Current Status of RMB Cross-border Trade Settlement and an Empirical Analysis of the Influencing Factors of Its Scale

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ABSTRACT

This article starts with the current status of RMB cross-border trade settlement, combined with data analysis, and summarizes the share of RMB cross-border payment in the global market, the coverage of RMB cross-border trade settlement system, the normalization of RMB swaps, and the new growth of RMB cross-border service trade Points. In order to explore the influencing factors of RMB cross-border trade settlement, this paper selects 72 periods of time series data from January 2015 to December 2020 to carry out the research. By constructing a VAR model, it analyzes the impact of factors that affect the RMB settlement of cross-border trade from the long-term and short-term.

Keywords: RMB cross-border trade settlement; current situation; VAR model; influencing factors

1. INTRODUCTION

In recent years, with the continuous enhancement of China's comprehensive national strength, the increasingly close integration with the world's economy and finance, and the continuous improvement of its international status, the RMB has been increasingly used for cross-border trade settlement.

However, in recent years, the development of RMB settlement in China's cross-border trade is facing constraints. Based on this, it has become an important issue to explore the status quo of RMB settlement in cross-border trade under the new situation, and to study the influencing factors of RMB in cross-border trade.

This article draws on the research results of previous scholars, and uses statistical analysis and empirical analysis methods to conduct research on the basis of forming its own research ideas. The innovation lies in: Based on the new era, the current situation of RMB cross-border trade settlement has undergone new changes; the latest data has been compiled, and the data comes from official authoritative channels, ensuring real-time and effectiveness.

2. LITERATURE REVIEW

Reading previous studies by scholars from various countries found that scholars from various countries started relatively late in the study of cross-border trade currency settlement, and the research level was relatively single. Relevant literature mainly focuses on the status quo and influencing factors of cross-border trade RMB settlement. Most of them use statistical analysis methods to conduct research. [1]

3. CURRENT STATUS OF RMB CROSS-BORDER TRADE SETTLEMENT

3.1. The share of RMB cross-border payments in the global market is at the forefront and is growing steadily.

According to the latest data released by the World Banking, Financial and Telecommunications Association (SWIFT), in May 2021, in the ranking of global payment currencies based on amount statistics, the euro, the US dollar, the British pound and the Japanese yen accounted for 39.03%, 38.35%, 5.78% and 3.02%, the renminbi ranks 5th. In June 2021, the proportion of RMB in global payments has risen sharply, reaching 2.46%, an increase of 0.55% from the previous month.

According to data from the International Monetary Fund (IMF), in the fourth quarter of 2020, the share of

the U.S. dollar in global foreign exchange reserves has fallen to the lowest level since 1995; the share of the euro has risen to 21.2% in 2014. The highest level since. As more and more countries switch to currencies such as the euro, it seems an indisputable fact that the global currency status of the US dollar has been impacted. Many countries have turned to the euro and the renminbi one after another, which has also promoted the internationalization of the renminbi.[2]

3.2. The RMB cross-border trade settlement system covers a wider range

The RMB cross-border payment system was officially launched in October 2015. Since the launch of CIPS,it has developed rapidly and continuously improved, and its coverage in the global financial market has also become more extensive.

As of the end of June 2018, the number of CIPS direct participants increased from 19 at the time of launch to 31, and indirect participants increased from 176 to 738, covering 87 countries and regions on 6 continents. As of the end of 2020, up to 242 countries and regions around the world are involved.

The CIPS standard transceiver can satisfy users to make payments to two or more companies at the same time, greatly accelerating the implementation of users' international services. The RMB cross-border trade settlement system will also expand its coverage as the RMB internationalization progresses.

3.3. Normalization of RMB swaps

Beginning in 2009, in order to avoid exchange rate risks caused by violent fluctuations in the exchange rate of the US dollar and the euro, and to further facilitate the facilitation of China's trade, and to increase the international use of the renminbi, a large-scale currency swap agreement for swapping the local currencies of the two countries began to appear on a large scale. [3]

At the beginning of 2021,the scale of renminbi swaps has reached 3.47 trillion yuan, and renminbi swaps are normalized and become the world's largest swap currency. This is not only conducive to promoting the frequency of renminbi use in international trade, but also conducive to increasing the number of renminbi reserves in the world, thereby promoting the internationalization of the renminbi.[5]

3.4. RMB cross-border service trade has become a new growth point

According to the financial statistics report of the People's Bank of China, in 2020, cross-border goods trade settlements settled in renminbi will accumulate 4.79 trillion yuan, an increase of 0.54 trillion yuan from 2019, an increase of 12.71% year-on-year, accounting for cross-border trade renminbi settlements In the same year, cross-border service trade and other current account settlements totaled 1.98 trillion yuan, a year-on-year increase of 10.61%, accounting for 18.71% of cross-border trade settlements in RMB. From a structural point of view, trade in services is an important part of the growth of RMB cross-border settlement and payment. According to historical data, the proportion of non-goods trade cross-border renminbi settlement in the total cross-border renminbi settlement has increased from 10.87% in August 2014 to 29.73% in May 2020.

Many experts believe that future cross-border service trade will become a key driver of global trade. In the first half of 2021, the added value of my country's service industry reached 29.6 trillion yuan, and its share of GDP increased from 54.5% last year to 55.7%, providing strong industrial support for the high-quality development of service trade. At the same time, with the favorable cross-border service trade policy, my country's cross-border service trade is expected to embark on the "fast lane" of accelerated development. The RMB cross-border service trade has undoubtedly become a new growth point.

4. AN EMPIRICAL STUDY ON THE INFLUENCING FACTORS OF THE SCALE OF RMB SETTLEMENT IN CROSS-BORDER TRADE

4.1. Constructing a VAR model to explore the factors affecting the scale of RMB settlement in cross-border trade. The model settings are shown in the figure 1:

Variable	Meaning	Theoretical Description
Y	Cross-border trade RMB settlement volume (100 million yuan)	Cross-border RMB settlement scale
T	Total import and export (100 million yuan)	Scale of import and export trade
CPI	CPI Index	Degree of inflation
E	Renminbi to U.S. dollar exchange rate	Changes in the relative currency value of the renminbi
F	Money supply ratio M1/M2	RMB liquidity in China

figure 1 Variables and their theoretical descriptions

Based on the availability and consistency of the data, the data is converted into monthly data with high frequency, and some missing data are calculated based on reasonableness evaluation. , And finally get the monthly time series of 2015.Q1-2020.Q12.

The VAR model is used to study the impact of the four major factors on the scale of RMB settlement of cross-border trade.In order to eliminate heteroscedasticity and optimize the empirical results, some indicators are taken logarithm and first-order

difference for empirical testing and analysis.

4.2.Empirical analysis

4.2.1.ADF inspection

The ADF test results of each indicator variable and its first-order difference show in figure 2:

Variable	ADF statistics	1% threshold	5% threshold	10% threshold	conclusion
Ln Y	-3.737	-3.526	-2.903	-2.589	stable
Ln T	-5.578	-4.093	-3.474	-3.164	stable
Ln CPI	-1.930	-3.526	-2.903	-2.903	unstable
D(Ln CPI)	-7.458	-2.598	-1.946	-1.614	stable
E	-2.430	-3.527	-2.904	-2.589	unstable
D(E)	-4.868	-2.598	-1.946	-1.614	stable
F	-1.705	-3.525	-2.903	-2.589	unstable
D（F）	-9.598	-2.598	-1.946	-1.614	stable

figure 2 The ADF test results

According to the test results, Ln Y and Ln T are both stationary series at the 1% significance level, and are zero-order single integer series; CPI, E, and F are non-stationary series, and after first-order difference processing, they are at 1% significant The null hypothesis is rejected at the horizontal level, that is, the original time series satisfies the first-order single integer.

4.2.2.Build a VAR model

First of all, the size of the lag order needs to be determined. According to the AIC and SC criteria, the best lag order is 2. Since the unit roots of all variables fall within the unit circle, the VAR model is stable.[4]

Carry out impulse response analysis:

Model principle: Take the other 4 variables as impulse dependent variables, and generate a composite impulse response analysis chart to describe the degree of influence of each variable on the RMB settlement scale (Ln Y) of cross-border trade during the observation period, as shown in the figure3 below.
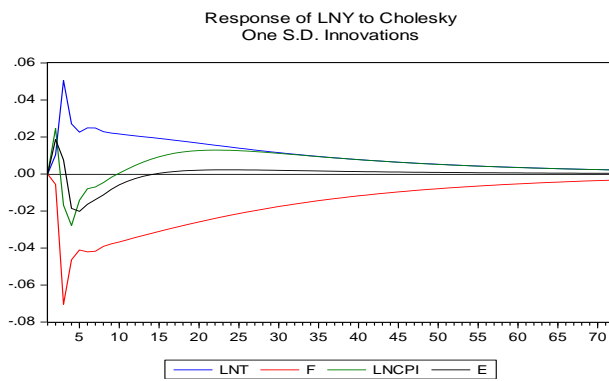

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figure 3 analysis chart

By constructing a VAR model, taking the other 4

variables as impulse dependent variables, a composite impulse response analysis chart is generated to describe the degree of influence of each variable on the scale of cross-border trade RMB settlement (Ln Y) during the observation period, as shown in the figure above.

In terms of the scale of import and export trade, the scale of RMB settlement in cross-border trade shows a positive effect in the short and long term. While the total trade volume is expanding, the RMB settlement scale of cross-border trade is lagging behind in filling the space for trade growth. In the long run, if we want to further positively promote the RMB settlement volume of cross-border trade, we need to adjust the trade structure on the basis of expanding the total trade volume.

Inflation and changes in the value of the renminbi have a positive and negative effect on the renminbi settlement of cross-border trade at the initial stage, and eventually approach a lower positive value. The degree of inflation and the change in the renminbi currency value measured by the exchange rate are measures of the internal and external performance of the renminbi currency. In the short and long term, due to negative fluctuations and the final trend toward a lower positive value, the degree of inflation and exchange rate growth can be inferred This will inhibit the development of RMB settlement in cross-border trade. The trend curve shows that the rate of exchange rate changes is smaller, which means that the path of international transmission is slower than that of domestic.

From the perspective of RMB liquidity, RMB settlement in cross-border trade has a long-term negative correlation with RMB liquidity.

5. CONCLUSIONS

In summary, the first part of this article analyzes the current situation of RMB cross-border trade settlement in five aspects, and concludes that RMB cross-border payment accounts for the forefront of the global market share and is growing steadily; RMB cross-border trade settlement The coverage of the system is more extensive; the normalization of RMB swaps; the RMB cross-border service trade has become a new growth point

The latter part analyzes the impact of factors affecting the settlement of cross-border trade in RMB from the long-term and short-term through the construction of a VAR model. Generally speaking, the changes in the degree of inflation, changes in the relative currency value of the renminbi, and the role of renminbi liquidity in China on the scale of cross-border trade renminbi settlement are relatively consistent. At first, they were mainly negative shocks, and then volatility increased and stabilized. The scale of cross-border trade RMB settlement import and export trade has long-term positive correlation.

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