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RMB Internationalization on The Performance of Chinese Listed Companies Vis-A-Vis Forex: A Proposed Financial Model

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Abstract: This dissertation delves into the relationship between bank RMB internationalization and foreign exchange (forex) performance of China-listed companies, and consequently a financial model is constructed. This research is therefore concerned with the increasing global adoption of the Chinese currency, and the analysis of the link between the RMB Internationalization Index (RII) and some of the key forex performance metrics, such as the Foreign Exchange Exposure Ratio (FEER), Net Exposure (NE), and Realized Foreign Exchange Loss/Gain (RFELG). The gathered evidence yields to a firm proposition of a positive correlation between the internationalization of China's RMB and the forex performance of Chinese listed companies. More explicitly, RII (RMB Internationalization Indices) is negatively related to Net Exposure and Realized Foreign Exchange Loss/Gain, which means that if companies adopt more RMB, they are less and less exposed to foreign currency risks. The findings reveal that the transition towards RMB-denominated transactions not only facilitates the stabilization of cash flows but also acts as a means of reducing the dependence on other currencies, especially the USD. On the other hand, one of the important findings is a U-shaped relationship between RMB internationalization and Foreign Exchange Exposure Ratio. Initially, companies might suffer increased exposure due to market uncertainty, but as the RMB develops into a more globally accepted currency, forex exposure will be less, consequently, firms will be more stable in the long-term. The financial model thus developed integrates those empirical findings and gives some practical recommendations for mitigating foreign exchange risks. Through the recommendations, it is made clear that dynamic hedging strategies must be adopted at each stage of RMB internationalization. In the early stages of RMB, companies with high exposure to exchange rate fluctuations could utilize aggressive hedging to be on the safe side. As the RMB becomes more widely accepted, firms would be able to transfer to low-risk hedging strategies and thus, decrease foreign currency liabilities further by increasing the use of RMB in international transactions. The model also indicates that businesses lath the stages of RMB internationalization to make informed investment decisions and adjust currency management strategies accordingly.

Keywords: RMB Internationalization, Foreign Exchange Exposure Ratio, Net Exposure, Realized Foreign Exchange Loss/Gain, Currency Exposure, Financial Model, Forex Risk Management, Chinese Listed Companies.

1. Introduction

1.1. Background of the Study

Over recent decades we know that the global financial scene has seen some drastic changes whereby a number of currencies have competed to rise in the international stature. In that lineup, the RMB has been a heavy hitter. This reflects a quick and dynamic transformation of the RMB from the domestic level in early 2000s to enhance its function as a global reserve currency for now, placing it after the following four major currencies: U.S. Dollar (USD), Euro (EUR) and Japanese Yen (JPY), British Pound Sterling (GBP) on the planet, ranked sixth largest in preference rank made by Chen (2024). These developments have serious implications for Chinese companies, the majority of which are listed on both domestic and global stock exchanges. This paper tries to fill this vacuum by studying how the internationalization of RMB influences the business performance of Chinese listed companies and provide some policy suggestions for their financial development.

There are several main reasons why the RMB has been granted more internationalization. China's spectacular economic rise, targeted financial reforms and the closer integration of its economy into the global community have been major contributors. The internationalization of the RMB has been achieved in a less impressive but no less significant way, with the RMB added to the International Monetary Fund (IMF) Special Drawing Rights (SDR) basket in 2016, signifying its increasing importance in the global financial land (Cui et al. The increase is significant for the RMB given its reserve currency classification, which is an added incentive to use it in international trade and investment.

While the strategic imperatives are appreciated, RMB internationalisation has its challenges as well. On the one hand, this increases the convenience and benefits resulting from direct RMB settlement in international trade and lower global financial market financing cost that promote offshore operation of Chinese enterprises (Yang 2021). However, volatile exchange rates and the risk of undermining domestic financial systems present a real danger. This also explains why it is important to conduct in-depth research on the impact of RMB internationalization on Chinese listed companies.

A number of pertinent studies have considered wider economic consequences of RMB internationalization. As an example, Lei (2024) argues that RMB internationalization considerably help the competitiveness in financial services trade of China. This means that the model has predicted a positive effect from RMB, due to their use in international transactions which supported Chinas trade balance and enhanced its financial stability as found by Lei in his research using Vector Autoregression (VAR) model. Likewise, He, Liang and Liu (2024) also detect the exchange rate exposure for Chinese firms which are listed in China and prove that RMB internationalization has a direct impact on them as well as indirect impact.

The effect of RMB internationalization on enterprise performance is a complex issue from a microeconomic perspective. RMB internationalization can also provide an additional source of financing for enterprises at home and abroad, as well cost reduction (Zhang 2019). Nonetheless, it increased the risks associated with exchange rates –thus has forced companies like these to draw up firmly risk management strategies to avoid long-term negative results. The combined effect of these two sides makes it necessary to explore how the internationalization of RMB affects various aspects of corporate performance in a more specific way.

The significance of the internationalization of the RMB in practice Lower Transaction Costs and Reduced Dollar Dependency: Studies by Chen, Gummi and Wang (2024) on the energy security that China requires for its Petroleum about RMB internationalization Might do away with the indirect costs related to types of trading in a multiple. This is something that has been observed by Johnson (2019), who also points out the challenges faced in accessibility, as RMB-denominated instruments become increasingly more widely available compared to other major currencies like the US Dollar.

RMB internationalization driven by enterprise demand RMB internationalization brings enterprises numerous opportunities, and in order to seize the benefit of RMB internationalization, they need to go through the global economic environment, management process with strategic standpoints and operational optimization (Zhu, 2023.). Taking into account the implications to your core financial and operational metrics e.g. Foreign Exchange Exposure Ratio, Net Exposure, Realised Foreign Exchange Loss/Gain etc., this itself requires a nuanced understanding of how RMB internationalisation would affect you.

Existing literature offers theoretical frameworks that help to understand the effects of RMB internationalization. As Brown (2020) notes, RMB use in international trade and investment increasingly impacts on capital flows, FX markets and the global monetary system. It is necessary to take this attitude into consideration when examining the effects of RMB internationalization on profitability and growth of Chinese listed companies.

This complex relationship between RMB internationalization and enterprise performance has been corroborated by empirical research. For example, Xie (2023) studied the effect of RMB internationalization on Chinese imports trade and found that it could help to improve the competitiveness in world markets for enterprises in China. In the same vein, Deng (2023) analyzed the impact of RMB exchange rate on China air conditioning industry, and proposed that RMB internationalization can favor market stability in one hand, reduce coexistence losses as a result of to exchange rate fluctuation for enterprises on other hand.

In spite of a rich literature on RMB internationalization, there is a missing link: its host (Chinese listed company) level effects. But the finer points of how individual companies are engaging with these issues at the ground level often gets lost in macroeconomic studies. This study will help us to find out High and Low performers on the new setting in Chinese listed companies first; second, they can be filling this gap by focusing especially for performance metrics of Chinese listed companies such as Foreign Exchange Exposure Ratio, Net Exposure, Realized Foreign Exchange Loss/Gain. This research will offer a comprehensive picture of what the internationalization of the RMB means for individual enterprises, by unpacking these metrics.

In summary, the internationalization of RMB is expected to bring good things and difficulties for Chinese listed companies. This allows for direct settlement in RMB, falling financing costs and increases the competitiveness in the global financial market. But it comes with exchange rate risks and warrants sturdy risk management. This study is the first to provide a systematic examination of the impacts that RMB internationalization has on Chinese listed companies by utilizing their stock returns as a measure of firm performance, and thus have strong theoretical implications and broad policy recommendations to assist in developing these firms' global presence with enhanced financial stability. This paper will provide insights into the mechanisms and practices of RMB internationalisation experienced by Chinese enterprises in a dynamic global economy, contributing to an expanded understanding of RMB internationalisation in a sustainable manner as evidenced through financial indicators and associated data.

1.2. Research Literature

The internationalization of the RMB and its effect on the foreign exchange performance of Chinese listed companies have been commonly examined. This synthesis takes a look at existing literature on currency exposure, the Foreign Exchange Exposure Ratio (FEER), net exposure, realized fx loss/gain, and the RMB Internationalization Index (RII), recognizing study gaps and recommending how the here and now study will resolve these gaps.

The RII measures the degree and effect of the RMB's worldwide use. Xun, Chen, and Cao (2019) make use of a VAR version to catch the dynamic interplay in between the RII and exchange rates. Yonghong et al. (2019) offer a composite index incorporating numerous elements of currency internationalization. Rao (2021) connects the RII to broader economic policies, emphasizing its calculated advantages for China's economic and financial stability. Chen (2021) empirically applies the RII to assess its impacts on China's external international straight investment (OFDI), showing its useful significance in international financial investment decisions. Lei (2024) and He, Liang, and Liu (2024) check out the sector-specific effects and firm-level exchange rate exposure, respectively, highlighting how higher RII levels can mitigate money threats for Chinese companies.

Currency exposure is specified as the sensitivity of a company's financial performance to exchange rate fluctuations. Pobrić (2019) offers an extensive understanding of the elements affecting currency exposure, developing a framework for determining and examining these determinants. Building on this, Pradita and Geraldina (2019) focus on the banking sector, highlighting just how exchange rate fluctuations can influence financial institutions' profitability and stability. Similarly, Adhithya and Kalra (2019) determine the foreign money danger exposure of leading Indian firms, highlighting positive steps to reduce currency threat. Hossain and Gulay (2020) check out using foreign currency derivatives to enhance solid worth, suggesting that reliable use currency derivatives can handle exchange rate volatility.

Downes, Mathis, and Kutcher (2020) check out the interplay in between currency exposure, repatriation, and the marketplace value of repatriation tax obligations, offering understandings for policymakers and corporate executives on wider financial implications.

The FEER gauges a company's financial performance sensitivity to exchange rate changes, which is essential for firms with considerable foreign currency transactions. Bartram (2019) emphasizes handling foreign exchange exposure to support earnings and protect business value. Avdjiev et al. (2019) link exchange rate motions to company financial investment decisions, while Adler, Lisack, and Mano (2019) highlight the value of alleviating fx exposure for financial stability, especially in emerging markets. Kazdal and Yılmaz (2021) present methods for quantifying FEER, demonstrating its energy in predicting economic stress and anxiety and leading policy interventions. Liao and Zhang (2021) investigate hedging methods to handle forex direct exposure, highlighting the strategic use of by-products to decrease FEER.

Net exposure represents a business's sensitivity to exchange rate fluctuations. Tang (2019) quantifies the impact of currency exposure on stock returns in the Chinese auto market. Zhang et al. (2020) web link net exposure to financial stability with incomes openness. He, Liu, and Zhang (2021) provide a multifactor strategy to recognizing net exposure's determinants. Habib, Jiang, and Zhou (2021) discover the connection in between related-party deals and supply price crash danger, highlighting the interconnectedness of corporate governance practices and financial threat. Damodaran (2024) integrates net exposure into assessment versions, giving workable understandings for financial analysts and investors.

Recognized fx loss/gain (RFXLG) determines the actual gains or losses sustained due to foreign exchange rate activities. Fratzscher et al. (2019) demonstrate the effectiveness of foreign exchange interventions in alleviating understood fx losses. Khan (2019) links fair value accounting techniques to RFXLG, supplying insights right into systemic risk within the banking market. Frankel and Froot (2019) integrate behavioral finance with traditional financial designs to describe RFXLG characteristics. Sjödin et al. (2020) link business model innovation to financial performance metrics like RFXLG, highlighting aligning service designs with monetary risk administration. Jia and Yang (2021) introduce deep knowing techniques for anticipating RFXLG, enhancing corporate economic preparation and efficiency examination.

The connection in between currency exposure and the analysis of RMB internationalization is crucial for comprehending how Chinese listed companies take care of exchange rate risks. Rao (2021) highlights RMB internationalization's duty in reducing currency exposure, offering Chinese firms with a competitive edge by reducing the unfavorable impacts of exchange rate fluctuations. Hou, Huang, and Zhang (2021) find that business with significant global trading tasks that make use of RMB in their transactions face much less volatility and financial uncertainty. He, Wang, and Yu (2023) check out the co-movements of exchange rates and their impacts on company forex direct exposures, finding that RMB internationalization significantly minimizes the negative impacts of money changes on Chinese companies. Lim (2023) says that integrating RMB into worldwide economic systems helps reduce Chinese firms' exposure to non-RMB currencies. Eichengreen et al. (2024) highlight that calculated use of RMB in global deals can minimize foreign exchange risks for Chinese firms. He, Liang, and Liu (2024) reveal that firms proactively engaging in RMB-denominated deals experience substantial decreases in exchange rate direct exposure.

The internationalization of the RMB has extensive effects for the efficiency of Chinese listed companies. Zhang (2023) discovers that raised use of RMB in international transactions decreases exchange rate danger and transaction costs, enhancing operational efficiency and profitability. Li, Jia, and Li (2023) analyze the broader macroeconomic implications of currency internationalization, locating that RMB internationalization assists in higher financial openness and combination right into the global financial system. Deng (2023) highlights that RMB internationalization helps reduce the negative results of exchange rate volatility, stabilizing income streams and improving financial performance. Xie (2023) concludes that the wider approval and use of RMB in global profession transactions lower currency conversion costs and minimize exposure to exchange rate risks. Qian (2023) locates that a much more open resources account, facilitated by RMB internationalization, enhances financial stability and decreases systemic risks. He, Liang, and Liu (2024) show that business with considerable global transactions benefit from reduced exchange rate direct exposure as a result of the widespread use RMB. Chen, Gummi, and Wang (2024) locate that the boosted use RMB in oil transactions improves energy security by reducing dependence on foreign currencies and mitigating exchange rate risks.

In spite of substantial literature on currency exposure, FEER, net exposure, RFXLG, and the RII, there is a space in comprehending the integrated impact of RMB internationalization on the forex performance of Chinese listed companies. Most researches concentrate on details aspects or sectors, lacking a comprehensive model that considers all these variables together. This research study intends to fill this gap by examining the combined impact of RMB internationalization on the forex efficiency of Chinese listed companies. By examining business profiles in terms of the RII, currency exposure, FEER, net exposure, and realized fx loss/gain, this research study will certainly give an alternative view of how RMB internationalization influences financial performance. Additionally, it will suggest a financial model customized to the needs of these business, supplying plan recommendations to improve their advancement from a financial perspective.

By resolving this gap, the research will certainly add to a deeper understanding of RMB internationalization's diverse influence, providing useful understandings for policymakers, corporate executives, and financial analysts. This thorough strategy will help Chinese companies better browse the intricacies of worldwide markets, advertising even more secure and sustainable economic outcomes.

2. Methods

The research design in this study is organized to comprehensively examine the effect of RMB internationalization on Chinese listed firms' performance. This research takes a quantitive descriptive approach and makes use of both descriptive and inferential statistics to analyse the data. The second stage deploys multiple designs, each of which targets an identifiable element in the research questions mentioned in the Problem Statement.

It starts with a thorough descriptive analysis of the Chinese listed firms to provide an up-close characteristic of them. Summarizing these characteristics provides a basic financial situation and operational context for the companies on which the rest of the analysis relies upon.

After the descriptive phase, this research integrates Correlation Analysis to study the relationship between RII and performance measurements (Foreign Exchange Exposure Ratio, Net Exposure, and Realized Foreign Exchange Lost/Gain) of the companies. This step identifies/investigates the strength and direction of those relationships attempting to indicate how RMB internationalization influences company performance.

Second, the study uses simple regression to probe deeper into these relationships. This method assumes the influence of RMB internationalization on performance metric from the angle of independent variables (RII) and dependent variable (Foreign Exchange Exposure Ratio, Net Exposure, Realized Foreign Exchange Lost/Gain). The regression analysis not only forecasts the impact of RMB internationalization on company performance, but also scrapes beneath the surface to understand what portion of these economic factors contribute to financial-end results among companies.

In addition, the study applies panel data analysis to capture individual specific as well time trends. The study would analyze the performance of firms over time as well, controlling for longitudinal nature with fixed effects and random effects models. In addition, this method is especially useful for capturing the heterogeneity of the RMB internationalisation effect on firm performance than a simple cross-sectional data analysis due to sample selection bias.

Appropriate interpretation can follow with the help of hypothesis testing, which is an important part of research design. By using different t-tests and F-tests, the study tests (in a statistical way) the hypotheses that can be derived from above-mentioned research questions with proving relationships identified in those regression models.

The financial model is developed by using Structural Equation Modeling (SEM) Aplication. The benefits of SEM are its capacity for the overall estimation process, and this mechanism can address countless performance-related issues when examining RMB internationalization. Components of these arguments are supported with a multilevel analysis that deepens the study allowing the proposed model to be both solid from a statistical and theoretical point of view.

The finding is further strengthened by various robustness checks. Checks are then carried out with methods such as sensitivity analysis, outlier detection and multicollinearity verification to ensure that results are consistent and reliable in order to enhance the overall credibility of the study.

Examples of existing work (with proper references) from various sources, describing the current state or background information about the topic. (“China A-share and RMB effects on tourism opening-up days in Japan”, “RMB internationalization and Chinese listed company performance” research designs)” The study seeks to enrich the financial economics literature — particularly in the context of China's rapidly changing financial landscape — using a multi-method analytical method.

3. Results & Discussions

3.1. Evaluating the Effect of RMB Internationalization on Forex Performance Indicators

Table 1: Baseline Regression Results of the Effectiveness of RMB Internationalization on the Three Forex Performance Metrics. Furthermore, each equation is associated with the dependent variable of interest as per below:

Table 1. Full Sample Regression Results

	(1)	(2)	(3)
VARIABLES	Realized Foreign Exchange Lost/Gain	Foreign Exchange Exposure Ratio	Net Exposure
RII^2	0.0688	-0.0199**	0.037
	(0.044)	(0.0092)	(0.08)
RII	-0.0819***	0.0897**	-0.0439***
	(0.0019)	(0.0380)	(0.0048)
Currency Exposure	0.00765***	-0.199***	0.0078
	(0.0025)	(0.0662)	(0.0062)
Constant	-0.376***	8.96***	-0.6004***
	(0.0692)	(1.567)	(0.1266)
R	0.631	0.510	0.615
R-squared	0.398	0.260	0.379

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The inclusion of the squared term of the RII or RII^2 in the regression model was due to the requirement to capture any potential nonlinear relationships between RMB internationalization and Forex performance indicators. Non-linear transformations, for example, squares, can enable the presentation of diminishing or accelerating effects in the financial model, which is basically the argument of Bartram (2019). In this context, RII^2 enables the testing of whether the effect of RMB internationalization becomes stronger or weaker as the RMB is more integrated into world markets. These types of non-linear connections have also been brought forth in currency risk exposure studies by He, Liu, and Zhang (2021), who contended that the variations in the effects of such mechanisms on the performance of the corporates' interfaces with, at, and beyond the currency's integration peak are most crucial. The model has not only the complexity of RII^2 but also the contribution of these stages, which will allow it to be more robust and thus provide more details about the influence of RMB internationalization in financial prosperity.

Realized Foreign Exchange Loss/Gain. Results indicated the negative correlation of RMB internationalization and realized foreign exchange losses/gains. With the increasing internationalization of the RMB, an increasing number companies settle their international transactions in RMB, and therefore there is less need for currency conversions. This, in turn, inhibits realized forex losses (or gains) The negative coefficient for the RII indicates that firms face less exchange rate risk due to RMB internationalization, which is consistent with this risk-mitigation perspective. The negative connection between RMB internationalization and the gain/loss of the foreign exchange has been presented by He, Liang, and Liu (2024), which found similar results. The adoption of foreign exchange due to RMB internationalization is the one channel through which this effect occurs. It could proceed because, as a result of the growing use of RMB by companies in international transactions, they are less vulnerable to the volatility of currency fluctuations, thus less forex gains or losses. In this context, Eichengreen and his colleagues (2024) maintain that the fact that RMB is more widely accepted makes exchange rate risk smaller since RMB-based transactions are conducted in global trade and finance.

Net Exposure. Just as the realized foreign exchange loss/gain, the regression results indicate that there is an adverse relationship between RMB internationalization and net exposure. This is because when RMB internationalizes, the net exposure (the difference between a company's foreign currency-denominated assets and liabilities) declines. This suggests that as businesses transact more in RMB, they would hold fewer foreign currencies — and therefore less FX risk. As RII is negative, it indicates that the net exposure of Chinese trade firms to exchange rate affect is reduced due to having shorted proxy for RMB internationalization. The reduction in net exposure with increased RMB internationalization corroborates findings by Liao and Zhang (2021), who argued that companies transacting in a globally recognized home currency would naturally lower their net exposure to foreign currencies. As firms progressively adopt RMB for both asset and liability management, the need to hold foreign currency-denominated assets or liabilities decreases, thus reducing net exposure. This reduction aligns with the stabilization goals observed in other research contexts, such as those highlighted by Qian (2023) regarding systemic financial risk management through RMB internationalization.

Foreign Exchange Exposure Ratio. The relationship between RMB internationalization and foreign exchange exposure ratio. In the short term, because whether foreign exchange exposure may increase or decrease in the early stages of RMB internationalization is subject to market uncertainties and it will take time for RMB to be gradually adopted in global transactions, the linear term hence is positive while the quadratic term is negative. However, greater RMB adoption and international market stability decreases the exchange rate risk exposure ratio. The inverted U-shaped relationship indicates that the foreign exchange risks of enterprises will increase gradually with the trend from RMB to internationalization in the early stage and then decrease when the RMB has completed its international currency status. The discovery of the inverted U-shaped relationship between RMB internationalization and the foreign exchange exposure ratio echoes the results of scientific research by Adler, Lisack, and Mano (2019), who analyzed the dynamics of currency internationalization and stated that in the initial stages, exposure to the risks of the program might arise because of the market's increased volatility and the uncertainties. Yet, due to the RMB gaining weight in the world markets, the exposure is declining step by step, thereby promoting forex programs that use the strengthened RMB to the Chinese corporate sector. This relationship shows that companies need to change their risk management strategies. This notion has been additionally studied by Tang (2019) in the area of currency exposure's impact on stock returns for Chinese firms.

Implications for Policy and Practice. The results of this analysis have important implications for policy makers and practitioners. From a policy stance, the reverse U-shaped relationship between RMB internationalization and forex risk indicates that policy makers must reduce the initial forex exposure faced by enterprises in order to lower their sensitivity to RMB exchange rate volatility when internationalizing the RMB. Those measures could involve the creation of sufficient RMB liquidity in global markets and hedging tools to handle currency risks during the transition period. The intermediate role of RMB internationalization with certain traditional primary forex management performance indicators such as realized foreign exchange loss/gain and net exposure, indicates the necessity for practitioners to include RMB in their global trade strategy. By using RMB in cross-border transaction actively, companies can reduce their exposure to foreign exchange risks and therefore stabilise their financial performance against currency fluctuations

These results illustrate the huge impact of RMB internationalization on forex performance of Chinese listed companies. The effect seems to work through different channels for different performance metrics: loss/gain and net exposure of realized foreign exchange are negatively related to RMB internationalization, while the foreign exchange exposure ratio is affiliated with an inverted U-shaped path. You can see that this is a complex and dynamic process, and has significant implications for corporate forex strategies. As the RMB increasingly finds its place in global financial markets, smooth navigation of a transition phase — at both the level of policy and individual companies — is key to unlock the potential benefits of a more internationalized Chinese currency.

3.2. Developing a Financial Model for Chinese Listed Companies Based on RMB Internationalization

Developing the Financial Model for Selected Chinese Listed Companies based on comprehensive analysis performed in Section 3.1: Evaluating the Effect of RMB Internationalization on Forex Performance Indicators. The regression results in this section yield the underlying empirical evidence on which the construction of our model is based. The financial model is designed to capture the complex interplay we have identified between RMB internationalization, currency exposure and our key forex performance indicators including Foreign Exchange Exposure Ratio, Net Exposure and Realized Foreign Exchange Loss/Gain.

3.2.1. Modeling Procedures

The hypothesized model will incorporate RMB Internationalization (RII) and its squared term (RII^2) as predictors for forex performance indicators, mediated by Currency Exposure. Forex performance metrics (e.g., Foreign Exchange Exposure Ratio, Net Exposure, Realized Foreign Exchange Loss/Gain) will serve as endogenous variables, capturing the direct and indirect effects of RMB internationalization. To ensure that the model is properly identified, all relationships will be theoretically justified based on prior literature and empirical findings from regression analyses conducted in Section 3.1. Model identification tests will verify that there are enough observations relative to the number of parameters, ensuring statistical stability and robustness.

Table 2. Path Analysis

Path	Regression Coefficient	S.E.	C.R.	P
RII -> Realized Foreign Exchange Loss/Gain	-0.0819	0.0019	- 43.11	***
RII -> Foreign Exchange Exposure Ratio	0.0897	0.038	2.36	**
RII -> Net Exposure	-0.0439	0.0048	-9.15	***
Currency Exposure -> Realized Foreign Exchange Loss/Gain	0.00765	0.0025	3.06	***
Currency Exposure -> Foreign Exchange Exposure Ratio	-0.199	0.0662	-3.01	**
Currency Exposure -> Net Exposure	0.0078	0.0062	1.26	
Note: ***indicates significant at the 0.1% level, **indicates significant at the 1% level, and * indicates significant at the 5% level.				

3.2.2. Explanation of the Financial Model for Chinese Listed Companies

The financial model proposed in this study is designed to capture the intricate dynamics between RMB Internationalization (RII) and the forex performance metrics of Chinese listed companies, including Currency Exposure, Foreign Exchange Exposure Ratio, Net Exposure, and Realized Foreign Exchange Loss/Gain. This section will build upon the findings discussed in the previous sections, and will provide a detailed explanation of the model's structure, its derivation, and practical applications.

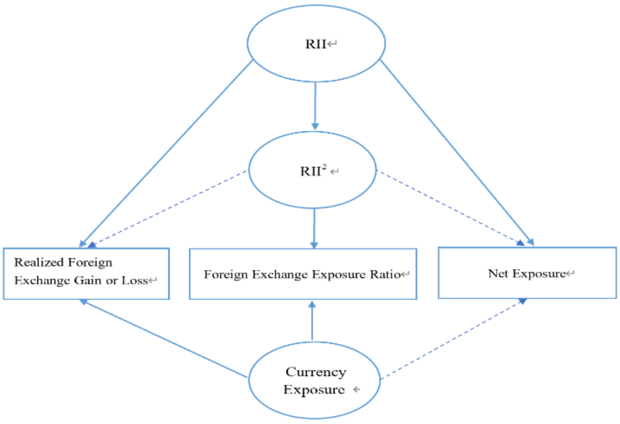

Figure 1. The Financial Model for Chinese Listed Companies

The Figure displayed above illustrates the conceptual framework of the proposed financial model. This model integrates RMB Internationalization and its squared term (RII^2) to account for both linear and non-linear relationships with key forex performance indicators. The interactions between RMB internationalization and the forex performance metrics are mediated by the companies' Currency Exposure, influencing Net Exposure, Foreign Exchange Exposure Ratio, and Realized Foreign Exchange Loss/Gain.

The full structural equation model is represented as:

$$Y = BX + C + \varepsilon$$

Where:

$$Y = \begin{pmatrix} Realized\ Foreign\ Exchange\ Loss / Gain \\ Foreign\ Exchange\ Exposure\ Ratio \\ Net\ Exposure \end{pmatrix}$$

$$B = \begin{pmatrix} 0.0688 & -0.0819 & 0.00765 \\ -0.0199 & 0.0897 & -0.199 \\ 0.037 & -0.0439 & 0.0078 \end{pmatrix}$$

$$X = \begin{pmatrix} RII^2 \\ RII \\ \text{Currency Exposure} \end{pmatrix}$$

$$\varepsilon = \begin{pmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \varepsilon_3 \end{pmatrix}$$

3.2.3. Application of the Model

The model provides several actionable insights for Chinese listed companies in managing their foreign exchange risks within the context of RMB internationalization:

Hedging Strategies. Based on the U-shaped relationship between RII and FEER, the model suggests that companies should adopt dynamic hedging strategies. In the early stages of RMB internationalization, companies may face increased forex exposure and should therefore use aggressive hedging instruments to mitigate risks. This approach aligns with the findings of Adler, Lisack, and Mano (2019), who argue that effective foreign exchange intervention can provide a buffer against exchange rate volatility, particularly in emerging markets where currency fluctuations can be more pronounced. As RMB internationalization progresses, the need for aggressive hedging decreases, and companies can switch to more conservative strategies. According to Bartram (2019), corporate hedging strategies often shift toward conservatism as firms develop a more stable currency exposure profile, which reduces the need for intensive intervention.

Currency Management. The model highlights the importance of reducing reliance on foreign currency transactions by increasing the use of RMB in international operations. Companies with high Net Exposure and significant realized forex losses stand to benefit the most from RMB internationalization. By shifting more of their international transactions to RMB, these companies can stabilize their financial performance and reduce net exposure.

Investment Decisions. The quadratic nature of RII's influence on key forex performance metrics suggests that companies should monitor the stages of RMB internationalization closely. During early stages, when forex exposure is increasing, companies should diversify their investments to minimize the risks associated with exchange rate fluctuations. As RMB usage becomes more widespread, companies can focus on optimizing RMB-denominated transactions to improve profitability and reduce volatility.

Policy Implications. For policymakers, the model underscores the importance of promoting RMB internationalization as a means of stabilizing Chinese companies' financial performance. By encouraging the use of RMB in international trade and finance, the government can help companies reduce their exposure to volatile foreign currencies, thereby contributing to more consistent financial outcomes across industries.

4. Conclusions

4.1. Conclusions

This part will discuss the actual empirical findings of the current study and yield detailed conclusions about RMB internationalization influence on Forex performance of Chinese listed companies. These findings are discussed in the context of their implications for corporate financial management and policy with special emphasis on the influence exercised by firm ownership structure and performance metric selection.

4.1.1. Impact of RMB Internationalization on Realized Foreign Exchange Loss/Gain and Net Exposure

The results of this study led to the conclusion that RMB internationalization under all dimensions is negatively correlated with both Realized Foreign Exchange Loss/Gain and Net Exposure. This means that as RMB internationalization advances, Chinese listed enterprises will suffer less exchange losses and have lower net foreign exchange positions. The most important conclusions that can be drawn from this relationship are:

Reduction in Foreign Exchange Losses. Companies can also settle more trades in their home currency as RMB is used for a broader range of international transactions. It eliminates the necessity for currency conversion to a greater extent and in this way, reduces risks of exchange rate fluctuation. For that reason, companies have lower Realized Foreign Exchange Loss/Gain, which represent the real profit or loss from foreign exchange. This indicates that RMB internationalization can be an effective means of reducing the risk to which companies are exposed in foreign exchange markets.

Decline in Net Exposure. The RMB internationalization is in the negative relationship with Net Exposure. Net Exposure measures the difference between a firm's foreign currency assets and liabilities as internationalization of the RMB has progressed, Chinese companies are also holding few foreign currencies for cross-border transactions. As a result, it lowers their common net currency exposure and the dangers to foreign currency exchange rates. While companies with reduced net exposure can practice better risk management in the FX market, they can direct their efforts towards enhancing operational efficiency.

Implications for Corporate Strategy. The inverse correlation of RMB internationalization with these two forex performance indicators suggests that companies could save a lot on the foreign payments side from having a more globally used RMB. From a strategic level, businesses will look to use the RMB more widely in international trade and financial dealings as part of their FCY risk management. Since this is particularly relevant for organizations that operate in relatively volatile currency environments, having less exposure to foreign currencies can produce a stable financial result.

4.1.2. Inverted U-Shaped Relationship Between RMB Internationalization and Foreign Exchange Exposure Ratio

With the help of the model, a much more intricate relationship between RMB internationalization and the Foreign Exchange Exposure Ratio is unfolded. The results in the regression performed imply that there is an inverse U shape as the coefficient of linear term RMB Internationalization Index (RII) is positive but the coefficient of squared term RII^2 is negative. This relationship can be divided into two phases:

Initial Increase in Foreign Exchange Exposure. In the initial phase of RMB internationalization, the exposure ratio may grow initially. One reason is the market uncertainties and limited use of RMB in international transactions. An RMB-denominated offshore contract is not a normal upward pressure on domestic producer incompetency because they tend to have limited ability to deal with non-RMB exposure, and the general belief that RMB has not yet achieved full global financial status. So, the foreign exchange exposure ratio will probably increase, since domestic corporations still have a lot of dependence on these foreign currencies.

Subsequent Decrease in Exposure as RMB Usage Expands. As the RMB internationalization advances and more countries accept it for cross-border trade settlement and financial activities, the RMB share in global reserve currency will increase accordingly. This will result in a negative impact on the Foreign Exchange Exposure Ratio. More frequent RMB transaction, then firms will lessen their FX risk by as RMB becomes more common globally. The shrinking exposure ratio in the later period of forming RMB internationalization indicates that firms are able to move out from foreign exchange and decrease their FXS.

Implications for Risk Management. Regarding Risk Management This inverted U-shaped relationship underscores the importance of timing to RMB internationalization. And these companies must also understand that, while the infancy of internationalization might be difficult to navigate when it comes to forex risk management, a difficult to manage present might pay significant dividends down the road. Policymakers should still work to support programs that foster more widespread use of the RMB in global markets, as this will allow companies to slowly dial down their forex risk

4.1.3. Heterogeneity in the Effect of RMB Internationalization on State-Owned Enterprises (SOEs) and Non-State-Owned Enterprises (Non-SOEs)

Meanwhile I look at how the internationalization of the RMB affects firms with different ownership identities. Result 1: Non-soc. vars (SOEs) are more responsive to RMB internationalization Specifically:

Greater Impact on Non-SOEs. The strong negative correlation of RMB internationalization with Realized Foreign Exchange Loss/Gain and Net Exposure is pronounced for non-SOEs relative to SOEs. Meanwhile, non-SOEs — many of which are small and medium-sized enterprises (SMEs) — generally have fewer resources and weaker risk management capacities than SOEs. Hence, they benefit the most from RMB internationalization, because it enables them to hold a smaller share of their reserves in US dollars and do more trade paid for in RMB.

Foreign Exchange Exposure Ratio Sensitivity. This response is greater for Non-SOEs and lower if compared with the direct exposure ratio after a shock to Foreign Exchange Exposure Ratio. However, for non-SOEs, this inverted U-shaped function is even more apparent which reaching turning point where their exposure ratio shinking starts earlier than SOEs. This is probably due to non-SOEs are subject to greater market volatility so more likely they can benefit from RMB internationalization in dealing with currencies risks.

Implications for Policy and Practice. The impact of RMB internationalization is different in terms of ownership structure, which suggests both heterogeneity and the need for differentiated strategies. The focus in the policy should be to promote RMB internationalisation, particularly among non-stat of enterprises (SOEs) as these businesses have the most to gain from lower forex risks. SOEs could, however, still reap the rewards of internationalisation even as they may choose to be more cautious than counterparts which are not State-owned.

The practical results of this study illustrate that the internationalization of RMB is crucial in enhancing FX performance among Chinese listed firms. This, together with the reduction of foreign exchange loss and that of net exposure as well as a lowering of the Foreign Exchange Exposure Ratio eventually evidences for the companies in global market due to RMB internationalization. Whilst the first move in RMB internationalization can be tricky for SOEs and non-SOEs alike, it is telling that both all have a stake to make clear to rise from it. Further development opportunities arise for policymakers that should continue to advance the use of RMB for international trade and RMBeleigible investments, as it would allow Chinese firms to reduce FX exposure while lowering reliance on foreign currency loans leadership is becoming increasingly confident will hold up.

In summary, the internationalization of the RMB has important opportunities for listed Chinese companies to improve their financial status. This way, businesses can mitigate against the exposure to foreign exchange risks and concentrate their efforts on expanding operations and competing more efficiently worldwide.

4.2. Recommendations

4.2.1. Promote Further RMB Internationalization

The research underscores the need for continued efforts to promote RMB internationalization. The research highlights necessity for construing efforts for promotion of architectural projects in RMB. Policymakers enacting supportive measures for the RMB in cross-border trade and finance to do that, several different types of policy are needed:

Expand Cross-Border RMB Settlement. The Chinese government has to give impetus RMB as currency at more countries by designing and enlarging cross-border swap of RMB systems. More widespread adoption can be encouraged by subsidies, tax breaks and regulatory support for companies utilising the RMB in foreign transactions. Moreover, collaboration with the international finance institutions to foster RMB-denominated products can also boost position of RMB in global markets.

Integrate RMB Internationalization with “Belt and Road” Initiatives. Policymakers ought to realise that the pursuit of RMB internationalisation, on the one hand, must reflect the specific nature of other CSR exports and increase with rational overlaps within the BRI. These measures, if integrated into a single platform, will serve to extend further the web of trade relations with countries along the BRI through more RMB-denominated trade and investments in these markets while it bolsters regional economic integration in both cases.

Gradually Open the Capital Account. Policymakers should still cautiously open capital account to promote the use of RMB. If we liberalize the capital account, the freer movement of capital would naturally result in more investments coming into China in RMB from abroad. Still, this procedure must be properly regulated in order to not become a cause of economic chaos.

4.2.2. Support Non-SOEs and SMEs in Utilizing RMB Internationalization

There has already been research which indicates that, as a result of currency volatility, non-SOEs and SMEs are disproportionately affected by unfavourable terms, and thus currently have the most to gain from internationalisation of the RMB. Policymakers should provide targeted assistance for these enterprises to fully enjoy the benefits brought by RMB internationalization:

Financial Support and Subsidies. Financial Aid and Grants Funding support for non-SOEs and SMEs (eg, RMB subsidies in processing cross-border trade settlement or preferential loan terms) would promote them to use RMB more actively. This would help them to mitigate financial risks and promote global competitiveness.

Guidance on Financial Innovation. Policymakers can play a role in this by advising both non-SOEs and SMEs on the best way to innovate financially. Some companies can manage currency risk better by increasing the use of RMB-denominated financial instruments. And said financial products and services should also include a broader role for governments in making available banking and other financial products that are tailored to the specific needs of small businesses

4.2.3. Implement Regulatory Reforms to Foster Global Competitiveness

Policymakers should also introduce reforms to Chinese regulation to encourage the internationalization of Chinese firms, which would represent one way for China to become a truly global superpower with a worldwide influence through its currency.

Simplify Regulatory Procedures for Cross-Border Transactions. Due to Regulatory Requirements. The further streamlining of the approval processes for cross-border RMB transactions will facilitate enterprises in handling international trade with greater use of RMB. Process efficiency means that it is easier for companies to conduct transactions in RMB increasing their footprint in global markets.

Ensure Consistency in Regulatory Policies. Maintaining the confidence of foreign exchange internationalization enterprises requires a uniform regulatory policy for things such as RMB internationalization. They should make sure of the clear and coherent communication of policies, regulations, and reforms so that uncertainties are reduced for businesses dealing in global markets.

Table of Contents for Chinese Listed Companies and Policymakers on RMB Internationalization in this section aims to guide Chinese listed companies to explore the opportunities and challenges brought by RMB internationalization. However, companies should focus on adopting prudent foreign exchange risk management strategies, building their global competitiveness and utilizing the RMB internationalization to increase potential for growth across borders. Policymakers should now adopt a series of supportive measures in areas such as more RMB internationalization, non-SOEs and SMEs, risk management infrastructure and regulatory reforms. Collectively, these initiatives will help drive a more resilient and competitive China in an ever-more-global financial environment.

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