

The impact of RMB exchange rate fluctuations on the banking industry

Xiaodan Zhang *

School of Economics and Management, Nanjing University of Science and Technology, Nanjing, China

* Corresponding Author Email: Zhangxiaodan0324@163.com

Abstract. With the deepening of globalization and the steady advancement of the internationalization of the RMB, the participation and importance of the RMB in global transactions have gradually increased. As banks are an important part of the global RMB transactions, the impact of exchange rate fluctuations on the banking industry is objective. And in the context of undercurrents of international capital and frequent domestic financial risks, the impact of exchange rate fluctuations on the banking industry has become increasingly prominent. Therefore, this paper conducts a relatively comprehensive study on the fluctuations in the RMB exchange rate and its impact on the banking industry.

Keywords: RMB exchange rate, RMB exchange rate fluctuations, banks.

1. Introduction

With the acceleration of the internationalization process, the economies of various countries are gradually becoming global and developing in coordination with other countries, and the financial industry is filled with the atmosphere of liberalization. Financial markets account for a relatively higher and higher proportion of the world's economic industries, and national economic development and financial markets are increasingly dependent on each other.

China is currently the largest developing country in the world. Driven by international investment and international trade, China has become the world's second largest economy. With the official inclusion of RMB into the Special Drawing Right (SDR) basket currency in October 2016, the steady advancement of RMB internationalization and the expansion of the use of RMB in cross-border trade and investment, more and more international market participants are using RMB for settlement and investment transactions. Its participation and importance in global transactions are also gradually increasing.

In the context of the global spread of COVID-19, with the increasingly complex international financial situation and the accelerated internationalization of the RMB, RMB exchange rate fluctuation has become a normal economic situation, which has affected the development of China's economy. According to data from the State Administration of Foreign Exchange, China's foreign exchange reserves reached \$3,238 billion at the end of December 2023, up 2.1% from the end of November, and the frequency of using foreign currencies is also increasing. As banks are an important part of the global RMB transactions, the impact of exchange rate fluctuations on the banking industry is objective. In the fierce international trade competition, in order to ensure the security of foreign exchange funds, this paper focuses on studying the causes of RMB exchange rate fluctuations after the "811 Reform", exploring the impact on the banking industry, and proposing suggestions.

2. Fluctuations in RMB exchange rate

Before 2005, China implemented a fixed exchange rate system and the RMB exchange rate remained stable. On July 21, 2005, China moved into a managed floating exchange rate regime based on market demand and supply with reference to a basket of currencies.

On August 11, 2015, the central bank adjusted and improved the central parity quotation mechanism for the RMB against the US dollar. When making quotations, it will comprehensively

consider the supply and demand situation of foreign exchange and changes in the exchange rates of major international currencies. Since then, the RMB exchange rate has ended unilateral appreciation and entered a stage of two-way exchange rate fluctuations. In the more than eight years since August 11, 2015, the trend of the central parity rate of the RMB against the US dollar can be roughly summarized into five stages characterized by "three depreciations and two appreciations". The trend of the central parity rate of the RMB against the US dollar is shown in Figure 1.



Figure 1. the trend of the central parity of RMB against USD

Source: Official website of the PBoC.

This paper focuses on the fluctuations in the RMB exchange rate after the "811 reform". From August 10, 2015 to January 4, 2017, the first depreciation of the central parity rate of the RMB against the US dollar occurred. During this stage, the central parity rate of the RMB against the US dollar depreciated from 6.1162 to 6.9526, with a depreciation rate as high as 13.7 %. From January 4, 2017 to April 19, 2018, the first appreciation of the central parity rate of the RMB against the US dollar occurred. During this stage, the central parity rate of the RMB against the US dollar appreciated from 6.9526 to 6.2832, with an appreciation range of 9.6 %. From April 19, 2018 to June 1, 2020, the second depreciation of the central parity rate of the RMB against the US dollar occurred. During this stage, the central parity rate of the RMB against the US dollar depreciated from 6.2832 to 7.1315, with a depreciation rate as high as 13.5 %. From June 1, 2020 to March 1, 2022, the second appreciation of the central parity rate of the RMB against the US dollar occurred. During this stage, the central parity rate of the RMB against the US dollar appreciated from 7.1315 to 6.3014, with an appreciation range of up to 11.6 %. From March 1, 2022 to August 11, 2023, the third depreciation of the central parity rate of the RMB against the US dollar occurred. During this stage, the central parity rate of the RMB against the US dollar depreciated from 6.3014 to 7.1587, with a depreciation rate as high as 13.6 %.

3. Causes of RMB exchange rate fluctuations since "811 reform"

3.1. The first devaluation

From August 10, 2015 to January 4, 2017, the first devaluation occurred. There were two reasons for this. The first was the expectation of continued devaluation, and the second was the loss of foreign exchange reserves.

Firstly, since the PBoC intervened in the foreign exchange market to keep the RMB exchange rate stable against the U.S. dollar, the market may believe that the monetary authorities do not have the confidence to maintain a stable RMB exchange rate against the U.S. dollar, leading to expectations

of RMB depreciation. Therefore, investors would rush to reduce their holdings of RMB and buy U.S. dollars, accelerating the depreciation of the RMB.

Secondly, the PBoC maintained the value of its currency by purchasing foreign exchange to maintain exchange rate stability, but this resulted in a loss of foreign exchange reserves. As a result, a balance of payments deficit occurred, that is, the country's foreign exchange income was less than its foreign exchange expenditure, leading to the devaluation of the RMB.

3.2. The first appreciation

From January 4, 2017 to April 19, 2018, the first appreciation occurred. There were three reasons for this. The first was a softening dollar against a basket of currencies, the second was the improvement of domestic economic situation, the third was the stability of foreign exchange market.

Firstly, in this period, the U.S. dollar index continued to decline. Since the Chinese Yuan is pegged to the U.S. dollar, a fall in the U.S. dollar means a relative appreciation of the Chinese yuan. In addition, some policies of the Trump administration were not beneficial to the strengthening of the U.S. dollar and have also affected the US dollar exchange rate.

Secondly, China's economic growth showed a relatively stable trend in 2017, with the growth rate reaching a record high of 6.9%. At the same time, the trade surplus expanded and the international balance of payments improved, which provided support for the RMB exchange rate.

Thirdly, since the end of 2016, the People's Bank of China has taken a series of measures to stabilize the foreign exchange market, including strengthening supervision, restricting capital flows, and strengthening the crackdown on illegal foreign exchange transactions. These measures help stabilize foreign exchange market confidence and meet market demand, thereby allowing the RMB exchange rate to appreciate.

3.3. The second devaluation

From April 19, 2018 to June 1, 2020, the second devaluation occurred, mainly due to the Sino-US trade conflict. The timetable for China and the United States to impose retaliatory tariffs on each other is shown in Table 1.

On April 3, 2018, the United States officially announced the imposition of punitive tariffs of up to US\$60 billion on a variety of Chinese goods, and the Sino-US trade friction officially began. The U.S. government announced and imposed additional tariffs on China, and China implemented countermeasures. Sino-U.S. trade friction has gradually escalated, the risk of a trade war has further intensified, and the market's uncertainty about the global economic outlook has increased. Investors were worried that trade friction will further intensify tensions between China and the United States, thus raising expectations for a depreciation of the yuan.

Table 1. The timetable for China and the United States to impose retaliatory tariffs

Date	Country	Behavior
Apr.3, 2018	U.S.	The Trump Administration officially announced 25% tariffs on 1,333 Chinese products worth \$50 billion.
Apr.4, 2018	China	China announced 25% retaliatory tariffs on 106 U.S. products worth \$50 billion.
Jun.15, 2018	U.S.	The United States released a revised list of 1,102 Chinese products (worth \$50 billion) to be charged a 25% tariff, which would be implemented in two stages.
Jun.16, 2018	China	China responded by issuing an updated \$50 billion retaliation list with 25% tariffs on 659 U.S. products in two stages.
Jun.18, 2018	U.S.	In response to China's retaliatory tariffs announced on June 16, 2018, President Trump directed the U.S. Trade Representative to identify an additional \$200 billion worth of Chinese goods for additional tariffs.
Jul.10, 2018	U.S.	The U.S. list of \$200 billion worth of imports from China was disclosed, with the clarification that a new 10% tariff rate would be imposed after public hearings.
Aug.1, 2018	U.S.	President Trump directed the U.S. Trade Representative to consider a 25% tariff rate rather than the 10% rate on the list of \$200 billion worth of imports released on July 10, 2018.
Aug.3, 2018	China	China announced its proposed supplemental tariffs of 5% to 25% on U.S. imports, covering \$60 billion worth of products in retaliation to the August 1, 2018, U.S. tariff announcement.
Aug.7, 2018	U.S.	The Trump Administration released the updated list for the second stage of its tariffs on \$50 billion worth of goods that had been announced on June 15, 2018. The remaining portion, \$16 billion worth of imports affecting 279 products from China, was subjected to a 25% tariff rate effective on August 23, 2018.
Aug.8, 2018	China	China released the updated list for the second stage of its tariffs on \$50 billion worth of imports from the United States. Sixteen billion dollars of imports, affecting 333 products from the United States, were subjected to 25% Chinese tariffs effective on August 23, 2018.
Sep.17, 2018	U.S.	President Trump finalized the list of 5,745 products accounting for \$200 billion worth of imports from China subject to a 10% tariff.
Sep.18, 2018	China	China announced its list of products accounting for \$60 billion of U.S. products to be charged tariff rates ranging from 5% to 10%.
May.10, 2019	U.S.	The Stage 3 tariffs imposed by the United States on \$200 billion worth of Chinese goods increased from 10% to 25%.
Jun.1, 2019	China	The Stage 3 tariff increase went into effect in China on \$60 billion worth of U.S. products.
Aug.13, 2019	U.S.	The United States announced its imposition of a new 10% tariff initially applied to \$112 billion of Chinese products starting September 1, 2019, and subsequently applied to \$160 billion worth of Chinese goods on December 15, 2019.
Aug.24, 2019	China	China responded with 5% and 10% retaliatory tariffs on \$75 billion worth of U.S. products, effective September 1, 2019, and December 15, 2019, respectively.

Source: After sorting out The State Council, The People's Republic of China; CRS, 2020.

3.4. The second appreciation

From June 1, 2020 to March 1, 2022, the second appreciation occurred. There were four reasons for this. The first was the large inflow of foreign capital, the second was the expansion of trade surplus, the third was a softening dollar, the fourth was the increase of the internationalization of the RMB.

Firstly, a large amount of foreign capital poured into China to purchase RMB assets during the epidemic, which led to a sharp increase in demand for RMB in the foreign exchange market, thus causing the RMB exchange rate to rise. According to data from the State Administration of Foreign Exchange, foreign investments of all types in China totaled US\$520.6 billion in 2020, an increase of 81% compared with 2019.

Secondly, China has maintained a foreign trade surplus for a long time, which has been particularly prominent during the global economic downturn during the epidemic. During the epidemic, manufacturing companies in various countries around the world were affected to a certain extent, and output was difficult to meet the needs of residents in various countries. In the global context of supply exceeding demand, as China took the lead in resuming work and production and has a relatively complete industrial chain, more and more international orders were transferred to China, resulting in a significant increase in my country's exports, relatively insufficient imports, and a corresponding expansion of the trade surplus.

Thirdly, In March 2020, Federal Reserve cut rates to zero and launches massive \$700 billion quantitative easing program, which resulted in a sharp decline in the dollar exchange rate. As a result, the Chinese RMB exchange rate has appreciated relative to the U.S. dollar.

Fourthly, with the continuous improvement of the internationalization of the RMB, the scope of use and demand for the RMB has gradually expanded. As a result, this promoted the appreciation of the RMB exchange rate.

3.5. The third devaluation

From March 1, 2022 to August 11, 2023, the third devaluation occurred. During this period, the rapid depreciation of the renminbi can be attributed to three factors. Firstly, lockdowns in China since March 2022 which have led to a significant drop in exports. Secondly, a rise of the U.S. dollar index under Fed interest rate hiked. Thirdly, an increase in demand for the U.S. dollar as a safe-haven asset due to uncertainties over the Russia-Ukraine war.

Firstly, up until March 2022, China's year-on-year exports growth rate was higher than anticipated: exports totaled USD \$276.1 billion, a year-on-year increase of 14.7%, China's trade surplus was USD \$47.4 billion and foreign exchange settlement, and bank sales was USD \$30.6 billion. However, this reversed in April after lockdowns caused negative growth rates. Demand for cross-border renminbi settlement has also been hit by the reduction in exports.

Secondly, since April 2022, the Fed was facing its most severe inflation crisis in 40 years, and was implementing its most aggressive monetary tightening policy since the 1980's Paul Volcker era. Since April, under its interest hike cycle, the U.S.-China interest rate gap has narrowed to close to zero, putting further pressure on renminbi depreciation.

Thirdly, the war between Russia and Ukraine would bring great uncertainty to the entire region, which may lead to the expansion of conflicts, diplomatic tensions, and economic sanctions. This uncertainty would affect market expectations and increase investors' concerns about risks, leading them to seek safe-haven assets. In global financial markets, the U.S. dollar is often regarded as one of the most important safe-haven assets. When geopolitical tensions escalated, investors tended to move funds to relatively stable and safe U.S. dollar assets to avoid risks. Therefore, increased uncertainty about the Russia-Ukraine war will increase the safe-haven demand for the U.S. dollar. In this period, as investor demand for U.S. dollars increased, the U.S. dollar exchange rate tended to rise. The purchase of U.S. dollar assets by investors would push the U.S. dollar exchange rate to strengthen. This was also because the market had less confidence in other currencies and was more inclined to hold the U.S. dollar as a safe-haven.

4. Impacts of RMB exchange rate fluctuations on the banking industry since "811 reform"

4.1. Bank balance sheets

Changes in the RMB exchange rate will affect the bank's foreign currency capital, foreign exchange liabilities and foreign exchange assets. Among them, in the event of a sharp appreciation of the RMB or a sharp depreciation of the US dollar, the bank's foreign currency capital will be severely reduced, increasing the bank's exchange rate risk. The increase in exchange rate risk will

also lead to an increase in the bank's total risk assets, which may lead to a decrease in the bank's capital adequacy ratio and expose the bank to higher risks. In addition, exchange rate changes will also cause significant fluctuations in foreign exchange deposits. If the RMB is expected to appreciate, the scale of foreign exchange deposits will be significantly reduced, while the scale of foreign exchange loans will increase, resulting in a rising loan-to-deposit ratio and a possible disharmony between assets and liabilities. Imbalanced foreign exchange asset structure will also increase the liquidity risk of commercial banks.

4.2. Bank operations

On the one hand, exchange rate changes will affect banks' income from import and export trade financing business. When the RMB appreciates, companies borrow U.S. dollars for import trade and need to pay more RMB interest and principal; and when companies export goods to the U.S. market, due to the enhanced purchasing power of the U.S. dollar, the company can obtain more RMB income. On the other hand, fluctuations in the RMB exchange rate may affect banks' loan pricing. When the RMB exchange rate appreciates, borrowers' repayment costs may rise, which may lead to higher loan default rates. Conversely, when the RMB exchange rate depreciates, borrowers' repayment costs may fall, but this may also reduce banks' loan returns.

4.3. Bank risk management

Due to the uncertainty of exchange rate fluctuations, banks may need to adjust their foreign exchange positions and risk management strategies more frequently. Banks should continue to innovate exchange rate risk management tools and technologies, such as using foreign exchange derivatives, establishing foreign exchange risk management systems, etc. These ways are aimed to reduce exchange rate fluctuations Negative impact on banking business. However, these may increase banks' operating costs and risk management difficulties.

4.4. Customers' awareness of exchange rate risk

As exchange rate fluctuations have an increasing impact on businesses and individuals, customers' awareness of exchange rate risks has gradually increased. This requires banks to strengthen cooperation with customers and provide more comprehensive exchange rate risk management services to meet customer needs.

5. Suggestions

5.1. Country

The country should continue to implement an effective exchange rate system and maintain the long-term stability of the exchange rate market. Based on the premise of dual circulation development, our country has stepped up efforts to promote the internationalization of the RMB and used RMB to conduct transactions in the process of bilateral trade. On the one hand, it can promote the further development of the country's foreign trade, on the other hand, it can mitigate exchange rate risks, which is aimed to reduce transaction costs. In addition, promoting the internationalization of the RMB and promoting cross-border RMB settlement business will help further reduce foreign exchange reserves and reduce imbalances in the economic structure.

5.2. Regulatory Authority

Firstly, in the face of changes in the exchange rate market, regulatory authorities need to improve their own supervision and pay more attention to changes in bank risks. At the same time, they should pay more attention to the liquidity creation function and proactively coordinate the relationship between economic growth and risk prevention. The greater the risk a bank takes, the weaker its sustainable development capability. Therefore, in the process of bank development, it is necessary to

create a multi-level, wide-ranging and all-round financial supervision system, and implement targeted management control to ensure the safety and stability of various fields.

Secondly, regulatory authorities should be committed to innovating and continuously improving the corresponding legal standards, and improving the development mechanism related to capital replenishment. In the short term, the best way to achieve high-quality control of capital flows is to improve the foreign exchange management system. On the one hand, this can reduce the impact of foreign capital inflows on the real economy, and on the other hand, this can reduce various risks in the foreign exchange market. In addition, for high-risk businesses, more powerful management and control will be implemented, a dynamic risk prediction mechanism will be built, supervision of the financial field will be strengthened, and the probability of risk occurrence will be reduced.

5.3. Banks

Banks should speed up the transformation in business, continuously improve their competitiveness, and continue to make progress along with the exchange rate reform. First, banks should identify their own shortcomings and make up for them, gradually increase the share of low-risk businesses such as wealth management and consulting, and expand profit channels. In addition, it is necessary to improve the internal risk prevention mechanism to resist the negative effects of exchange rate changes on banks. The second is to enhance its own advantages in supply-side reform, improve the credit business mechanism, appropriately reduce high-risk loans, expand green credit business, and provide a strong guarantee for the bank's business transformation.

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