RMB Internationalization and Banks' Transnational Operation Strategies
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ABSTRACT
Since our country successfully launched the pilot program of RMB settlement for cross-border trade in 2009, the internationalization of RMB has made rapid progress and achieved world-renowned achievements. Seizing the strategic opportunity of RMB internationalization to conduct transnational operations is the only way for banks to cope with domestic fierce competition and enhance their international competitiveness. The purpose of this article is to study the application of RMB internationalization and banks' transnational business strategies. This article first extracts and analyzes the characteristics of our country's banks' transnational operations. Based on this, research and analysis of RMB nationalization and banks' transnational business strategies. This article uses a variety of research methods such as comparative analysis and mathematical statistics to conduct experimental research about this article. The research shows that the profitability of China's banking industry is gradually increasing. After-tax profits of the Chinese banking industry nearly doubled in 2017-2020, which is closely related to the expansion of the banking industry's transnational operations.

Keywords: RMB Internationalization, Cross-Border Operations of Banks, Strategic Research Design, Analysis and Discussion

1. INTRODUCTION
Under the grand strategy of RMB internationalization, Chinese banks have taken internationalization development as an important development strategy in the future\textsuperscript{[1-2]}. Chinese banks, represented by Bank of China, occupy a major market share in traditional business areas such as RMB cross-border settlement and payment clearing. They have played a major role in the internationalization of RMB and established a comparative advantage \textsuperscript{[3-4]}. In 2006, the Central Bank of the Philippines included the renminbi as one of its international reserve currencies. This is the first time that a foreign central bank has listed the renminbi as a reserve currency \textsuperscript{[5-6]}; Kenya and Mongolia are also studying the possibility of renminbi foreign exchange reserves\textsuperscript{[7-8]}. Relevant analysis pointed out that China's RMB will replace the U.S. dollar as the world's primary reserve currency as soon as the next year, but the non-convertibility of the RMB has seriously hindered this process \textsuperscript{[9-10]}.

This article focuses on the impact of RMB internationalization on banks' transnational operations, and analyzes the internationalization of RMB and banks’ transnational business strategies, and compares the transnational business strategies of banks in the United States, Japan and other countries to judge what this article is studying. The internationalization of RMB and the feasibility of banks' transnational business strategies.

2. THE APPLICATION OF RMB INTERNATIONALIZATION AND BANK MANAGEMENT STRATEGIES

2.1. Multinational Operations of Banks
Banking transnational operations is a dynamic process of bank business area expansion, that is based on international business, banks set up representative offices, branches, sub-banks, and joint ventures overseas to expand their service areas from domestic to foreign countries\textsuperscript{[11-12]}.
2.2. Analysis of The Impact of RMB Internationalization on Banks' Transnational Operations

(1) The impact of the functions of the international accounting unit

A country’s real economic sector’s initial demand for non-domestic currencies and services is for the payment and settlement of cross-border inter-border trade. Because the payment and settlement of cross-border international trade is necessary to contact foreign currencies and their services, the national credit currency the first function of the environment development is payment and settlement, although opening an account in the actual procedure is a necessary condition to complete the payment and settlement. The cross-border development of currency payment and settlement functions means that national credit currency has begun to enter the international monetary and financial field, as a trade settlement currency to accept international choices.

(2) The influence of the function of the international trading medium

The function of currency trading media is usually the function of currency directly assuming the function of trading goods, which is derived from the functions of currency payment and settlement and asset retention, such as the exchange and pricing of one currency against another currency, and the borrowing and lending of the currency itself. Financial services include foreign exchange trading and financing loans. The cross-border development of currency transaction functions will not only affect the operation of operating currencies and credit banks, but also enable the expansion and development of currency markets and industries related to bank transactions, such as banks generated after local currency is used for cross-border international trade settlement. Does the acceptance bill have a market that can be circulated and discounted? Do various cross-border currency transactions have a legal system that is compatible with international currency transactions?

(3) The internationalization of RMB helps commercial banks improve their competitiveness in multinational operations

Commercial banks' cross-border operations under the background of RMB internationalization not only encourage them to improve their business innovation capabilities, but also help enhance their own service levels and competitiveness, and play a significant role in improving business performance. The demand for financial products and services will be more comprehensive, diversified, and high-quality, which objectively sets requirements for commercial banks to innovate financial products and improve service levels, which is conducive to improving the current status of "homogenization" of commercial bank operations and stimulating financial enrichment. In the process of following the "going global" of enterprises, use the advantages of the RMB internationalization background to form professional brand competitiveness. In addition, the development of RMB internationalization business will also increase the cooperation between Chinese commercial banks and foreign banks. There will be more exchange opportunities to learn advanced science and technology and management methods, thereby improving their profitability.

2.3. Analysis of Bank's Transnational Operation Strategy in the Process of RMB Internationalization

(1) With the help of "One Belt One Road", increase efforts to go out and build a global service network

First, neighboring countries with more trade are still key areas. These areas are relatively like my country’s culture and have deep historical origins; economic growth is fast, development potential is great, and the distribution of Chinese enterprises’ “going out” is relatively concentrated. Peripheralization and regionalization are also important stages of the development of RMB internationalization, which is conducive to the development and innovation of cross-border RMB business of commercial banks, and has incomparable advantages for commercial banks' cross-border operations. Therefore, commercial banks should improve the layout of neighboring countries and regions, expand market share, and enhance competitiveness.

(2) While strengthening the basic RMB business, focus on business innovation and implement differentiated operations

Our country’s commercial banks should continue to strengthen their leading advantages in RMB business, thereby enhancing the market competitiveness of wholesale financing services, reducing capital costs, and increasing the market share of our country's commercial banks in syndicated loans, cross-border mergers and acquisitions, project financing and other businesses. Continue to promote commercial banks to make breakthroughs in retail business, keep up with the needs of customers for overseas employment, tourism, study abroad, home ownership and global asset allocation, and strengthen the development of RMB cross-border remittance, wealth management, personal investment and other businesses.
2.4. The Impact of RMB Internationalization on the Transmission Channels of Monetary Policy Spillovers

(1) Theoretical model of the spillover effect of monetary policy

1) Mundell-Fleming model (MF)

The MF model still produced a great breakthrough in the previous macroeconomic equilibrium analysis. It extended the general equilibrium analysis of Keynesian theory from the commodity market and money market to the balance of payments market. In the MF model, a country's economy is composed of the following three sectors. Product market equilibrium:

\[ Y = A + cY - bi + G + NX \]  

(1)

The equilibrium of the product market means that total supply is equal to total demand. The left side of the equation represents total supply, and the right side represents total demand. Total demand consists of two parts: one is domestic absorption, including consumption, investment and government purchases, A represents the part of spontaneous absorption, c and b represent the impact of income and interest rates on consumption and investment, respectively, and G represents government purchases; NX represents net exports, representing the part of foreign demand. Balance of Payments:

\[ ce - tY = w(t^* - t) \]  

(2)

In order to analyze the international transmission of monetary policy, the MF model of the small open economy can be extended to the MF model of the two countries' economies, and the spillover effects of monetary policy under the floating exchange rate system and the fixed exchange rate system can be studied separately. Since capital is completely mobile in an open economy, as long as the interest rates of the two countries are the same, the balance of payments will reach equilibrium.

In the actual economic operation of RMB internationalization, macroeconomic variables will affect individual microeconomic decisions, and individual decisions will in turn affect macroeconomics. Therefore, Lucas emphasized that any macroeconomic theory model should be based on microeconomic theory, and put forward the famous Lucas critique. Based on the MF model, Obstfeld and Rogoff (1995) introduced rational expectation factors, nominal price stickiness, and monopolistic competition into dynamic general equilibrium, and established a new open economy macroeconomics (NOEM) model with microeconomic foundations. This model is a two-country economic model, assuming that population and commodities are continuously distributed on (0, 1), where (0, n) belongs to the country and (n, 1) belongs to foreign countries. Every individual is both a producer and a consumer. They all have the same preferences and are monopolists in the production of products. There is a positive correlation between output and labor and a negative correlation between leisure. The utility of the individual is shown in formula (3).

\[ U_j = \sum_{j=0}^{\infty} \beta^j \log C_j^t + b \log \frac{M_{-1}^t}{P_t} - \frac{k}{2} \gamma_j(j)^2 \]  

(3)

In the formula, \( C_j \) represents the consumption of individual j in period t, which is defined as

\[ c_i^j = \int_0^q c_i^j(z)^q d\zeta \frac{1}{q}, 0 < q < 1 \]  

(4)

\( c_i^j(z) \) represents the quantity of goods consumed, \( z \in (0, 1) \), and q represents the elasticity of substitution between different goods. All commodities consumed by domestic residents determine the price index

\[ P_t = \left[ \int_0^q P_t(z)^q d\zeta \right]^{\frac{1}{q}} \]  

(5)

\( P_t(z) \) represents the price of domestic and foreign commodities. The utility of residents also depends on the actual currency balance held, which is expressed as \( M/pt \) in the utility function. According to budget constraints, residents will choose consumption, the output of commodity j, currency holdings, and the amount of bonds to maximize utility. The specific constraints are:

\[ P_t^j c_i^j + M_{-1}^t + P_t^j B_{-1}^j \leq P_t(j) \gamma_j(j) + R_{-1} P_{t-1} + M_{-1}^j \]  

(6)

Like the conclusions of the analysis of macroeconomic variables, there is uncertainty about the impact of domestic monetary policy expansion on foreign economies through the utility function, and the final impact on output changes depends on the degree of substitution and complementarity between foreign and domestic products. Although the transmission channels and effects of international monetary policy are different under the two analytical frameworks, the common point of the two is that the expansion of foreign monetary policy will have spillover effects on other countries and affect the output of other countries.

(2) Analysis of the impact of transmission channels

1) Interest rate channel

In addition to the impact of domestic currency supply and demand, our country's interest rate will also be affected by foreign demand for the renminbi, as well as the interest rates and exchange rates of other countries.
2) Exchange rate channels

The perfection of the RMB exchange rate formation mechanism has made the central bank basically withdraw from normal foreign exchange intervention, and market supply and demand have played a greater role in the formation of exchange rates, making the exchange rate transmission mechanism smoother.

3. EXPERIMENTAL RESEARCH ON RMB INTERNATIONALIZATION AND BANK MANAGEMENT STRATEGY

3.1. Experimental Protocol

The profits of commercial banks come from the products and services they provide. The type and scale of banking business play a vital role in their loan-to-deposit ratio and liquidity ratio. Therefore, we analyze the impact of RMB internationalization on the banking industry's loan-to-deposit ratio and liquidity ratio. Impact, that is, to examine the impact of RMB internationalization on various businesses in China's banking industry.

(1) In order to make this experiment more scientific and effective, this experiment analyzes the loan-to-deposit ratio (the ratio of bank loans to deposits) from 2013 to 2020. The loan-to-deposit ratio is one of the most basic indicators for evaluating bank liquidity. The larger the indicator, the worse the bank’s liquidity.

(2) In order to further research and analyze this experiment, this experiment compares and analyzes the current assets and current liabilities of a bank during the four years from 2007 to 2020 in order to judge the bank's cross-border operation liquidity supply capacity.

3.2. Research Methods

(1) Induction

In this experiment, the collected data were sorted and analyzed through the collection of the China Banking Regulatory Commission’s annual report and website. These data not only provide theoretical support for the topic selection of this article, but also provide data support for the final research results of this article.

(2) Comparative method

This experiment will compare and analyze the deposit-loan ratio and liquidity ratio of a certain bank for several consecutive years, in order to study and analyze the operating strategies of multinational banks under the influence of RMB internationalization.

(3) Mathematical Statistics

Use relevant software to conduct statistics and analysis on the research results.

4. AN EXPERIMENTAL ANALYSIS OF RMB INTERNATIONALIZATION AND BANK MANAGEMENT STRATEGIES

4.1. Comparative Analysis of Loans and Deposits

In order to make this experiment more scientific and effective, this experiment compares and analyzes the progress of a bank's loan-to-deposit ratio from 2013 to 2020. The data obtained are shown in Table 1.

| Years | Total deposit | Total loan |
|-------|---------------|------------|
| 2013  | 22.1          | 18.7       |
| 2014  | 26.2          | 19.7       |
| 2015  | 30.4          | 21.5       |
| 2016  | 34.5          | 23.6       |
| 2017  | 40.3          | 28.1       |
| 2018  | 48.7          | 31.0       |
| 2019  | 61.5          | 41.7       |
| 2020  | 72.4          | 51.9       |

Figure 1. Loan-to-deposit ratio analysis

It can be seen from Figure 1 that in recent years, the loan-to-deposit ratio of China's banking industry has shown a trend of rising after a decline. From 2013 to 2014, the loan-to-deposit ratio basically remained above 75%. In 2015, the ratio fell below 70%. This is mainly because the growth rate of deposits in 2014-2015 was much faster than the growth rate of loans, while annual loans increased too fast, and deposit loans in other years maintained the same growth rate.

4.2. Comparative Analysis of Bank Current Assets and Current Liabilities

In order to further research and analyze this experiment, this experiment compares and analyzes the liquidity ratio of banks. This ratio is closely related to the monetary policy of the central bank. When the monetary policy of the central bank is tightened, the
currency value will fall. When the policy is relaxed, the ratio rises. The data obtained is shown in Table 2.

**Table 2.** A Comparative Analysis of the Value of Bank’s Current Assets and Current Liabilities

| Year | Banking ratio | Multinational bank ratio |
|------|---------------|-------------------------|
| 2017 | 40.30%        | 37.71%                  |
| 2018 | 49.81%        | 46.12%                  |
| 2019 | 45.72%        | 42.41%                  |
| 2020 | 43.69%        | 42.23%                  |

It can be seen that with excess liquidity in China's financial market, inflationary pressures have increased, especially when it peaked in 2018, causing the liquidity ratio of the banking industry to decline year after year. Only when the central bank lowers the deposit reserve ratio and releases a certain amount of liquidity to the market, the liquidity situation may be improved.

5. **CONCLUSION**

This article discusses the impact of currency internationalization on the country’s banking industry, and focuses on the impact of RMB internationalization on China’s banking industry. From an industry perspective, currency internationalization develops along the path of performing the functions of international pricing units, transaction media, and reserve currency functions, which will promote the development of the banking industry in the direction of internationalization, and domestic banks will successively complete the provision of cross-border local currency settlement services, cross-border use of assets and liabilities, to provide financial services for holders of local currencies around the world. International currency issuing countries have gradually formed an international financial center dominated by local currency financial transactions. The proportion and position of the financial industry in the national economy has greatly increased, and the international development of the banking industry has increased the scale of the industry and the quality of service supply.

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