

# Completion Report

Affiliation : Edith Cowan University

Name : Zhaoyong Zhang

## 1. Outcomes:

This research project aims to employ the advanced econometric techniques to empirically and systematically investigate what factors drive the foreign exchange reserve hoarding in China and Japan, and how exogenous shocks affect their behavior and the cross-market & cross-border volatility spillovers. It is among the first to systematically examine the effects of the US domestic partisan conflict on a country's foreign exchange reserve hoarding, and its findings help improve the understanding of international transmission of political and economic uncertainty and how the central banks in these economies respond to the exogenous shocks. It also provides market participants, investors, business firms and policy-makers with robust evidence-based policy recommendations and implications on the cross-market & cross-border volatility spillovers in the integrated financial markets. This study also contributes to the exiting literature on East Asian integration and the potential impacts of RMB internationalization both regionally and globally.

Despite the recent COVID-19 pandemic and research budget overrun largely due to the post-pandemic rising costs, I've eventually managed to complete this project with great success. A series of eight articles have been produced and seven have been published so far in international academic journals with high impacts.

The major findings out of this project are: (1) We find strong evidence suggesting that partisan conflict is positively associated with China's reserve level, and has a primarily dominant role in predicting the surge in China's foreign exchange reserves, while the impact of the US economic uncertainty is found negative and less persistent. The results are robust and consistent under different scenarios and robustness checks. (Jiang, Shi & Zhang, 2021); (2) The forecasting performance of estimated yields from the NS-based models during a prolonged period of liquidity trap in Japanese bond market is less satisfactory than the competitor models, but can be useful in forecasting yields over longer horizons and can work well with GARCH-type structures in modeling the conditional volatility. The findings have important implications for forecasting the Japanese bond yields in the presence of a liquidity trap. (Tsui, Wu, Zhang & Zheng, 2023); (3) We find robust evidence confirming dominant predicting power of the stock market in the price discovery process, and presence of asymmetric and persistent volatility effects in China's stock market and index futures market. Volatility spillovers are found bidirectional and news release has significant and positive association with the dynamic conditional correlation between the index spot and the index futures markets. These have important implications for effective hedging and portfolio management decision. (Zhou, Zhang & Zhang, 2021).

I have also conducted research with publications relating to this project to investigating significant issues/concerns such as banking sector systemic risk contagion, stock split rule and liquidity, trading macro-cycles of foreign exchange markets with hybrid models and impacts of BRI on green innovation and international joint ventures.

In conclusion, this project has been very productive and successful, and led to a series of important publications with impacts in international academic journals.

## 2. The Future Plan:

I'm planning to continue the current research on the East Asian financial market integration, with a particular focus on the two largest markets of China and Japan, to comprehending and advancing our understanding of the spillover effects of China's rise and RMB internationalization on the regional financial market integration, and the bilateral economic interaction between China and Japan. We look forward to the Foundation's continued support in the future.

Once again, many thanks for the financial support from the Sumitomo Foundation which has made this research project a great success.

## Publication of the Results of Research Project:

Verbal Presentation (Date, Venue, Name of Conference, Title of Presentation, Presenter, etc.)

Thesis (Name of Journal and its Date, Title and Author of Thesis, etc.)

1. X.D. Jiang, Y.L. Shi and **Z.Y. Zhang** (2021), "Does US Partisan Conflict Affect China's Foreign Exchange Reserves?", *International Review of Economics & Finance*, 75, 21–33. (**Indexed in Scopus (Elsevier), SSCI, Web of Science, Q1, ABDC -"A"**)
2. X.M. Zhou, J. Zhang and Z.Y. Zhang (2021), "How does news flow affect cross-market volatility spillovers? Evidence from China's stock index futures and spot markets", *International Review of Economics & Finance* (Elsevier), 73, 196-213. DOI: <https://doi.org/10.1016/j.iref.2021.01.003>. (**Indexed in Scopus (Elsevier), SSCI, Web of Science, Q1, ABDC -"A"**)
3. S. Tabibian, Z.Y. Zhang, and A.A. Mand (2021), "Stock Split Rule Changes and Stock Liquidity: Evidence from Bursa Malaysia". *Journal of Risk and Financial Management* 14: 406, 1-16. <https://doi.org/10.3390/jrfm14090406> (**Indexed in Scopus (Elsevier), ProQuest, Q2, ABDC**)
4. T. Choudhury, S. Scagnelli, J. Yong and Z.Y. Zhang (2021), "Non-traditional systemic risk contagion within the Chinese banking industry", *Sustainability*, 13, 7954: 1-16. <https://doi.org/10.3390/su13147954>. (**Indexed in Scopus (Elsevier), SSCI, Q1, Web of Science, SSCI**)
5. J.Z. Ling, A.K. Tsui, and Z.Y. Zhang (2021), "Trading Macro-Cycles of Foreign Exchange Markets Using Hybrid Models". *Sustainability*, 13, 9820: 1-20. <https://doi.org/10.3390/su13179820> (**Indexed in Scopus (Elsevier), SSCI, Q1, Web of Science**)
6. A.K. Tsui, J.X. Wu, Z.Y. Zhang & Z. Zheng (2023), "Forecasting the Term Structure of the Japanese Bond Yields in the Presence of a Liquidity Trap with EGARCH Process", *Journal of Forecasting*

(Wiley), 1–23. <https://doi.org/10.1002/for.2952>. **(Indexed in Scopus (Elsevier), Impact Factor: 4.6, SSCI, Q1, Web of Science, ABDC -“A”)**

7. B.W. Li, Z.J. Zhang & Z.Y. Zhang (2024), “The impact of the Belt and Road Initiative on green innovation and innovation modes: empirical evidence from Chinese listed enterprises”, *Frontiers in Environmental Science*, 11:1323888. doi: 10.3389/fenvs.2023.1323888 **(Indexed in Scopus (Elsevier), Impact Factor: 4.6, SSCI, Q1, Web of Science)**
8. K.Y. Ho, Z.Y. Zhang and L.Y. Zhou (2024), “Diversification, Partner Relatedness, and Shareholder Value of International Joint Ventures”, *Finance Research Letters* (under submission) **(Indexed in Scopus (Elsevier), SSCI, Web of Science, Q1, ABDC "A"-rank)**

Book (Publisher and Date of the Book, Title and Author of the Book, etc.)