China (ICBC) is the largest bank in China. The bank was founded in 1984. Today ICBC is the most expensive banking brand in the world^[7].

Mission of the Bank: excellent quality for clients, excellent services for clients, maximum profit for shareholders, real success for employees.

ICBC's vision is to build a state-of-the-art, world-class financial enterprise with global competitiveness, deliver excellence, adhere to a mission, be a customer favorite, be a leader in innovation, security and discretion, and be people-centered.

Values:

- honesty leads to prosperity.
- honesty, humanity, prudence, innovation and excellence.

The bank has 17,000 internal branches and 41 branches around the world.

ICBC pays attention to Internet banking. It enjoys high returns thanks to its extensive client base and nationally regulated bank deposit rates. ICBC and US bank Wells Fargo are competing against each other for the best bank in the world in terms of market capitalization.

Revenue mainly comes from internal subsidiaries. Its subsidiaries include a leasing company, as well as an asset management company and an insurer, which form joint ventures with foreign companies. ICBC strives to become a global titan alongside such financial groups as JPMorgan Chase and Citigroup from the USA.

The Chinese banking conglomerate ICBC, at the end of 2019, took 1st place among the world's 1000 best banks according to The Banker magazine, took 1st place in the Global 2000 rating according to Forbes, topped the list of Global 500 commercial banks in Fortune for the seventh year in a row and for the fourth year in a row ranked 1st among the top 500 banking brands in brand financing^[5].

ICBC attaches great importance to the development and implementation of its development strategy in international markets.

ICBC meets all the necessary world-class standards. The Bank's clients are always satisfied with the business policy.

Despite the difficulties caused by the pandemic around the world, ICBC is rapidly moving towards its intended goal to achieve a positive result. The Bank is reforming its structures by managing assets and capital investments.

The main task of ICBC is the reconstruction of the banking system and for this the Bank needs innovations that will change the negative situation caused by the crisis in the global economy.

Therefore, the Bank is betting on a new strategy for restructuring the entire system of the banking business.

To achieve great success in the international market, ICBC must strengthen its position and become competitive. To do this, it is necessary to introduce business innovations and the latest modern technologies.

In November 2007, the Bank opened a subsidiary company in Moscow - ICBC Moscow. ICBC Moscow strives to always put clients first and offers them a wide range of financial services in Russia.

Financial statements are presented in Figure 1. During the pandemic, ICBC raised its stock prices and remained in positive territory (Figure 2). As of April 2021, the stock is up 0.11%. Thus, ICBC Bank is a reliable partner for companies that cooperate with it, as well as individuals.

ICBC provides commercial banking and financial services.

The bank operates in the following business segments: corporate banking, individual banking, treasury operations and others. Despite the financial and economic crisis caused by COVID-19, financial revenues in 2020 increased by 0.4%, profits in 2020 increased by 0.2% (Figure 1)^[7].

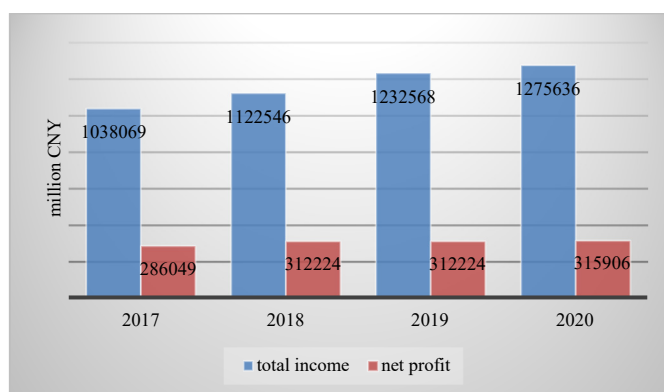


Figure 1. Financial performance of ICBC^[7]

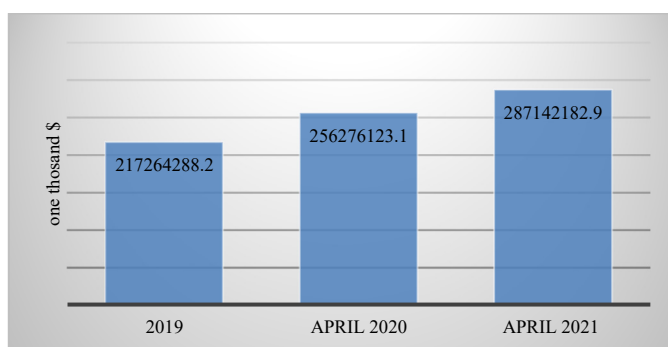


Figure 2 - Shares of the Bank during the pandemic in thousand \$^[7]

The corporate banking segment provides corporate loans, trade finance, depository activities, corporate wealth management services, custodianship and various types of corporate intermediary services for corporations, government agencies and financial institutions.

The personal banking segment offers individual loans, deposits, card business, wealth management services, and various types of personal intermediary services for individual clients.

The treasury segment covers money market transactions, investment securities, foreign exchange transactions and holding positions in financial derivatives on its own account or on behalf of customers. The “Other” segment includes assets, liabilities, income and expenses that cannot be allocated to a segment. ICBC's clients are Chinese, employees of multinational corporations with Chinese origins and students studying in Russia. Currently, ICBC Moscow offers services such as money transfers, currency exchange, and clearing services between countries. ICBC is in its life cycle. On the life cycle of stability, ICBC operates at maximum efficiency. The balance of the company is between growth and profit. ICBC maintains a corporate culture so that employees and stakeholders feel comfortable and spiritually join the company by participating in its life. There is a clear focus and the company clearly fulfills its main function. At ICBC, there is a balance between flexibility and control. In most models of other stages of life, this stage can be classified as a transition from growth to maturity.

ICBC still has enough investment opportunities to make it attractive to investors. ICBC has achieved an optimal life cycle, balancing three important business elements, namely external factors, internal factors and managerial motives.

In order for ICBC to remain stable, it needs to continue to grow by penetrating the international market using an intensive growth strategy. For example, ICBC may step up its market penetration efforts in urban centers in developing countries. Thanks to this external strategic factor, the company can grow through economic growth and the corresponding expansion of the financial services market in countries with high growth rates. Also, ICBC can diversify its business by offering new financial products to increase its revenue.

4 PECULIARITIES OF INFORMATION TECHNOLOGIES AND PROSPECTS OF THEIR APPLICATION IN THE ICBC INTERNATIONALIZATION STRATEGY

ICBC is positioned to be strong and active in terms of global placement. Thanks to many years of efforts, today the Bank has branches all over the world. Its internationalization strategy is a dynamic expansion. ICBC has successfully completed overseas mergers and acquisitions today, which quickly pushed its overseas expansion strategy forward. In the long process of internationalization, ICBC promotes a strategy of expanding external relations that aims at economic development and accelerates the process of internationalization.

Thanks to the globalization of China's economy, ICBC has made great strides in a short time in terms of expansion in international markets, in countries such as Romania, Vietnam, UAE, Pakistan, France, Belgium, Netherlands, Italy and Spain, Russia^[8].

At the present stage, the main tasks of ICBC are: development of an internationalization strategy, strengthening financial support for enterprises entering the international market, strengthening the independence of development of foreign banking institutions.

ICBC's internationalization strategy in the Russian market is focused on investing in brand awareness activities. Increasing ICBC brand awareness is important to help the Bank enter new consumer segments and increase awareness. ICBC should also introduce consumers to new markets for its banking products. By increasing sales through training new consumer segments in existing and new markets, the Bank leads the Bank to overall business development and growth.

ICBC offers a wide range of financial products^[5]:

- provides financial services to Chinese and Russian export and import enterprises;
- invests in projects and financing of enterprises in the real sectors of the economy;
- conducts international payments;
- carries out conversion operations;
- helps Russian enterprises to develop their business in China;
- contributes to the development of trade and economic relations, the organization of investment and business cooperation between Russia and China.

The use of modern information technologies radically affects the internationalization of the Bank and changes business processes, bringing it to a fundamentally new level. Banking technologies are inextricably linked with information technologies, which provide complex business automation.

At the heart of ICBC's changing IT landscape is the technology platform, which acts as a business environment that enables ecosystem members to interact and create value. The technological platform includes infrastructure, data and tools for their processing and analysis, applications, development tools, API.

ICBC actively applies the latest technologies to create innovative services and services. Methods of working with Big Data were used in the development of a universal chat platform for instant messengers. A retinal-based biometric identification system for self-service devices is being introduced. A system for the development of a mathematical model of cash and cash management in ICBC self-service devices has been implemented, which is designed to reduce device downtime and save on optimizing the stored amounts of cash^[9].

On the basis of an open interface (API), a prototype of a portal has been developed that allows external ICBC partners to manage the life cycle (API) for connecting ICBC-Messenger partners. It also publishes corporate API services, which helps in attracting new partners.

ICBC has introduced the technology of "direct settlement", which made it possible to make payments in the ICBC settlement system in real time.

ICBC has built a basic ICBC product portfolio based on aggregated data. The first deals were made with external clients for products to build a model of propensity to buy and segment the customer base for targeted campaigns.

The Open Data portal was launched - a unique information product based on Big Data technologies, which presents aggregated data on the economic activity of the population and business.

ICBC has established innovation laboratories, which have an average development time of an innovative product of about five months. Among the innovative initiatives that ICBC is testing or implementing are the following^[13]:

- accounting and management of powers of attorney, electronic mortgages for real estate, money transfers, accounting of factoring transactions based on blockchain technology;
- building an electronic document management system based on blockchain technology;
- automated construction of work schedules for employees in customer service offices;
- using the technology of automatic communication with clients in text service channels (messengers);
- using smart digital assistants to solve customer problems and a universal platform for chatbots;
- Creation of a new generation mobile banking application based on messenger technology;
- creation of an ecosystem of customer communication, simple communication channels, management of accounts and funds, transfers; research of marketplaces for partners, provision of additional services to clients.

ICBC adopts the experience of advanced world developments in the field of information technology, and also develops its own Programs for the development of the banking sector and improving the quality of service while minimizing costs and risks. Key ICBC programs are shown in Figure 3.

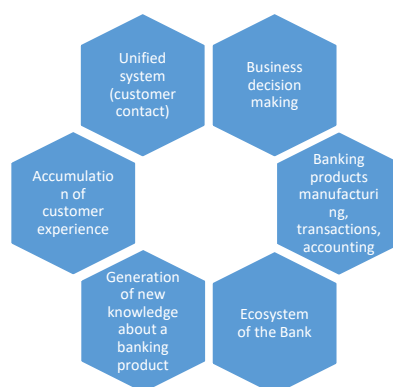


Figure 3. ICBC technology platform

The main task of the technological platform is to reduce the development time of banking products (time-to-market) and increase the level of automatic processing of transactions.

The new modeling platform will reduce operational risk and allow you to quickly implement models of any complexity into business processes. The implemented project will ensure the continuity of the development and implementation of machine learning models with their subsequent integration into ICBC business processes. The deployed architecture automates the management of models, working with them is carried out in a separate secure test environment, and the changes are automatically transferred to the industrial environment. ICBC Bank managed to build processes for the development of modeling teams, providing them with advanced technologies. For the development of machine learning models, access to corporate data warehouses has been implemented, ready-made images of workplaces for teams with a different stack of machine learning libraries have been configured. Automated processes of transferring models from the development circuit to the application circuit will allow in the future to reduce the time-to-market tasks of introducing machine learning into the decision-making processes of the bank, as well as to reduce the operational risk of manually transferring the logic of models between systems.

5 CONCLUSION

ICBC in the international market can strategically benefit from the development of its international payment clearing services, expand its client base to a global scale.

Since the start of the coronavirus pandemic, mobile capabilities have become a more significant factor when choosing a bank among respondents. ICBC needs to understand which mobile banking features are most valued by consumers and where the Bank is compared to its competitors. This is necessary in order to update digital platforms and stay ahead of the competition.

The strategy of internationalization of the banking business, its management and performance assessment necessitate the modernization of information technology systems in the bank, improve the quality of client work, determine the development strategy of the bank and strategic planning.

The transition to international reporting standards, the reduction of banking risks also predetermine the conditions for choosing directions for the development of the Bank's automation, choosing a specific information system and planning investments in it.

Acknowledgments: This paper has been supported by the RUDN University Strategic Academic Leadership Program.

REFERENCES

- [1] Base of world banks and financial institutions - [Electronic resource]. URL: <http://www.bankersalmanac.com/addcon/infobank/bank-rankings.aspx>.
- [2] Wang Kai. The current state and prospects of cooperation between Russia and China in the trade, economic and financial sphere // ed. Dr. econ. Sciences, prof. S.A. Dyatlova, Doctor of Economics Sciences, prof. D.Yu. Miropolsky, Dr. econ. Sciences, prof. T.A. Selischeva. - SPb: Publishing house, SPbGEU, 2017. - 709 p.

- [3] Wang Kai. Comparative analysis of the largest Chinese, European and American transnational banks based on the CAMEL system // Management and Economics. - 2018. - No. 6. - P. 12-18
- [4] Banks in China: an overview of the banking system // <https://prc.today/banki-kitaya-obzor-bankovskoj-sistemy/>
- [5] Corporate Strategy // <http://www.icbc-ltd.com/ICBCLtd/About%20Us/Corporate%20Strategy/>
- [6] ICBC Moscow / <https://www.icbc.com.cn/ICBC/EN/PersonalFinance/>
- [7] Official site ICBC // <http://www.icbc.com.cn/icbc/>
- [8] ICBC Marketing Strategy & Mix (4Ps) // <https://www.mbaskool.com/marketing-mix/services/16872-icbc.html>
- [9] ICBC Financial Leasing Co., Ltd. Green Finance Framework // <https://www.icbcleasing.com/>
- [10] Marketing Strategy Of ICBC // <https://www.essay48.com/marketing-strategy/>
- [11] Internationalization of Banks: Strategic Patterns and Performance // <https://www.econstor.eu/bitstream/>
- [12] Internationalization of Banks European Cross-border Deals // <https://link.springer.com/content/pdf/>
- [13] Internationalization theories // <https://nscpolteksby.ac.id/>