

One Currency, Two Markets

This book is for anyone who is interested in the economic analysis of the future of the international monetary system and the USD, and the rising importance of the RMB. It points out the unsustainability of the dollar standard in the long run, that China has unique incentives to internationalize its currency, and how Hong Kong plays an important role. It explains the real reasons for China to internationalize its currency, including using external commitments to force financial sector reforms (“daobi” in Chinese). It applies economic theories accessible to laymen to establish that financial development and openness are crucial for RMB internationalization to succeed, and that greater exchange rate volatility is inevitable due to the “open-economy trilemma”. Employing the “gravity model,” the book predicts quantitatively that, by 2030, the RMB can be a distant third payment currency after the USD and the euro but surpassing the British pound sterling.

EDWIN L.-C. LAI is Professor of Economics at HKUST. He has been Senior Research Economist and Adviser at the Federal Reserve Bank of Dallas, a consultant with the World Bank, and a visiting fellow at Princeton University. He is an associate editor of *Review of International Economics* and has published numerous papers in leading economics journals.

One Currency, Two Markets

China's Attempt to Internationalize
the Renminbi

EDWIN L.-C. LAI
Hong Kong University of Science and Technology



CAMBRIDGE
UNIVERSITY PRESS

Cambridge University Press
978-1-108-49168-6 — One Currency, Two Markets
Edwin L.-C. Lai
Frontmatter
[More Information](#)

CAMBRIDGE UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom

One Liberty Plaza, 20th Floor, New York, NY 10006, USA

477 Williamstown Road, Port Melbourne, VIC 3207, Australia

314–321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre,
New Delhi – 110025, India

79 Anson Road, #06–04/06, Singapore 079906

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning, and research at the highest international levels of excellence.

www.cambridge.org

Information on this title: www.cambridge.org/9781108491686

DOI: 10.1017/9781108647236

© Edwin Lun-Cheung Lai 2021

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2021

Printed in the United Kingdom by TJ Books Limited, Padstow Cornwall

A catalogue record for this publication is available from the British Library.

Library of Congress Cataloging-in-Publication Data

Names: Lai, Edwin L.-C., author.

Title: One currency, two markets: China's attempt to internationalize the renminbi / Edwin L.-C. Lai, Hong Kong University of Science and Technology.

Description: Cambridge, United Kingdom ; New York, NY : Cambridge University Press, 2021. | Includes bibliographical references and index.

Identifiers: LCCN 2021000172 (print) | LCCN 2021000173 (ebook) | ISBN 9781108491686 (hardback) | ISBN 9781108740586 (paperback) | ISBN 9781108647236 (epub)

Subjects: LCSH: Renminbi. | Money—China. | Foreign exchange—China. | Capital market—China. | Finance—China.

Classification: LCC HG1285 .L35 2021 (print) | LCC HG1285 (ebook) | DDC 332.4/50951—dc23

LC record available at <https://lccn.loc.gov/2021000172>

LC ebook record available at <https://lccn.loc.gov/2021000173>

ISBN 978-1-108-49168-6 Hardback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

Cambridge University Press
978-1-108-49168-6 — One Currency, Two Markets
Edwin L.-C. Lai
Frontmatter
[More Information](#)

To the memory of my parents, Shuxin and Yi

Contents

List of Figures	<i>page</i> viii
List of Tables	xi
List of Boxes	xiii
Preface	xv
Acknowledgments	xxi
A Short Summary of This Book	xxiv
List of Abbreviations	xxxiv
1 Introduction	1
2 China's Aversion to a Floating Exchange Rate	22
3 Why Does China Want to Internationalize the RMB?	37
4 China's Strategy of Internationalizing the RMB	58
5 The Importance of Capital Account Liberalization	95
6 The Importance of Financial Sector Reform	138
7 The Importance of the Offshore RMB Market	194
8 The Potential of the RMB as a Payment Currency	241
9 The Prospects of RMB Internationalization	269
References	287
Further Reading	299
Index	301

Figures

0.1	A summary of the theoretical framework of this book	<i>page xxxii</i>
1.1	Historical CNY/USD exchange rate (yuan per dollar), 2013–2019	2
1.2	Monthly RMB deposits in Hong Kong in billion USD, 2004–2019 (excluding certificates of deposit)	3
1.3	Shares of currencies in the total amount of allocated foreign exchange reserves across the globe by 2019 Q2	7
1.4	Average bid–ask spread of selected currency pairs, 2013–2017	12
1.5	China’s foreign exchange reserves, 1994–2018	16
2.1	Historical CNY/USD exchange rate, 1981–2018	23
2.2	Share of processing exports in China’s total exports, 1993–2018	24
2.3	China’s current account balance, 1982–2018	25
2.4	Foreign exchange reserves (excluding gold) of selected countries, 1980–2018	30
2.5	Exchange rate volatility against the USD, 1996–2019	34
3.1	Excess return of Chinese overseas assets over its overseas liabilities, 2005–2017	45
3.2	Excess return of US overseas assets over its overseas liabilities, 2005–2017	46
4.1	Top 15 offshore RMB economies (in terms of payment) by weight as of June 2018	66
4.2	Offshore RMB deposits by region as of 2019 Q2 (excluding certificates of deposits)	68
4.3	Outstanding RMB bonds issued in Hong Kong by type of issuer as of the end of October 2015	70
4.4	RMB financing activities in Hong Kong, 2010–2016	71

4.5	Amount of RMB bonds issued in Hong Kong, 2010–2017	72
4.6	Amount of global CNH bonds issued, 2007–2018	72
4.7	Cross-border RMB trade settlement, 2012–2019 (quarterly)	75
4.8	Allocation of RQFII quotas as of end of 2106 (in billion yuan)	83
4.9	Proportion of global international debt securities outstanding denominated in RMB and USD as of mid-2019	89
4.10	Proportion of global trade of goods settled in RMB, 2012–2019	91
4.11	The RMB Globalization Index, 2013–2019	91
5.1	Chinn–Ito Index normalized to the range between 0 and 1, 1997–2017	98
5.2	Gross international investment position as a percentage of GDP (de facto measure of capital account openness), 1996–2019	102
Box 5.1A	The open-economy trilemma	118
Appendix 5.1	Monthly gross capital flow and exchange rate volatility	133
Appendix 5.2	Monthly gross capital flow and exchange rate volatility (3-month moving average)	134
Appendix 5.3	Monthly gross capital flow and exchange rate volatility (5-month moving average)	135
6.1	IMF Financial Development Index, 1996–2018	141
6.2	PBC benchmark one-year deposit and lending rates from 1998 to 2019	152
6.3	Lending rate liberalization timeline	153
6.4	One-year actual average lending rate, benchmark lending rate, loan prime rate and medium-term lending facility rate, 2010–2020	155
6.5	Actual average deposit rate and the benchmark deposit rate (1-year)	157

X LIST OF FIGURES

6.6	Total bond outstanding as percentage of GDP in 2017	174
6.7	Central government bond outstanding in different countries, 1996–2017	176
6.8	Central government bond turnover ratio, 1996–2017	177
6.9	Foreign ownership of domestic central government bonds as of the end of 2017	178
6.10	Market capitalization of the five largest stock markets by country/territory as of December 2018	182
Box 7.1A	CNY/USD exchange rate and percentage premium of CNH over CNY, 2013–2019	225
Box 7.1B	CNY SHIBOR 12-month rate vs. CNH HIBOR 12-month rate, 2013–2019	226
Box 7.1C	London three-month Eurodollar rate less US three-month money market rate, 1990–2016	227
Box 7.1D	Deviation from covered interest parity, 2013–2019	230

Tables

3.1	Roles of an international currency	<i>page</i> 38
4.1	Offshore RMB clearing banks	64
4.2	RMB deposits in Hong Kong, 2011–2018 (excluding certificates of deposit)	69
4.3	RMB trade settlement handled by Hong Kong, 2011–2018	74
4.4	Offshore RMB business in Hong Kong, 2010–2018	78
4.5	Bilateral currency swap agreements between PBC and foreign central banks as of May 2018	81
4.6	The relative importance of the USD, EUR, JPY, and RMB in the international economy, in percentage, 2016–2019 Q2	90
5.1	The simplified balance of payments accounts of a country	96
5.2	Comparison of capital account items for which transactions were restricted, 2013–2018	99
5.3	The simplified balance sheet of the central bank	116
Appendix 5.1	Testing the trilemma: the results without moving average adjustment	133
Appendix 5.2	Testing the trilemma: the results with 3-month moving average	134
Appendix 5.3	Testing the trilemma: the results with 5-month moving average	135
6.1	Variables used to calculate the financial development index	142
6.2	The distribution of assets among China's banks as of December 2017	159
6.3	Distribution of loans to different types of enterprises according to size and ownership type in 2016	163
6.4	Simplified balance sheet of a bank	165

xii LIST OF TABLES

6.5	Depository amounts in bonds in different types of bond market, 2016	173
8.1	Payment shares and GDP shares in 2016, excluding settlements of FX market transactions and intra-eurozone payments	242
Box 8.1A	Box Global FX turnover share, GDP share, and the share ratio, 1995–2019	246
Box 8.1B	Box Countries/territories and their currencies	249
Box 8.1C	Box Actual and predicted payment shares in 2016, excluding settlements of FX market transactions and intra-eurozone payments	251
8.2	Thought experiment 1	253
8.3	Thought experiment 2	255
8.4	Payment shares of countries without BRI, and estimated payment shares with BRI, in 2016	261
8.5	Currency shares of outstanding stock of international debt securities in 2020 Q1 (out of a total of USD 24.91 trillion) and rough projection of the shares in 2030 Q1 (out of an estimated total of USD 31.88 trillion) with and without BRI.	263

Boxes

1.1 How the Americans seized the opportunity in Bretton Woods	<i>page</i> 12
5.1 The theoretical basis of the open-economy trilemma	118
7.1 The economics behind the operation of the Hong Kong offshore market	221
8.1 The gravity model for explaining inter-country bilateral payments flows by currency	243
8.2 Estimation of the gravity model for inter-country bilateral RMB payments flows	258

Preface

The Chinese government is trying to internationalize the renminbi (RMB). But what are the real reasons for doing it? Will it succeed? What are the factors working in its favor? What are the impediments? What are the implications for the rest of the world?

In this book, I explain how the problem with the international monetary system since the demise of the Bretton Woods system and the recent global financial crisis prompted China to seek independence from the dollar standard. One way is to make the RMB a widely accepted currency internationally. China, however, is in an awkward position. On the one hand, it is the second largest economy and the largest trading nation in the world, and it will likely become the largest economy before long. This works in favor of the internationalization of the RMB. On the other hand, China is still an emerging economy, meaning that its financial and legal institutions are still immature compared with the more advanced system in the West. Yet, China does not want to fully integrate its financial system with the West any time soon. As currency internationalization requires the currency to be largely convertible in the capital account, this factor works against the internationalization of the RMB. Thus, China tries to internationalize its currency in its own unique way, i.e., by adopting the “one currency, two markets” approach, which entails establishing a global offshore RMB market. Through this strategy, China sets up a firewall between the onshore and offshore markets, allowing full convertibility of RMB in the offshore market but partial convertibility in the onshore market. Behind this approach are a number of policy measures. Among all the policy measures, I shall highlight financial market liberalization, capital account opening and the offshore RMB centers, especially Hong Kong. In telling my story, I shall invoke economic theories to support my arguments and

xvi PREFACE

empirical facts to support my theory. Based on my theory, I conclude that China's economic size, its commitment to sufficiently free capital mobility, the development of a deep, broad, and liquid financial market, and people's confidence on the RMB are the four key factors for the success of RMB internationalization. China has economic size, but it needs to work on the other three factors. It is not at all clear whether and when China would achieve the degree of capital mobility and financial market development sufficient to make the RMB a significant international currency on a par with, say, the euro, not to mention the USD. Moreover, it seems unlikely that a country without a contestable democracy, independent judiciary, and a truly free press to constrain the government can secure the confidence of the world in its currency. Thus, my conjecture is that, in the intermediate term, the RMB can only be a distant third payment currency (behind the USD and the euro). In the longer run, because of China's large GDP and continuing reforms and opening, and the world's central banks' demand for safe assets for foreign exchange reserves, the world may become a multi-reserve-currency system, with the USD, euro, and RMB being the three main reserve currencies. However, the road for the RMB to get there may be quite long and uncertain.

LITERATURE REVIEW

Many outstanding books directly or indirectly related to RMB internationalization have been written. For example, Eichengreen (2011) gives a historical account and interpretation of the rise and fall of the USD and conjectures concerning the future of the international monetary system (IMS). He thinks that it is more likely for the RMB to become a regional currency than a global currency as it is hard for China to give up exchange rate stability and capital controls entirely. He argues that to give up those things China has to let go of its development model, the pillars of which are financial repression and a stable exchange rate. He argues that the dominance of the USD will continue in the foreseeable future unless the United States causes

self-inflicted injuries to its own financial system, such as a dollar crash caused by the budget deficit running out of control. However, even if there is no dollar crash, the dominance of the USD will weaken with the rise of the Chinese RMB and currencies of other developing countries such as the Indian rupee. He conjectures that the future will be one with multiple international currencies, and that the USD will have to compete for business in order to maintain its dominant position.

Eichengreen and Kawai (2015) is a valuable and informative edited volume about RMB internationalization consisting of multiple articles discussing a wide range of topics concerning the internationalization of the RMB. Its strength is its broad coverage and the expertise of the authors. However, because it is written by many authors dwelling on many topics, it does not have a consistent theme.

Overholt, Ma, and Law (2016) is a well-researched, comprehensive, and informative book about RMB internationalization with a consistent theme. They project an optimistic view about the future of RMB internationalization. One distinguishing feature of the book is the emphasis of the importance of the development of the onshore bond market in China, which I think is interesting. It is worth reading for anyone who cares about RMB internationalization.

Cheung, Chow, and Qin (2017) is an insightful book about the RMB. It focuses more on the RMB exchange rate than its internationalization, though it devotes two chapters on RMB internationalization, encompassing topics as wide as the offshore market, the measures taken by the Chinese government to promote the use of RMB overseas, and the latest developments. It is quite an informative source.

Prasad (2017b) is a well-written and comprehensive book on RMB internationalization that focuses exclusively on RMB internationalization, with a lot of details about the history, the policies, and the latest developments. Prasad points out the rapid rise of the use of the RMB internationally, but he also cautions that the

xviii PREFACE

currency started from a very low base, and that China is still a developing country with a relatively immature financial system and a rather closed capital account. He emphasizes that the RMB will fail to be a safe-haven currency as long as China lacks a set of credible checks and balances to discipline its government so as to give foreigners confidence about the currency. He thus concludes that the degree of RMB internationalization will only be moderate in the foreseeable future, with the RMB comprising no more than 10 percent of total foreign reserves of the world (as of the end of June 2019, the shares for the USD and euro are 61.6 percent and 20.3 percent respectively).

Subacchi (2017) is an informative book about RMB internationalization. The author points out that although China is the second largest economy and the largest trading economy, its currency is a “dwarf currency,” and this is one of the motivations for the Chinese to internationalize the RMB. However, China is still under financial repression, and its currency is still not convertible in the capital account. So, China has to adopt an unconventional approach. Subacchi points out that the main “RMB strategy” of China is to build offshore RMB centers, especially the one in Hong Kong, in order to facilitate capital account opening and to encourage RMB trade settlement so as to allow the RMB to flow outside China and create the market thickness of the RMB outside China.

Eichengreen, Mehl, and Chitu (2018) explores the more general topic of how global currencies work instead of focusing on RMB internationalization. The authors propose a “new view” to replace the “traditional view” about the extent to which the leading reserve currency dominated the market. The traditional view argues that the leading currency all but monopolized the market as network externalities and first-mover advantage led to a “winner takes all” situation. This is due to the high liquidity and low transaction cost of keeping, buying, and selling the assets denominated in the leading currency. The new view, however, argues that the force of network externalities is not strong enough to lead to a “lock-in effect” and

“winner takes all” effect for the leading currency. Instead, several reserve currencies can coexist so as to realize the benefits of diversification. The theoretical basis of the new view is built on a literature on technology standards that focuses on open systems, in which users of a particular technology or system can interact with those using other technologies or systems. The technical barriers between different systems can be circumvented by “gateway technologies” that enable users to overcome incompatibilities between systems and integrate competing systems into an extended network. The implication of the new view is that “The twenty-first-century Triffin Dilemma [of the USD] can be resolved through the development of other national sources of international liquidity.” The euro and the RMB are two obvious candidates. Consequently, the book seems to support a somewhat optimistic view about the prospects of RMB internationalization.

However, none of the books above has devoted enough space to rigorously explaining economic theories to the general reader and applying them to analyze the issues related to RMB internationalization. By contrast, in this book, I base my arguments on economic theory that is accessible to readers who only have some basic knowledge of economics but no deep knowledge of international macroeconomics and finance. For example, I explain in simple economic language the theories of the “open-economy trilemma,” coalescing effect, thick market externalities, uncovered interest parity, and the sequence of liberalization, and apply them to the real world. A second distinguishing feature of this book from the previous literature is that, instead of just qualitatively assessing the prospects of RMB internationalization, I carry out rigorous quantitative assessments. Making use of a proprietary data set from SWIFT, I carry out an econometric study to estimate the determinants of a currency’s share in total international payments and use it to predict the future payment share of the RMB, an indicator of the degree of internationalization of the currency. I find that financial development and capital account openness are much more important than the GDP

XX PREFACE

of China in determining the payment share of its currency. My model predicts that it is possible that, by 2030, RMB can rank a distant third (behind the USD and the euro) in the global ranking of payment currencies, but this is possible only if China greatly speeds up its financial development and capital account opening in the next decade. I believe my quantitative assessment is more convincing than any qualitative one in making the point that China's economic size alone cannot make the RMB an international currency. The third distinguishing feature of this book is that I argue that there is a positive feedback effect (or synergy) between capital account liberalization and domestic financial sector reform. This argument provides the rationale for using the internationalization of RMB to force domestic financial sector reform. This is the idea of *daobi* (倒逼), which I believe is (silently) advocated by some quarters in the Chinese government. I argue that *daobi* is one important motivation of internationalizing the RMB. For this reason, the sequence of liberalization in China should not strictly follow that of conventional wisdom, namely financial market liberalization should take place before capital account liberalization. Instead, the two liberalization initiatives should proceed interactively in tandem. Finally, my book differs from the previous literature by providing a detailed coverage of the offshore RMB market in Hong Kong and the new international payment system of China (Cross-Border Interbank Payment System, CIPS), complete with a mathematical model that explains the relationship between economic variables in the onshore and offshore markets, such as the interest rates and exchange rates.

I have inserted a few "boxes" in the book to carry more technical/theoretical materials or case studies. They are intended for readers who are interested in the details. For general readers, the boxes can be skipped without missing the main storyline of the book.

Acknowledgments

This book is the culmination of nine years of my research on RMB internationalization and many years of teaching international macroeconomics and finance. In 2012, Leonard K. CHENG, then the Dean of the Business School at HKUST, encouraged me to study RMB internationalization and appointed me as the Associate Director of the Center for Economic Development to spearhead the research. In retrospect, I am so happy that I accepted that task. Since then, I have read many papers and articles, talked to many people, hired many research assistants to work for me, given many talks, taught an MBA course in RMB internationalization, served as a Research Fellow for the Hong Kong Institute of Monetary Research, twice, to work on the topic, and written a few papers along the way. This journey paved the way for me to write this book, which summarizes and crystallizes my findings on the topic. I would like to thank all those whom I met in this journey. Without them, the book would not be as good as I hope it is.

I would like to thank especially Paul Sau-Him LAU and Paul LUK for tirelessly reading the entire manuscript and giving me very detailed and useful comments. They are true friends. They pointed out some literature that I had overlooked, offered valuable suggestions, and helped me to improve the book. I am truly grateful to Kim-Man NGAN, who kindly spent time to discuss with me the real world of the Hong Kong RMB market, and later wrote very detailed comments on my manuscript. Yatang LIN kindly read the manuscript and offered some interesting suggestions. I would also like to offer my gratitude to Kang SHI for offering his insights on the topic by engaging in two enlightening discussions.

I would like to express my gratitude to the Hong Kong Institute of Monetary Research of the Hong Kong Monetary Authority for

xxii ACKNOWLEDGMENTS

offering me the position of Research Fellow twice, in 2013 and 2018, to work on the topic of RMB internationalization. During those periods, I had the valuable opportunity to interact with many experts in the HKMA and came to understand better the RMB offshore market of Hong Kong and RMB internationalization in general. They include, but are not limited to, Giorgio VALENTE, Edmund LEE, Jacqueline ZHANG, Alfred WONG, Cho-Hoi HUI, Dong HE, and Hongyi CHEN. I sincerely thank all of them for the interactions.

During the years, I have benefited from my discussions with many outstanding economists, scholars, and practitioners who enlightened me a lot. They include, but are not limited to, Yin-Wong CHEUNG, Shu LI, SUN Lijian (Fudan University), Ben CHAN, Carmen LING, Ilhyock SHIM, Francis LUI, BA Qing, WU Jun, Shang-Jin WEI, Chao HE (IMF), and Paola SUBACCHI.

Many research assistants have helped me in writing this book or papers related to the topic of RMB internationalization. They have been indispensable for the completion of this book. In this regard, I offer my greatest gratitude to Weili CHEN, who has tirelessly collected data and carried out analyses with outstanding performance. Without him, the book would be of a much lower quality. I am also grateful to Barron Yiu-Hing TSAI, Xiaoyan ZHUANG, and Vincent Pok-Ho LO for offering a lot of very high quality research assistance. JIANG Yang (February) and BIAN Ce (Eileen) provided assistance with the figures, referencing, and indexing of the book. ZHOU Jing, BAI Xue, CUI Yiye, Erica Wai-Chu CHUNG, Victor Cheuk-Hin YAU, YANG Rui, and YE Muyang all made important contributions.

HKUST provides an excellent environment for writing this book. I would like to thank the School of Business of HKUST for giving me the opportunity to teach an MBA course in RMB internationalization so that I could look at the issue from the point of view of the students. I also want to thank the Institute of Emerging Market Studies and Center for Economic Development of HKUST for their support.

I am grateful to the Society for Worldwide Interbank Financial Telecommunications (SWIFT) for giving me permission to use their proprietary historical data on bilateral inter-country payments flows to analyze the potential of the RMB as a significant payment currency. The analysis is an important part of this book.

The work in this book has been supported by the Strategic Public Policy Research (SPPR) Scheme of the Central Policy Unit of the Hong Kong Government Project No. SPPR17RG01 and General Research Funds of the Research Grants Council of Hong Kong (Project No. 16506820). Data relating to SWIFT messaging flows are published with permission of S.W.I.F.T. SCRL. SWIFT © 2019. All rights reserved. Because financial institutions have multiple means to exchange information about their financial transactions, SWIFT statistics on financial flows do not represent complete market or industry statistics. SWIFT disclaims all liability for any decisions based, in full or in part, on SWIFT statistics, and for their consequences.

Last but not least, I would like to express my wholehearted gratitude to my publisher, Joe Ng of Cambridge University Press, for his enormous patience and offer of assistance whenever needed, making the writing of the book much less burdensome.