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PARDEE CENTER TASK FORCE REPORT

BOSTON UNIVERSITY

Boston University The Frederick S. Pardee Center
for the Study of the Longer-Range Future
Center for Finance, Law & Policy

Capital Account Liberalization in China: The Need for a Balanced Approach

GEGI Global Economic Governance Initiative

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Occasionally, the Pardee Center convenes groups of experts on specific policy questions to identify viable policy options for the longer-range future. This series, *Pardee Center Task Force Reports*, presents the findings of these deliberations as a contribution of expert knowledge to discussions about important issues for which decisions made today will influence longer-range human development.

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TABLE OF CONTENTS

PREFACE AND ACKNOWLEDGEMENTS

This report of the Task Force on Regulating Capital Flows for Long-Run Development is a project of the Global Economic Governance Initiative (GEGI) at Boston University, USA. Co-directed by Boston University Professors Kevin P. Gallagher and Cornel Ban, GEGI's mission is to advance policy relevant knowledge on governance for financial stability, human development, and the environment. GEGI is housed across three entities at Boston University—the Pardee School of Global Studies, the Center for Finance, Law & Policy (CFLP), and the Pardee Center for the Study of the Longer-Range Future.

Along with GEGI's Kevin P. Gallagher, the co-chairs for this Task Force report are José Antonio Ocampo from the Initiative for Policy Dialogue (IPD) at Columbia University, and Ming Zhang and Yu Yongding from the Institute for World Economics and Politics (IWEP) at the Chinese Academy of Social Sciences. GEGI, IPD, and IWEP are the co-sponsors of this report, and IWEP will publish the report in Chinese.

This is the third in a series of reports of this Task Force. This report, *Capital Account Liberalization in China: The Need for a Balanced Approach*, examines the benefits and risks of accelerated capital account liberalization in China. To help frame the discussion, the Task Force thought it would be helpful to discuss the experience of other emerging market countries that liberalized the capital account in the past, in order to draw out lessons for China as it considers this delicate task. The previous Task Force report, *Capital Account Regulations and the Trading System: A Compatibility Review*, also remains salient here. In that report, we found that an increasing number of trade and investment treaties prohibit the regulation of capital flows, and we recommended that such treaties have safeguards that enable nations to regulate capital flows to prevent and mitigate the harmful aspects of cross-border finance. The first report, *Regulating Capital Flows for Long-Run Development,* also remains salient, and highlights developments in economics and country experience that show why it is important to regulate capital flows now more than ever.

First and foremost, we thank those who provided financial support for the Task Force. The Ford Foundation has provided the core of the support for the Task Force in general, and this report in particular. We thank Leonardo Burlamaqui for his encouragement and support of this entire project. This report was also substantially funded by BU's Center for Finance, Law & Policy, and we thank its director, Cornelius Hurley.

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Pardee Center Associate Director Cynthia Barakatt led the not-so-easy task of editing and producing the report. She was aided by Leeann Sullivan and Chantel Pheiffer in the preparation of the manuscript of the report. We thank Jill Richardson for the promotional and communications effort to get the report into the hands of the proper audiences.

The Task Force would also like to thank and acknowledge Pardee Center Director Anthony Janetos for convening the workshop that led to this report and for his Center's continued support of GEGI.

ACRONYMS AND ABBREVIATIONS

BOP: Balance of Payments
CD: Certificate of Deposit
CEE: Central and Eastern Europe
CFM: Capital Flow Management Measures
CNH: Offshore Chinese Yuan Renminbi (currency)
CNY: Chinese Yuan Renminbi (currency)
CPC: Communist Party of China
CZK: Czech Republic Koruna (currency)
DF: Deliverable Forward
ECLAC: Economic Commission for Latin America and the Caribbean
EE: Eastern Europe
EM: Emerging Country/Countries
EME: Emerging Market Economy
FDI: Foreign Direct Investment
FTZ: Free Trade Zone
FED: U.S. Federal Reserve
FTA: Free Trade Agreement
FX: Foreign Exchange
GDP: Gross Domestic Product
GFC: Global Financial Crisis
HUF: Hungarian Forint (currency)
IMF: International Monetary Fund
INR: Indian Rupee (currency)
KA: Capital Account
KRW: South Korean Won (currency)
LHS: Left-Hand Side
LIBOR: London Interbank Offered Rate
MIBOR: Mumbai Interbank Offered Rate
NDF: Non-Deliverable Offshore Forward
NPL: Non-Performing Loan
OECD: Organization for Economic Cooperation and Development
PBOC: People's Bank of China
PLN: Polish Zloty (currency)
QDII: Qualified Domestic Institutional Investors
QE: Quantitative Easing
QFII: Qualified Foreign Institutional Investors

RHS: Right-Hand Side
RMB: Chinese Renminbi (currency)
RON: Romanian Leu (currency)
SAFE: State Administration of Foreign Exchange
SHIBOR: Shanghai Interbank Offered Rate
SOE: State-Owned Enterprise
UNCTAD: United Nations Conference on Trade and Development
URR: Unremunerated Reserve Requirement
USD: United States Dollars (currency)
USDCNY (USD/CNY): United States Dollar to Chinese Yuan Exchange Rate
WWII: World War II

Executive Summary

Capital Account Liberalization in China: A Cautionary Tale

Kevin P. Gallagher, José Antonio Ocampo, Ming Zhang, Yu Yongding

In many ways, China can be seen as the great "globalizer". Rather than abruptly opening to global trade under the "Washington Consensus," beginning in the early 1980s China followed the pragmatic expression attributed to its great reformer Deng Xiaoping: "cross the river by feeling each stone." China combined opening to global trade with significant and gradually sequenced government attention to infrastructure, industrialization, and logistics to become the largest trader on earth in just a few decades. Such an approach will prove even more important as China considers the need to globalize its financial sector. The history of other emerging markets' experiences with financial liberalization offers China some lessons as well. Fully opening the Chinese financial system will require keen attention to prioritizing other important reforms and to designing a strong and flexible set of cross-border financial regulations. Such regulations will be important to preventing and mitigating financial fragility and ensuring that financial markets serve the productive employment of the Chinese people.

China would do well to draw lessons from both the economics literature and country experiences with capital account liberalization. Such an approach would guide China to adopt a carefully sequenced and cautionary approach to capital account liberalization.

These words of caution come out of a February 2014 workshop of the Pardee Task Force for Regulating Capital Flows at Boston University. The workshop was sponsored by Boston University's Global Economic Governance Initiative, along with Columbia University's Initiative for Policy Dialogue, and the Institute for World Economics and Politics at the Chinese Academy of Social Sciences. It brought together scholars and policy-makers who discussed experiences with

capital account liberalization in Japan, India, South Korea, Latin America, Central and Eastern Europe, and beyond. Participants also reviewed the economic evidence pertaining to capital account liberalization, as well as new policy at the International Monetary Fund with respect to financial globalization.

This executive summary synthesizes some of the main themes and policy recommendations discussed at the workshop and presented in this report, though the specific recommendations discussed here are our own. The main message is that China would do well to draw lessons from both the economics literature and country experiences with capital account liberalization. Such an approach would guide China to adopt a carefully sequenced and cautionary approach to capital account liberalization.

Capital Account Liberalization in China

Regulating the inflow and outflow of capital has been a cornerstone of China's development reforms. For more than three decades after Deng Xiaoping's crucial reforms began, China's capital account policies were part of an apparatus to direct credit toward strategic development goals while maintaining financial stability. That period of economic history in China is among its best ever and among the best ever in the world, having recorded more than 10 percent income growth per year for those decades. Moreover, its limited financial globalization helped keep reforms on track. During the 1990s when emerging markets, especially in Asia, were wrecked by contagious financial crises, China's relatively closed capital account buffered the country from the worst of those crises.

Chinese officials have decided that a new economic model is needed, and thus China has been experimenting with a variety of reforms toward that new model. Gradual capital account liberalization started in 1994. Since then, China has removed almost all restrictions for inbound foreign direct investment and loosened controls over portfolio investments—though maintaining quota schemes—but cross-border money market transactions and financial derivatives have remained under strict control. However, as a result of RMB internationalization, China's capital account liberalization has accelerated since 2009. The RMB trade settlement scheme and so-called "recycling mechanism" has led to a significant opening of short-term cross-border capital flows. The trading of the RMB in Hong Kong has created significant opportunity and risk for RMB exchange rate arbitrage. Owing to stable RMB appreciation expectations, carry trade against the RMB became rampant. The development of the Hong Kong market along with other markets and the partial opening of the capital account for short-term

cross-border capital flows has led some to suggest that China's capital account is even more porous than policy would suggest. According to one estimate, China's gross cross-border bank exposure stood at $1 trillion in 2014, or 12 percent of China's GDP (Verma 2014). Since 2009 a new two-track capital flow regulation structure has been established. The cross-border capital flows denominated by USD were still regulated by the State Administration of Foreign Exchange (SAFE) at the People's Bank of China (PBOC) which was more strict; however, the capital flows denominated by RMB were regulated by the subsidiaries of Department of Monetary Policy II under PBOC, which was much looser. In other words, the experiment of RMB internationalization opened new loopholes for short-term capital flows into and out of China.

China appears to have re-committed to this exercise during its 18th Party Congress in 2013, where China said it would work to:

> "Promote bidirectional openness for capital markets, raise the extent of convertibility of cross-border capital and financial trading, establish and complete foreign debt and capital flow management systems under prudential macro-level management frameworks, accelerate the realization of the convertibility of Renminbi capital accounts." (CPC Central Committee 2013)

Therefore, it is not fruitful to debate whether China should open its capital account, because the decision to move forward already has been made. However, it is still vitally important to consider how the capital account should be opened, and at what pace.

Risks Associated with Capital Account Liberalization

Theoretically speaking, capital account liberalization can bring significant benefits to an economy after a nation has reached a certain threshold of institutional capabilities needed to manage its financial sector. Capital account openness can create more financial sector competition, enable portfolio diversification, and provide finance for current account imbalances. By the turn of the century, many nations from both the industrialized and developing world had open capital accounts.

However, according to the economics literature there is no clear association between capital account liberalization and economic growth in emerging markets. Moreover, there appears to be an association between capital account

liberalization and the incidence of financial crises. Finally, there is also evidence that capital account liberalization can lead to increased inequality.

Olivier Jeanne, Arvind Subramanian, and John Williamson of the Peterson Institute for International Economics did a comprehensive survey of the literature on capital account liberalization and economic growth and found that there is no clear cut relationship between the two. Indeed, the authors (two of them former IMF officials) go so far as to conclude that "the international community should not seek to promote totally free trade in assets—even over the long run—because free capital mobility seems to have little benefit in terms of long run growth" (Jeanne et al. 2012, 5).

Columbia University economists José Antonio Ocampo, Shari Spiegel, and Joseph Stiglitz, as well as Harvard University economists Kenneth Rogoff and Carmen Reinhart, have also shown that capital account liberalization is associated with an increased incidence of banking crises in a country (Ocampo, Spiegel, and Stiglitz 2008; Reinhart and Rogoff 2009). Examples of such crises over recent decades are Mexico, Brazil, Turkey, South Korea, Russia, Iceland, and Latvia. Open capital accounts leave emerging markets susceptible to the pro-cyclical nature of global finance. Short-term capital flows occur in surges and sudden stops that can be a cause of financial fragility. A surge in capital inflows can lead to exchange rate appreciation, a swelling of asset prices, and an expansion of bank balance sheets given that actors feel that they have more collateral at hand for foreign currency denominated debts. All of this can unwind during a sudden stop of capital flows: currencies depreciate significantly and balance sheets expand as financial actors still need to pay debt in foreign currency (Korinek 2011).

Of particular concern for China may be new evidence that capital account liberalization can be associated with rising inequality. An IMF study written by Furceri and Loungani (2013) examined over 50 cases of capital account liberalization in advanced economies, and found that inequality (as measured by the Gini coefficient) increased by approximately one percent during the first year after liberalization and by as much as two percent after five years.

Government officials and economists also fear that capital account liberalization causes a loss in policy autonomy for economic policy-making. It has long been established that policy-makers face a "trilemma" when it comes to the capital account. The economist Robert Mundel formalized work of John Maynard

Keynes that established that a country can only use two of the three instruments commonplace in a world of international finance: the use of the interest rate as a monetary policy tool, the control of the exchange rate, or the regulation of cross-border financial flows. The loss of policy autonomy when the capital account has been liberalized could be even more severe than Mundel proposed, as authorities may lose full monetary control and in a sense would be able to choose only where they want capital account volatility to be reflected: in monetary and credit aggregates, or in the exchange rate. With respect to China, there are also significant sterilization costs associated with managing the exchange rate with respect to the trilemma.

The Importance of Sequencing

The risks associated with capital account liberalization are unsettling. That is why there is an emerging consensus that capital account liberalization, if pursued, should to be sequenced according to country-specific characteristics. The International Monetary Fund (2012) conducted a thorough re-evaluation of capital account liberalization and the management of capital flows from 2010 to 2012 and produced a new 'institutional view' on such matters. The new view notes that exchange rate flexibility, monetary reform, and financial regulation are among the pre-requisites that may be necessary for countries to benefit from capital account liberalization. As Kenji Aramaki in this report notes, Japan is considered the exemplar in terms of sequencing the opening of the capital account, a process that took over 40 years to complete after significant reform of its exchange rate, interest rate, and financial sector policies.

New research in economic theory has stipulated that it may be optimal—rather than distortionary—to regulate surges in capital inflows.

Indeed, there is also a growing consensus that the option to regulate cross-border financial flows should be a permanent feature of any 21st century financial system, even one that is relatively open. New research in economic theory has stipulated that it may be optimal—rather than distortionary—to regulate surges in capital inflows. In the presence of significant information externalities, investors do not internalize their contribution to the system risks associated with surges and sudden stops. Conditions when numerous market participants make investments without incorporating such risks can quickly lead to financial instability. Thus, the case is made for counter-cyclical Pigouvian taxes on the inflows of

capital in order to correct for such inherent market failures in the financial sector (Korinek 2011).

Most econometric evidence finds that regulations on the inflow of capital can have the desired impact if designed and implemented properly. A comprehensive review of the literature before the financial crisis—that includes nations with open capital accounts such as Chile and Colombia—for the National Bureau of Economic Research in the United States concluded that: "In sum, capital controls on inflows seem to: make monetary policy more independent and alter the composition of capital flows; to a lesser extent it seems to reduce real exchange rate pressures" (Magud et al. 2011, 13).

In the wake of the financial crisis a number of countries with open capital accounts have begun to re-introduce regulations on the inflow and outflow of capital. Nations such as Brazil, Indonesia, South Korea, and Taiwan are among those that regulated cross-border finance in the wake of the financial crisis, while maintaining some level of capital account openness (Erten and Ocampo 2013; Gallagher 2014).

Lessons for China: Reform and Regulate First

It will be important for China to sequence capital account liberalization in tandem with other economic reforms and regulations in order to maintain economic growth, productive employment, social cohesion, and financial stability in the country.

In terms of sequencing, it will be important to reform interest rates and exchange rates before fully opening the capital account—especially to short-term debt, portfolio, and derivatives flows. Very low interest rates, coupled with the fact that China's savers will seek to diversify their portfolios as the Chinese economy adjusts to re-balancing, may bring some risks. A recent IMF study suggests that liberalization could trigger net outflows from both equity and bond markets as domestic investors seek to diversify large domestic savings (Bayoumi and Ohnsorge 2013).

It will also serve China well to put in place significant domestic financial regulations in order to maintain financial stability. Two important regulations that need priority attention are the implementation of a national deposit insurance company to allow for the bankruptcy and liquidation of domestic financial institutions and a full-fledged macro-prudential regulatory regime to avoid asset

bubbles. Of key importance in such a macro-prudential regime would be the regulation of the rapidly expanding set of shadow banking products in China.

Counter-cyclical capital flow management regulations are needed in tandem with those macro-prudential regulations. Interest rate and growth differentials between China and the rest of the world will leave the country susceptible to pro-cyclical surges and sudden stops of short-term capital flows. Two countries with open capital accounts, Brazil and South Korea, have been pioneering in this area. Both countries have pieces of legislation that permanently allow the monetary and financial authorities to regulate cross-border financial flows in a flexible manner on an as needed basis. Both countries were struck with significant financial crises after they liberalized their capital accounts. They thus decided to reintroduce regulations on the inflow and sometimes outflow of capital in a counter-cyclical manner.

In recent times, the channels for surges and sudden stops of capital flows in Brazil and South Korea have been the foreign exchange derivatives market via the carry trade. Both countries designed regulations to attempt to stem the fragility associated with such flows. South Korea's regulations have been much more successful because the derivatives market is deliverable and conducted onshore. Brazil's market is non-deliverable and much of it is conducted offshore—making it much more difficult for the authorities to regulate.

Finally, it will be important for China to ensure that it maintains the policy space to regulate cross-border finance as needed. Recently, the IMF has articulated a new "institutional view" on capital flow management that recognizes the need to regulate capital flows. This move has expanded the policy space to regulate capital flows in an institution that was once very adverse to regulating capital. However, certain commitments under the World Trade Organization's General Agreement on Trade in Services, and under some free trade agreements and bilateral investment treaties make it more difficult to regulate cross-border finance (Gallagher and Stanley 2013). Indeed, the negotiating position of the United States under the United States–China Bilateral Investment Treaty negotiations is that China should not be permitted to regulate cross-border finance without recourse. In its negotiations on an investment treaty with Germany, China was able to maintain the policy space to regulate capital (Anderson 2009). China should seek to strike such a balance in all future treaties moving forward.

Chinese authorities have always taken a gradual and sequenced approach to the reform process. It is paramount that such an approach be applied to capital account liberalization. Gradual liberalization after higher priority reforms that are safeguarded by strong regulation of both the domestic financial system and cross-border finance is a prudent course of action. In so doing, China will not have to learn the hard way—as so many other countries across the world have—that premature financial opening can lead to financial crises, slow growth, and inequality. Such a course of action will maintain China's tools to continue to deliver long-run prosperity for its people.

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1. Financial Openness of China and India: Implications for Capital Account Liberalization

Guonan Ma and Robert N. McCauley

INTRODUCTION

In recent years, policymakers in both China and India have announced their intention to further liberalize their still heavily managed capital accounts. The world has a huge stake in China and India integrating their finances into global markets without disruptive spillovers to the global financial markets (Hooley 2013). This is all the more true for China, which is larger and shows a stronger willingness to undertake incremental capital account liberalization over the coming years.

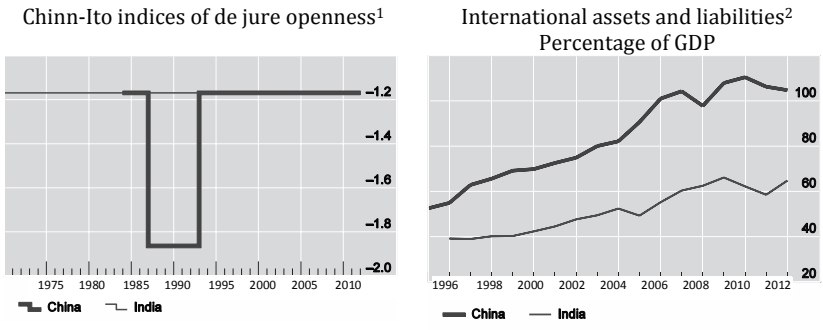
The extent to which these economies have already become financially integrated with the rest of the world serves as a practical starting point for policymakers managing the task of further capital opening, by indicating potential challenges and attendant risks. A starting point of considerable integration would suggest that China and India have little to lose and much to gain if the opening serves to force the pace of domestic financial liberalization. Little financial integration, however, would indicate greater risks and larger required adjustments in the domestic economy and markets in response to capital opening.

Much analysis of capital account openness uses the Chinn–Ito (2008) index, an interval, de jure measure derived from four on–off variables in the IMF's Annual Report on Exchange Arrangements and Restrictions (Figure 1, left-hand panel). For de facto openness, "the most widely used measure" (IMF 2010:51) is the ratio of the sum of international assets and liabilities to GDP (Lane and Milesi-Ferretti 2003, 2007) (Figure 1, right-hand panel).

We question whether these measures appropriately track the progress and relative position of China and India on the road to international financial integration.[1] We disagree with Chinn–Ito that China and India are both stalled on the road and agree with Lane and Milesi-Ferretti that both are often moving forward—that is, opening up. Admittedly, the process sometimes can be two steps

1 See Lane and Schmuckler (2007); and Aizenman and Sengupta (2011).

Figure 1: Capital Account Openness of China and India: De Jure and De Facto Measures



[1] Based on the binary dummy variables that codify the tabulation of restrictions on cross-border financial transactions reported in the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions* (2010). For further details, see Chinn and Ito (2006).

[2] International investment position. Data for China before 2004 from Lane & Milesi-Ferretti (2007).

Source: The IMF's International Financial Statistics (<www.econdata.com/databases/imf-and-other-international/ifs/Ð>) and World Economic Outlook (<www.imf.org/external/pubs/ft/weo>).

forwards and one step back. Moreover, we question whether Chinn–Ito (tied) or Lane and Milesi-Ferretti (China ahead) have their relative positions right, at least on average for the past decade.

We also question an emerging consensus regarding implications of capital opening for capital flows. Both He et al. (2012) and Bayoumi and Ohnesorge (2013) argue that when China fully opens up its capital account, there will be not only larger external positions but also, on balance, larger net private assets. By contrast, Bayoumi and Ohnesorge (2013) expect India to experience little net private capital outflows. Neither study considers stocks of bank assets, which are inherently difficult to model. Our findings on the pricing of the three financial instruments onshore and offshore raise questions about this consensus, since relative prices would encourage bank inflows. In particular, our finding that in China money-market instruments are cheap onshore leaves us concerned that these baseline projections that neglect bank assets are missing the potential for huge short-term inflows.

We raise these questions based on an examination of three de facto price-based measures. For currency forwards, short-term interest rates and equity prices, we analyze average deviations from the law of one price. The basic idea is that, other things being equal and under normal market conditions, onshore and

offshore prices of the same underlying financial instrument should be about the same if capital is mobile.

Also, we offer cross-country benchmarks as well as bilateral comparisons as a gauge of the remaining challenge of the capital account opening task. Finally, we look at the signs of these price gaps to see whether each financial instrument is priced more cheaply onshore or offshore, which can serve as signals of positive pressures from inward or outward private capital flows, respectively.

We advance four hypotheses, two in the time series (ts) and two in the cross-section (xs), and subject them to the evidence of the past decade: 2003–13.

Hts1: Lane and Milesi-Ferretti are right: both China and India are opening.

Hxs1: Chinn–Ito and Lane and Milesi-Ferretti are wrong: India is more open than China.

Hts2: Both China and India remain some distance from financial openness.

Hxs2: China faces net inflow pressures in the short term while India may face more balanced outflows and inflows when opening up.

The chapter is organized as follows. Sections two to four present evidence on the three measures of onshore–offshore price gaps for foreign exchange forwards, money-market yields and stock market prices. Section five draws on the evidence on price gaps to explore implications for China's capital opening, while the final section draws conclusions for the future.

ONSHORE AND OFFSHORE FOREIGN EXCHANGE FORWARDS

We first contrast forward foreign exchange rates in Shanghai or Mumbai with those traded offshore in Hong Kong, Singapore, or Tokyo. Capital mobility tends to equalize onshore and offshore forward rates. Thus, the currency with smaller differences in rates at home and abroad is more financially open. We define cross-border price gaps so that a positive value indicates that contracts are cheaper onshore. For currency forwards, a positive gap means that a dollar fetches more renminbi or rupee in Shanghai or Mumbai than offshore. For money markets, a positive gap means that prices are lower (yields higher) in Shanghai or Mumbai than offshore. For equities, a positive gap means shares are cheaper onshore.

As Liu and Otani (2005) argued, this measure benefits from using directly observed prices; but our comparison can only start when China inaugurated its onshore forward currency market in 2003. Since traders can access the domestic forward currency market only on the basis of "real demand"—that is, underlying transactions backed by trade documents—domestic forward rates can differ from those in the offshore non-deliverable market, where all comers can transact.[2]

We define the onshore–offshore forward currency gap as in Equation 1.

Equation 1

Forward currency gapt = (Ft – NDFt)/St

In Equation 1, Ft is the onshore forward; NDFt is the non-deliverable offshore forward; and St is the onshore spot exchange rate—all expressed as domestic currency per U.S. dollar. A positive forward premium gap indicates the respective currency is cheaper—that is, priced for less appreciation or more depreciation—onshore than offshore. This in turn would likely attract more inflows than outflows when the capital account opens up.

On balance, trading of currency forwards suggests India has been more financially open than China over the past decade, more so for the pre-crisis period than the post-crisis period, though China is catching up faster and noticeably narrowing India's lead since the GFC.

Figure 2 (p. 16) strikes the eye with how both currencies became cheap offshore after the Lehman failure, both at the 3-month (left-hand panel) and the 12-month (right-hand panel) tenor. It is also striking how expensive the longer forward of the renminbi used to be offshore, where speculators paid up in anticipation of its move from 8.2 to 6.1 per dollar. Also observe the sharp widening in the onshore/offshore foreign exchange forward gaps during the GFC, probably because of the market dislocations to be discussed below. Both the sign and the size of the forward gaps for the renminbi and rupee correlate substantially, possibly suggesting that some global factors, such as the sentiment of global investors and market uncertainties, may play a meaningful role in the evolution of the forward gaps.

Table 1 (p. 16) confirms that over the past decade, 2003–13, the average of the forward gap for the renminbi is clearly larger than that of the rupee. Hence

2 On NDFs, see Ma et al. (2004); Misra and Behera (2006); Ma and McCauley (2008a, 2008b); and McCauley et al. (2014).

the forward markets onshore and offshore have been more segmented for the renminbi than for the rupee, for both 3-month and 12-month tenors and for both the pre-crisis and the post-crisis periods. In this sense, India is financially more integrated with the global financial market than is China.

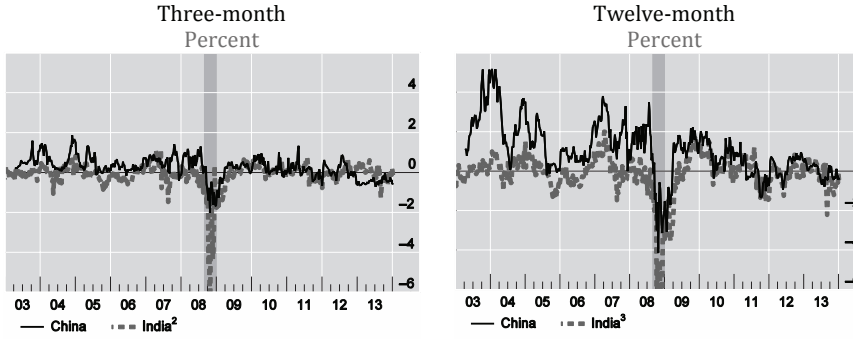
The dynamics of their forward premium gaps have, however, been quite different before and after the GFC. In particular, for both tenors, the onshore–offshore forward currency gaps of the renminbi have narrowed noticeably since the crisis, suggesting that China has become more open financially over recent years. Not so for India, which has witnessed wider forward premium gaps since the GFC. One possible reason could be the Chinese Government's promotion of external use of the renminbi, facilitating cross-border arbitrage. Another could relate to the emerging market sell-off in the wake of the expected U.S. Federal Reserve's tapering signal mostly in the third quarter of 2013, which most hurt deficit emerging economies. Of course, one can ask why this last particular shock was so asymmetric and different for the renminbi and the rupee (Ma and McCauley 2013; McCauley et al. 2014). Regardless, one may argue that on this measure of the foreign exchange forward gap, China has been liberalizing but India has been less so, or even the other way around.

Moreover, while the renminbi is priced cheaper onshore than offshore in the foreign exchange forward markets in all cases, the Indian rupee forward is mostly more expensive onshore in most cases. This holds true for both the full sample and the pre- and post-crisis periods. In other words, when the capital account opens up, the renminbi will most likely face appreciation and net private capital inflow pressures while the rupee may endure some depreciation and net private outflow pressures. Even the adjustments can take place mainly through positioning rather than actual cross-border flows; expectations may bias broader gross private capital inflows in case of a cheaper currency in the onshore forward market.

On balance, trading of currency forwards suggests India has been more financially open than China over the past decade, more so for the pre-crisis period than the post-crisis period, though China is catching up faster and noticeably narrowing India's lead since the GFC. Upon capital opening, China may see stronger private capital inflow pressures than India does, other things being equal.

If currency forwards suggest that India has remained more open than China on average over the past decade, albeit with a shrinking lead, how far do they have to go in terms of capital account liberalization? The euro/dollar trades, except

Figure 2: Onshore Foreign Exchange Forward Less Offshore Non-Deliverable Forwards (as percentage of spot rate)[1]



[1] Shaded area indicates the GFC period of September–December 2008.
[2] Minimum at –7.88 per cent on 24 October 2008.
[3] Minimum at –11.7 per cent on 24 October 2008.

Sources: Bloomberg; CEIC.

Table 1: Onshore Less Offshore Foreign Exchange Forward Premiums (percentage of the spot)

	Three-month			Twelve-month		
	Pre-crisis	Post-crisis	Full sample	Pre-crisis	Post-crisis	Full sample
Period average						
CNY[1]	0.5126	0.0494	0.2508	1.8510	0.3851	1.0518
INR	–0.0399	–0.0029	–0.0928	0.0297	–0.0745	–0.1601
KRW	–0.3007	–0.0287	–0.1726	–0.1263	–0.1015	–0.1334
Benchmark[1, 2]	*–0.1315*	*0.1019*	*–0.0369*	*–0.3403*	*0.2510*	*–0.0766*
Average of absolute value						
CNY[1]	0.5303	0.3279	0.4489	1.8549	0.7464	1.3290
INR	0.2579	0.2849	0.3334	0.4476	0.6142	0.6511
KRW	0.4365	0.2056	0.3406	0.4676	0.2562	0.3865
Benchmark[1, 2]	*0.5828*	*0.3634*	*0.4628*	*1.1589*	*0.7246*	*0.8964*

[1] Data start 7 April 2003 for renminbi, 7 January 2004 for Colombian peso, 12 January 2012 for Russian ruble.
[2] Benchmark averages Brazilian real, Colombian peso, Indonesian rupiah, Philippine peso, Russian ruble and Taiwanese dollar.

Note: Daily data of forward premium gap are calculated as the difference between onshore forward and offshore non-deliverable forward as a percentage of spot price. Closing at Tokyo 8 pm for Asian currencies; at London 6 pm for Russian ruble; at New York 5 pm for Brazilian real and Colombian peso. The full sample period is between 6 January 2003 and 31 December 2013; the crisis period is between September and December 2008.

Source: Bloomberg; Reuters.

in the most extreme markets, at the same rate in Frankfurt and in New York. Among currencies with a non-deliverable forward (NDF), the Korean won has the biggest and most integrated market. Post-crisis, the rupee forward gap is

between that of the won and a benchmark of six other NDF currencies for both tenors (Table 1). By contrast, the larger average absolute values for the renminbi are close to a benchmark of six other NDF currencies and point to weaker arbitrage and thus a longer way to go in capital opening.

ONSHORE AND OFFSHORE SHORT-TERM INTEREST RATES

We next compare short-term yields onshore and offshore. Otani and Tiwari (1981) compared yen yields in Tokyo and offshore, and Frankel (1992) prescribed such comparisons to test for capital mobility. Prior to the expansion of the offshore renminbi market in 2010, we do not observe offshore yields for both currencies; rather we infer yields from NDFs, assuming they are priced off dollar Libor—a reasonable assumption before the GFC.[3]

Equation 2

$$NDFt = St(1+it)/(1+rt\$)$$

In Equation 2, i is the implied offshore interest rate on the home currency and rt$ is dollar Libor. Rearranging terms, we extract the implied offshore interest rate (Equation 3).

Equation 3

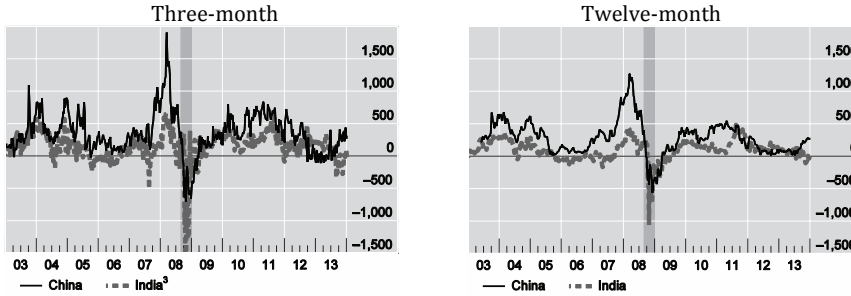
$$it = NDFt^*(1+rt\$)/St - 1$$

The onshore–offshore money yield gap is defined as (rt–it), where rt is the directly observed onshore 3-month bank rate or a 12-month government bill rate. If (rt–it) differs significantly from zero, the offshore market is segmented from the onshore. A positive money yield gap indicates that money-market instruments are priced cheaper (yield more) onshore than offshore. A smaller mean of the absolute yield gap points to greater financial openness.

Money-market yield gaps have narrowed somewhat for both economies in the 2000s (Figure 3). Ma et al. (2004) and Kohli (2011) found that this happened for the rupee in the early 2000s. The renminbi gap has narrowed since the GFC, but the rupee gap widened instead. Again, we observe noted co-movements in the

3 The GFC broke down covered interest parity (Baba and Packer 2009), observationally equivalent to pervasive capital controls. With a global 'dollar shortage' (McGuire and von Peter 2009), U.S. dollar Libor cannot safely be inserted into Equation 3. Mancini and Ranaldo (2011) test interest rate parity without Libor. If dollar yields were equal onshore and offshore, and forwards were priced off interest differentials, our yield gaps would simply be transformations of the forward gaps above. But onshore dollar yields can and do deviate from offshore levels.

Figure 3: Onshore Money-Market Yield Less Offshore NDF-Implied Yield (in basis points)



Notes: Weekly data. For China: three-month (12-month) NDF, three-month Chibor (one-year PBC bill auction yield before July 2008; secondary market yield thereafter), and three-month (12-month) Libor. For India: three-month (12-month) NDF, three-month Mumbai interbank offer rate (364-day Treasury Bill implicit yield), and three-month (12-month) Libor. Shaded area indicates the GFC period of September–December 2008. Minimum at –3310.89 bps on 24 October 2008.

Source: Bloomberg; CEIC

yield gaps of the renminbi and rupee, indicating possible important global drivers in addition to local impediments.

In sum, most of the main findings for the foreign exchange forward gap also hold in the case of the money yield gap. Each and every pairwise comparison strongly suggests that over the past decade, cross-border arbitrage continued to have freer play in India to keep yields in line (Table 2). On balance, onshore and inferred offshore money rates, like trading of currency forwards, identify India as more financially open than China over the past decade, for the full sample, the pre-crisis period and the post-crisis period, though its lead has been narrowing. More interestingly, again, the post-crisis yield gap of the rupee has widened over the pre-crisis counterpart, while that of the renminbi has narrowed considerably and is rapidly converging with the rupee gap in the wake of the GFC. On this measure, China again is catching up in terms of financial openness.

One main difference between the currency forward and money-market instruments is that for both currencies, money-market instruments have been cheaper onshore than offshore, indicating potentially greater private capital inflows than outflows, at least under money-market instruments, once their capital accounts open further.

Again, the benchmark won suggests that both renminbi and rupee money remain some distance from high financial integration. In particular, onshore and offshore rupee yields remain further apart than their won counterparts even

Table 2: Onshore Money-Market Yield Less Offshore NDF-Implied Yield (basis points)

	Three-month			Twelve-month		
	Pre-crisis	Post-crisis	Full sample	Pre-crisis	Post-crisis	Full sample
Period average						
CNY	436.8	316.1	354.7	381.1	208.2	280.1
INR	148.0	181.5	146.3	101.5	107.7	95.0
KRW	49.5	105.2	90.6	67.2	98.9	89.2
Average of absolute value						
CNY	437.0	345.3	392.7	381.1	235.4	308.9
INR	192.7	212.9	215.2	132.1	138.4	141.1
KRW	76.6	113.8	111.6	68.5	99.5	90.7

Notes: Daily data. For China: 3-month (12-month) NDF, 3-month Chibor (one-year PBC bill auction yield before July 2008; secondary market yield thereafter), and 3-month (12-month) Libor. For India: 3-month (12-month) NDF, 3-month Mibor (364-day Treasury Bill implicit yield), and 3-month (12-month) Libor. For Korea: 3-month (12-month) NDF, 3-month certificate of deposit rate (one-year Treasury Bond yield in the secondary market), and three-month (12-month) Libor. The full sample period is between 27 May 2003 and 31 December 2013; the crisis period is between September and December 2008.

Sources: Bloomberg; CEIC.

though the won gaps also widened after the crisis (and before the crisis relative to 2003–04) (Ma et al. 2004, 90). If the rupee has a way to go, the renminbi has still further, but apparently the renminbi is catching up rapidly, while after the crisis, the rupee appears to backstep and gradually lose its lead.

INTERNATIONAL INTEGRATION OF EQUITY MARKETS

The Chinese and Indian authorities have also run natural experiments by allowing firms to list their shares on exchanges both in Shanghai or Mumbai and in Hong Kong or New York. Onshore and offshore trades take place in different currencies, but a free flow of capital would ensure only minor differences in prices. Deviations from the law of one price point to markets segmented by official limits on foreign shareholdings in domestic markets. Following Levy-Yeyati et al (2009), we analyze the difference between onshore and offshore share prices and the speed of their convergence.

We construct indices of shares that are cross-listed in Shanghai, Hong Kong, and New York on the one hand (Peng et al. 2008), and Mumbai and New York on the other. We weigh individual share price differentials by market capitalizations in Hong Kong and Mumbai. We define the price gap as the ratio of the offshore to onshore prices: a ratio greater than 100 indicates the share trades cheaper onshore than offshore. The closer this "cross-market price premium" is to 100, the higher is the degree of onshore and offshore equity markets. Our Chinese

index in Figure 4 resembles the commercial 'Hang Seng China AH [A: Shanghai; H: Hong Kong] Premium Index' (Ma and McCauley 2013).

A threshold observation is that the line for India lies above 100, while the lines for China lie below 100. Indian shares tend to be cheaper onshore. By contrast, Chinese shares trade at a premium in Shanghai over their prices in Hong Kong or New York. Chinese investors wish they could buy Chinese equities at Hong Kong or New York prices. Thus, the more expensive share prices in Shanghai would likely prompt more private outflows than inflows, once restrictions on the capital account are further removed. The opposite is true for India. Nevertheless, by late 2013, the Shanghai premium and Mumbai discount had largely vanished. Indeed, the Chinese equity market integration has come a long way and even appeared to have taken a small lead over India's by 2013.

Table 3 confirms that price differentials have tended to narrow since the GFC. Before the crisis, Indian shares in New York traded at a 30 percent premium, while Chinese shares in Hong Kong traded at a discount of more than 45 percent. After the crisis, the New York premium narrowed to less than 10 percent for Indian companies and the Hong Kong discount to some 20 percent for Chinese companies. So India managed to sustain the financial opening in the equity market, contrasting the back-stepping seen for the two fixed-income markets.

While for the full sample of 1999 and 2013, the Indian equity market is much more internationally integrated than that of China, it still has a long way to go when measured against the close alignment of prices of Chinese shares in Hong Kong and New York. Similarly, the Indian equity market has a way to go when compared with the sample 0.12 percent mean difference between onshore and offshore share prices for a sample of emerging markets in Levy-Yeyati et al. (2009, 441).

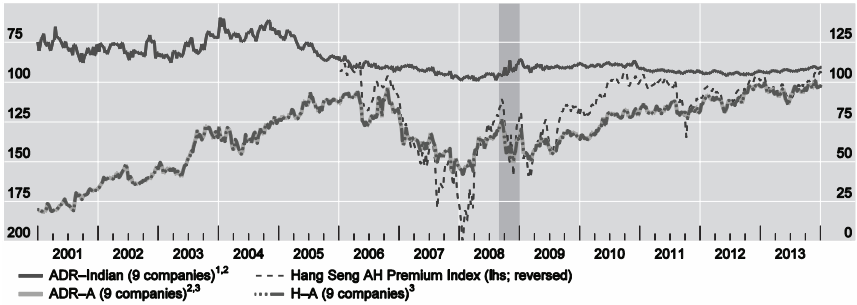
Table 3 also reports estimates of the half-life of the convergence of onshore and offshore share prices to their centers of gravity for the periods before and after the crisis. This half-life is estimated from Equation 4 (Peng et al. 2008).

Equation 4

$$\Delta q_{i,t} = \alpha + ß q_{i,t-1} + \Sigma \varphi_n \Delta q_{i,t-n} + \varepsilon_{i,t}$$

In Equation 4, $q_{i,t}$ is the logarithm of the overseas–local share price ratio for the cross-listed companies; Δ is the first difference operator. Since the estimated $ß < 0$, the speed of convergence, or half-life of a shock, to the premium can be taken

Figure 4: Ratios of Overseas Share Prices to Equivalent Local Share Prices (percent, weekly average)



[1] Average of ICICI Bank, Wipro, Dr. Reddy's Laboratories, HDFC Bank, Sterlite Industries (India) (until August 2013), Mahanagar Telephone Nigam, Tata Motors, Tata Communications and Infosys Technologies weighted by their domestic market capitalisation.
[2] Ratio of Asian closing to New York opening on the same day.
[3] Average of China Eastern Airlines, China Life Insurance, China Petroleum and Chemical, China Southern Airlines, Guangshen Railway, Huaneng Power International, Sinopec Shanghai Petrochemical, Aluminum Corporation of China and Petro China weighted by their Hong Kong market capitalisation. Shaded area indicates the global financial crisis of September–December 2008.

Sources: Bloomberg; authors' calculations.

Table 3: Ratios of Overseas Share Prices to Local Share Prices and Convergence Speed

	H-A ratio 41 dual-listed companies	H-A ratio 9 triple-listed companies	ADR-A ratio 9 triple-listed companies	ADR-H ratio 9 triple-listed companies	ADR-India ratio 9 dual-listed companies
Period average (%)[1,2]					
Pre-crisis	53.10	53.30	53.30	99.89	128.89
Post-crisis	87.67	79.99	79.93	99.98	108.07
Full sample	64.91	62.29	62.25	99.91	121.64
Estimated half-life (days)[2, 3]					
Pre-crisis	255	125	111	1	35
Post-crisis	109	213	162	1	13
Full sample	259	174	142	1	49

[1] Ratio of overseas share price to equivalent local share price for cross-listed companies; weighted average based on Hong Kong market capitalization for China and domestic capitalization for India.
[2] The full sample period is between 15 March 1999 and 31 December 2013; the crisis period is between September and December 2008.
[3] Based on estimation of Equation 4 in the text; see Annex 1 for details.

Source: Bloomberg; authors' estimations.

as –ln(2)/ln(1 + ß). Table 3 shows mixed results, though for both the Chinese and the Indian markets, the half-life fell in half of the cases after the GFC, indicating more integration (Ma and McCauley 2013). Again on this measure, the Chinese equity market on average remained three to five times more segmented than the Indian equity market. In contrast to the instantaneous arbitrage between New

York and Hong Kong,[4] that between New York and Mumbai takes weeks and that between Hong Kong and Shanghai takes months.

IMPLICATIONS FOR CAPITAL ACCOUNT OPENING

In this section, we draw implications from our findings of price gaps for capital account opening, focusing on China's case. Studies of the likely profile of China's international assets and liabilities over the medium-term given capital account opening highlight the scope for net private outflows of portfolio and direct investment. On the direct investment front, China's long-standing welcome for foreign companies contrasts with the quite recent adoption of the policy to encourage outward direct investment, particularly in commodity production. Limits on outward portfolio investment were eased just before the GFC and to this day the limits do not bind; but the upshot is that private portfolio claims on the rest of the world's stocks and bonds remain low, and the potential increase appears huge as the capital account opens up and the income level rises.

He et al. (2012) and Bayoumi and Ohnsorge (2013) present reasonable medium-term outlooks for a rise in net private external assets in the event of a full capital account liberalization in China. Both project big increases in gross positions, assets and liabilities alike, and both predict private assets would increase more than liabilities. Thus, both foresee that on net China should be expected to experience net private capital outflows following thorough capital account liberalization. Such net outflows would not necessarily put downward pressure on the renminbi's value if the current account remains in surplus, or if offset by a policy of a drawdown of the sizeable official reserves.

Limits on outward portfolio investment were eased just before the GFC and to this day the limits do not bind; but the upshot is that private portfolio claims on the rest of the world's stocks and bonds remain low, and the potential increase appears huge as the capital account opens up and the income level rises.

There are some differences between these exercises. He et al. (2012) examine both direct investment and portfolio stocks, and their result is driven by the legacy of asymmetric capital controls (with acquisition of external assets by private Chinese more tightly controlled, especially in direct investment), financial market development in China and higher growth there. They project a larger step-up in direct investment net assets of 10 percent of GDP than that in net port-

4 Or a sample average of one to two days for emerging markets in Levy-Yeyati et al. (2009, 444).

Table 4: Impact of Capital Account Liberalization in China on Direct and Portfolio Investment (stock adjustment as percentage of GDP)

	Bayoumi & Ornsorge (2013)		He et al. (2012) I 2020	*Memo: Actual 2010*
		Adjusted for smaller domestic stocks		
FDI assets			21.6	*5.3*
FDI liabilities			11.2	*25.1*
Net FDI			10.4	*–19.8*
Portfolio assets	15.4–24.9	9.4–15.1	24.2	*4.3*
Portfolio liabilities	1.7–9.9	1.7–9.9	16.4	*3.8*
Net portfolio	10.7–8.1	4.1–8.2	7.7	*0.6*

Source: Bayoumi and Ornsorge (2013:28); He et al. (2012:29).

folio assets, of 8 percent of GDP (Table 4). Bayoumi and Ornsorge (2013) analyze portfolio stocks only and find the increase in net private assets could result from an increase in gross portfolio assets of 10–25 percent of GDP and gross liabilities of 2–10 percent of GDP (Table 4). The resulting increase in net portfolio assets of 11–18 percent of GDP exceeds the 8 percent estimate of He et al. (2012).[5]

Policymakers, however, have to be concerned about not only the medium-term resting place or steady state, but also the dynamic path, as well as the volatility realized along it. Both papers neglect the banking flows, which can be huge and volatile. This is understandable since the cross-country pattern of external bank assets and liabilities is hard to account for in standard modeling exercises.

Moreover, these exercises based on stocks of financial assets and liabilities do not allow prices themselves to be a major driver of both portfolio and banking

5 If the domestic equity market is adjusted for untraded shares and the domestic bond market is adjusted for bank-held bonds then Bayoumi and Ornsorge (2013) put the stock adjustment at only 4–8 percent of GDP. Any such projected net portfolio outflows or build-up in net private external assets could easily be accommodated by the official sector running down the large foreign exchange reserves resulting in a rebalancing between private and public portfolios. The privatization of China's foreign assets should be seen as a natural consequence of allowing the private sector greater scope to buy foreign stocks and bonds (Ma and McCauley 2014).

flows in the short term. Our evidence on the onshore/offshore price gaps may help shed light on possible short-term dynamics of capital flows upon full capital account liberalization. In brief, we find that the inflow pressure in the money market is very strong in China, in sharp contrast with the medium-term prospect for portfolio and direct investment outflows.

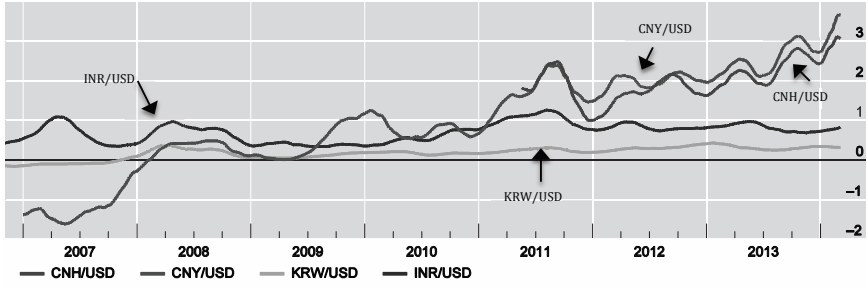
In particular, we have shown that the binding capital controls allow differences in forward exchange rates onshore and offshore, and also in onshore and offshore short-term interest rates. These price gaps tend to favor net private capital inflows rather than outflows, since the same financial instrument is priced cheaper onshore than offshore.

Moreover, the portfolio inflow pressure can be seen more clearly by consulting an *ex ante* measure of the risk-adjusted return on money-market carry trades. We take the short-term interest rate differential as a ratio of short-term volatility implied in currency options—a simple version of the Sharpe ratio. Figure 5 shows how attractive an open Chinese money market would be at recent levels of currency volatility. With three-month Shibor at 5 percent and Libor at 0.25 percent and the implied volatility of the renminbi at less than 2 percent, nonresidents would be strongly attracted to the Chinese money market.

Indeed, our simple Sharpe ratio for the renminbi averages 3.5 in recent months, compared to a range of 0.3 to 0.8 for other major emerging market currencies shown in Figure 5. Thus, the renminbi clearly represents an extremely attractive target among all the major emerging-market currencies for carry traders,

Figure 5: Sharpe Ratios

Lagged 60 business-day moving average



Note: Defined as the three-month interest rate differential (Shibor for renminbi, Mibor for rupee, 91-day certificate of deposit for won and Libor for dollar) divided by the implied volatility derived from three-month at-the-money exchange rate options for the relevant currency pair.

Sources: Bloomberg and BIS staff calculations.

suggesting substantial pressures from inward bank and bond flows into China, at least in the short term. Even the increase in implied volatility associated with the mild renminbi depreciation around the widening of the renminbi daily trading band in mid-March 2014 left the carry-to-risk ratio very attractive (see below).[6]

We have illustrated the strong incentives for fixed income inflows at the three-month tenor, but the problem extends out the yield curve, albeit to a lesser extent. That is, the Chinese Government's yields exceed the U.S. Government's yields all the way out to 10 years and beyond. Since the Chinese yield curve is on the flat side, the yield gap narrows with maturity.

Near-term developments will not necessarily lessen the attraction of the Chinese money market. While the normalization of U.S. dollar rates would tend to narrow the gap with Chinese yields, the liberalization of interest rates in China is expected to widen it. He et al. (2014) use a variety of approaches to conclude that equilibrium yields in China could be 2.5–3 percent higher from the current regulated level. Such a rise would take the Chinese yield curve to 5–6 percent at the short end and 6–7 percent at the long end. On the U.S. side, Laskey and Whalen (2014) of the Congressional Budget Office project that the U.S. Federal Reserve will take short-term rates up to 3.5 percent later in this decade while 10-year Treasury yields will rise to five percent. How precisely these two yield curves will relate to each other as normalization and liberalization play out is difficult to predict; but pressure from inward capital flows, especially at the short end, is a serious near-term prospect in light of a more liberal Chinese capital account. Thus, while domestic financial liberalization is often considered a prerequisite for further external financial opening, it can add to its immediate challenges.

The renminbi clearly represents an extremely attractive target among all the major emerging-market currencies for carry traders, suggesting substantial pressures from inward bank and bond flows into China, at least in the short term.

Our findings yield two useful insights for Chinese policymakers mandated to manage the task of capital account liberalization. First, the contrast between our short-term inflow pressures and the consensus medium-term outflow pressures could potentially imply volatility along the path towards full capital account openness. Policymakers need to carefully negotiate this risk-laden process.

6 Note that in contrast, although India's money-market rates at 8 percent are much more attractive taken in isolation, when the volatility of the rupee/dollar rate is factored in, the carry is not so attractive.

Ocampo and Erten (this volume) suggest Chinese policymakers could first suspend the existing capital controls as a way to open up the capital account, without scrapping all the underlying institutional arrangements and control tools. At least, stronger and more transparent reporting and statistical systems could be put in place so that broad market positions and cross-border flows can be tracked in a timely and systematic fashion.

Second, a sustained increase in exchange rate variability ahead of substantial capital opening could serve to render the renminbi a less attractive carry-trade target. The PBOC's widening of the permitted daily trading band from 11 percent to 12 percent in March 2014 clearly worked in this direction: the Sharpe ratio for the renminbi more than halved. More exchange rate risk would help tip the balance from short-term inflow pressure to medium-term outflow pressures.

SUMMARY

In this conclusion, we recap the evidence bearing on our four hypotheses. We also draw implications.

First, both the Chinese and the Indian economies are opening up. Our price evidence clearly questions the relevance and usefulness of the Chinn–Ito indices of *de jure* controls. Advancing financial integration is allowing policymakers to gain both experience and confidence, facilitating rather than impeding an acceleration of desired capital account liberalization.

Second, we find that India is more open than China. Thus we challenge Chinn and Ito's index, which suggests that China and India restrict capital flows to a similar extent. And we question Lane and Milesi-Ferretti's ranking of China as the more open economy.[7] On balance, the capital opening task is bigger for China than for India.

Why has India been hitherto more financially open than China? The answer could lie in a mix of the need to fund current account deficits in India, the greater rigor with which the controls are enforced in China, the longstanding multinational operations of Indian private firms to arbitrage onshore and offshore markets (Subramanian 2009), and a larger footprint of global banks in the

7 We hope researchers will use these measures with greater care, even skepticism, and will look for new measures. The Chinn–Ito measure in particular is not clearly fit for the purpose to which it is often put. Moreover, there is little reason to think that 'the most finely gradated' (Quinn et al. 2011, 492) measure of Schindler (2009) does not suffer from the same fundamental drawback. Looking at types of regulation does not reveal how restrictive they are, much less how restrictive they are in practice. De facto is the way to go.

Indian domestic banking market. Future research could weigh these explanations (Ma and McCauley 2013).

Whatever the cause of this longstanding difference, our evidence suggests China is catching up fast, meaningfully eroding India's lead. As a policy intention, the paced internationalization of the renminbi has no counterpart in India. By creating a pool of renminbi bank accounts and bonds outside the Chinese mainland and allowing for offshore delivery of the renminbi, this policy is also punching holes in the capital controls through which arbitrage transactions can pass. In fact, the renminbi internationalization has been viewed by some as a part of the capital account liberalization drive in China (Zhang 2014).

Third, an important conclusion of our study is, however, that on all three measures both the Chinese and the Indian economies have a way to go in terms of liberalizing their capital accounts. Policy continues to segment onshore and offshore markets in both cases. More consistent opening movements lately in China may support its capital account liberalization momentum.

Chinese policymakers need to take into account the risks of such dynamics and volatility on the journey to capital account liberalization. The contrast between possible short-term net inflows and projected medium-term net capital outflows upon liberalization may amplify the potential volatility.

Fourth, while the consensus medium-term prospect is for an increase in net private external assets for China, our findings of onshore/offshore price gaps across three important financial markets point to potential pressure from large inward capital flows in the event of full capital opening. In particular, the renminbi and money-market instruments have been priced cheaper onshore than offshore, while the premium of onshore share prices of Chinese companies had disappeared by 2013. Indeed, the renminbi was among the most attractive carry-trade targets until the volatility around the latest trading-band widening in March 2014. The full implications of this greater flexibility remain to be seen. The longer end of the renminbi yield curve could also attract substantial inflows with current and prospective yields. Therefore, our price gap evidence raises questions about the dynamics and volatility of net private capital flows during the process of a Chinese full capital account liberalization.

Chinese policymakers need to take into account the risks of such dynamics and volatility on the journey to capital account liberalization. The contrast between

possible short-term net inflows and projected medium-term net capital outflows upon liberalization may amplify the potential volatility.

Initially large inward portfolio and banking flows could interact in unpredictable ways with existing imbalances in the domestic financial system. Financial imbalances can build up over the longer financial cycles that are not simply operating at business-cycle frequency (Drehmann et al. 2012). In China, the government-sponsored investment and the credit boom of 2008–09 (which responded to the fallout from the boom–bust cycle in U.S. real estate) has lifted credit in China and raised the amount of credit in the system. Total credit to the non-financial private sector as a ratio to GDP, including the fast expanding shadow banking, rose by more than 60 percent in the wake of the GFC, from below 120 percent in 2007 to above 180 percent in 2013. This could be a sign of increased financial vulnerability (Drehmann et al. 2012).

Financial imbalances and vulnerability could trigger capital outflows in a more liberalized environment. The response of liberalized bank flows to a situation in which dollar rates remain low, Chinese rates are tending higher and the exchange rate expectations show stability or an appreciation bias could be sizable. By the same token, a clear turn in the financial cycle in China, arguably in its late stages already, and the prospect of big credit losses in China, in combination with normalization of U.S. dollar rates, could risk a substantial private capital outflow from China. Such net private capital outflows would fundamentally differ from a desired and benign increase in the net Chinese private external claims on the rest of the world over the medium term.

Under the circumstances, policymakers need to be concerned not only about the immediate money-market yield differential and its relation to exchange rate volatility, but also about the hard-to-predict outcome of the surge of credit in China. These considerations do not argue against incremental capital opening but at a minimum they argue for keeping a strong measurement system in place so that the authorities do not find themselves flying blind.

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2. Capital Account Liberalization: Japan's Experience and Implications for China

Kenji Aramaki

ABSTRACT

Japan took nearly 40 years from the 1960s to '90s to complete liberalization of its capital account. Major characteristics of this process included cautious sequencing, use of banks as a management mechanism, and a neutral position for internationalization of the yen. During the process, Japan frequently had to use regulatory measures to cope with unstable capital flows in the 1960s to '70s. China has been gradually easing regulations on capital account transactions while maintaining overall regulatory framework intact. However, the pace of liberalization has been accelerated after entering the 2000s, and this is particularly true for the internationalization of the renminbi. In light of Japan's experience, three questions are raised: First, how does China intend to control the concomitant risk of liberalization? Instability of capital flows seems to have become the reality for China. Second, why does China promote internationalization of the renminbi? Is it based on an objective assessment of economic benefit/cost and risk or on a political judgment? Third, which does China choose between the stable exchange rate and free flow of capital if it cannot give up independence of monetary policy?

Japan took nearly 40 years from the 1960s to '90s to complete liberalization of its capital account. Major characteristics of this process included cautious sequencing, use of banks as a management mechanism and a neutral position for internationalization of the yen.

CAPITAL ACCOUNT LIBERALIZATION IN JAPAN

Process of Capital Account Liberalization and Its Characteristics

Legislative Framework and Its Major Features

After the end of the war, two laws, i.e., the Foreign Exchange and Foreign Trade Management Law ("Foreign Exchange Law"1949), which comprehensively managed both foreign exchange and trade, and the Law Concerning Foreign Capital

("Foreign Capital Law"1950), which aimed at promoting inflows of high-quality long-term foreign capital, regulated foreign exchange and capital account transactions in Japan. This regulatory framework, while placing imports under the approval system, had very restrictive features including:

1) A principle of general prohibition with liberalization for exceptions was adopted with permissions given by cabinet and ministerial ordinances or by specific authorization

2) The foreign exchange centralization system was adopted, under which the government centrally controlled all foreign currency

3) A foreign exchange budget system which regulated the amounts and items that could be imported was adopted

4) Authorized foreign exchange banks were used as a mechanism for controlling foreign-exchange and capital account transactions.

Overall Process
A three-stage liberalization (or "Liberalization in three stages")
Substantive capital account liberalization was started in the early 1960s and liberalization was completed in the late 1990s, nearly 40 years later. The whole process may be divided into the following three stages.

1st stage: Liberalization of trade and current account transactions.

In 1960, the government adopted "the Basic Plan for Liberalization of Trade and Foreign Exchange," which called for an increase in the import liberalization rate and the general liberalization of current-account transactions within two years. In 1964, Japan's import liberalization rate reached the same level of Western countries. In April of that year, Japan accepted the IMF Article VIII status, abolished the foreign exchange budget system, and in principle liberalized current account transactions.

2nd stage: Gradual liberalization and a major shift to a system of general liberalization.

The aforementioned basic plan showed a cautious stance on liberalization of capital account transactions, by simply stating "Regulations shall be eased gradually". Under such a stance, transactions including foreign direct investment and portfolio investment were liberalized gradually from the latter half of the 1960s. In May 1972, the foreign exchange concentration system was abolished

and holdings of foreign exchange by residents were liberalized. Furthermore, in December 1979, the Foreign Exchange Law was thoroughly revised, incorporating the Foreign Capital Law and the regulatory principle was changed from general prohibition to general liberalization, by, for example, shifting extensive transactions from under the previous approval system to under a prior notification system.

3rd stage: Abolition of remaining restrictions and completion of capital account liberalization.

While the 1979 reform generally liberalized capital account transactions, certain transactions, such as foreign currency denominated lending between residents, were subject to approval. Certain other transactions, including cross-border issuance of securities, were subject to prior notification with examination, under which the transactions in question were prohibited for a pre-specified period and an order to change or suspend the transaction may be issued based on the result of examination. Furthermore, a system of emergency measures was instituted, under which approval requirements could be introduced for capital account transactions. These provisions intended to retain a regulatory framework for the unlikely adverse event, while committing to the principle of liberalization. The emergency measure was never resorted to and, in May 1997, a number of drastic changes were made by another revision of the Foreign Exchange Law, including the general abolishment of the system of approval/prior notification of capital account transactions while maintaining emergency measures, and the liberalization of foreign-exchange business, thus completing liberalization of capital account in Japan.

Through this three-stage process, all the main features of postwar regulatory framework mentioned earlier have been eliminated (or substantially modified): the foreign exchange budget system (eliminated in 1964); foreign exchange concentration system (eliminated in 1972); the system of general prohibition (eliminated by 1979 revision); and use of authorized foreign exchange banks as management instruments (the 1997 revision greatly reduced the management function of banks).

MAJOR CHARACTERISTICS OF LIBERALIZATION PROCESS

The major characteristics of the process of capital account liberalization are as follows (Table 1).

Table 1: Sequencing of Japan's Liberalization of Foreign Exchange and Capital Account Transactions

	Trade	Foreign exchange and capital account transaction	Finance
1940s〜50s Establishment of single exchange rate ($1=\360) (Apr. 1949)	Complete management of trade by government (Dec. 1945) Under the Foreign exchange law, ① imports placed under approval system and ② foreign currency budget system adopted	Under the Foreign Exchange Law (Dec. 1949), ① a principle of general prohibition on foreign exchange and capital transactions with freedom as exceptions, ② the foreign exchange concentration system and ③ the use of authorized foreign-exchange banks as a management mechanism adopted	(Control of deposit interest rate, specialized financial institutions system)
1960s Accession to OECD membership (Apr.1964) Trade balance started to stably record surplus (from around mid-1960s)	Cabinet adopts "the Basic Plan for Liberalization of Trade and Foreign Exchange" (Jun. 1960) (aimed at raising import liberalization rate (40% as of Apr. 1960) to roughly 80% within 3 years) Import liberalization rate of 93% achieved (Apr. 1964) (level of Western countries reached)	Under "the Basic Plan", current account transactions to be liberalized within two years, and regulations to be gradually eased on capital account Liberalization of use of yen for external payments (Jul. 1960) Introduction of non-resident free yen accounts (Jul. 1960) Japan moves to IMF Article VIII status (Apr. 1964) Abolishment of foreign exchange budget (Apr. 1964) "First foreign capital liberalization package" (Jun. 1967)(start of major liberalization of inward foreign direct investment) Easing of regulations on portfolio investment in Japanese stocks (Jul. 1967) Introduction of yen conversion limit (Feb. 1968) Start of liberalization of outward foreign direct investment (Oct. 1969)	
1970s "Nixon Shock" (15 Aug. 1971) Yen tentatively moves to float (27 Aug. 1971)	Import liberalization rate of 95% achieved (Apr. 1972) (import liberalization substantively completed)	Start of liberalization of outward portfolio investment in securities (Apr. 1970) Abolishment of foreign exchange concentration system (May 1972)	Introduction of CDs (with liberalized interest rate)(May 1979)(start of deposit interest rate liberalization)

Cautious Sequencing of Liberalization by Type of Transactions

The sequence of liberalization by transaction type has the following features:

- Substantive liberalization of capital account transactions started after the liberalization of current account transactions.
- Liberalization of inward investment led to the liberalization of outward investment.

Smithsonian Agreement (18 Dec. 1971); $1 set to /308 (19 Dec. 1971) Yen floated (14 Feb. 1973) First oil shock (Oct. 1973) Second oil shock (Dec. 1978)		Outward foreign direct investment in principle liberalized (Jun. 1972) Completion of liberalization of inward foreign direct investment (Jun. 1975) Comprehensive revision of Foreign Exchange Law (Dec. 1979)(shift to the principle of general liberalization of capital account transactions, approval/prior notification system for certain transactions and emergency measures introduced)	
1980s The "Yen-Dollar Committee" Report (May 1994) The Plaza Accord (Sep. 1985)		Liberalization of euro yen lending (Jun.1983~Jul.1986) Elimination of Real demand rule relating to forward exchange transactions (Apr. 1984) Liberalization of external yen lending (Apr.1984) Elimination of yen conversion limit (Jun. 1984) Permission of euro yen bond issuance by non-residents (Dec. 1984)	
1990s		Revision of Foreign Exchange Law (May 1997)(approval/prior notification requirements in principle eliminated, changed to after-the-fact report system, liberalization of foreign exchange business (abolishment of authorized foreign exchange bank system)	Establishment of Law Relating to the Reform of the Financial System (Jun. 1992)(enables banks, securities firms, and trust banks to enter each other's businesses through establishment of subsidiaries) Completion of liberalization of interest rate (Oct. 1994) Ordinary banks allowed to issue bonds (Oct. 1999)(abolishment of separation system between long-term and short-term financial institutions)

- Liberalization started with direct investment and proceeded to other transactions.
- Some transactions, such as cross-border securities issuances, were treated cautiously.

Use of Foreign Exchange Banks as a Mechanism for Foreign Exchange Control
Under the Foreign Exchange Law, authorized foreign exchange banks played a major management role by tracking overseas transactions, and verifying their legal appropriateness. These functions were basically maintained even after the

1979 reform. The revised law also had a provision to exempt requirements of approval or prior notification if the transaction in question was carried out by authorized foreign exchange banks or designated securities firms. It was only after the reforms of 1997, which eliminated the authorized foreign exchange bank system, that the use of banks as a foreign exchange management mechanism was significantly reduced.

Neutral Stance for the Internationalization of the Yen

Regarding the internationalization of the yen, the use of yen for foreign payments, was allowed and the non-resident fee yen account was introduced in July 1960, at a very early stage of Japan's liberalization process. Non-residents could deposit into this account not only those payments in yen they received for current account transactions such as importation to Japan but also those yen that they obtained through the sale of foreign currency to banks. By this treatment, a channel was opened for the first time for the inflow of short-term capital.

The internationalization of the yen progressed gradually in the 1970s, but the level of international use of the yen was still relatively low. The stance of government at that time seems to be a kind of neutral one; the internationalization of the yen would proceed as a result of internationalization and liberalization of Japan's economy and the government should not employ intentional measures to promote it. Behind such a stance, there might have been a concern for disruptive effects of non-residents' holdings of domestic currency on domestic finance and exchange rates.

What evoked extensive debates on the internationalization of the yen was the so-called "Yen-Dollar Committee Report" in May 1984. The U.S. argued that the yen/dollar exchange rate issue underlying the trade imbalances between Japan and the U.S. was caused by the lack of appropriate valuation of the yen due to the closed nature of Japan's financial and capital markets and that Japan needed to liberalize financial and capital markets and internationalize the yen. In relation to the former, Japan took a position that liberalization of financial and capital markets was beneficial to Japan's economy and therefore Japan would cope with the issue on its own initiative. As for the latter, Japan took a position that may be described as a "Natural Evolution" approach under which the internationalization of the yen was thought to proceed basically as a result of choice made by parties concerned in transactions, and the role of policies was to remove barriers to the use of the yen when parties concerned chose to use it.

Japan implemented measures included in the report, and the internationalization of the yen progressed to a certain extent in the latter half of 1980s. However, against the background of stagnation of Japan's economy, the international role of the yen stayed low or decreased in the 1990s. From 1998 onward, the government took a position to promote the internationalization of the yen for such goals as enhancing competitiveness of Japan's financial and capital markets, though such goals were not adequately met.

REGULATORY RESPONSE TO UNSTABLE CAPITAL FLOWS

Overview

While substantial liberalization of capital account transactions were implemented from the 1960s to 1970s, the Japanese economy was exposed to extremely unstable capital flows against the background of major external shocks that took place in the international financial markets, and the government was forced to cope with the instability. (Figure 1, p. 40)

Regulatory Response to the Instability of Capital Flows

Response to short-term capital inflows around the "Nixon Shock": Periods I & II (1965–1975)

While the regulatory framework after World War II encouraged capital inflows, control of capital inflows became a major policy agenda in the late 1960s.

As authorized foreign exchange banks provided one of the main channels for short-term capital inflows from the early 1960s, in the late 1960s regulations were introduced, such as requirements for foreign-currency reserves on external short-term debt and restrictions of outstanding balance of foreign short-term borrowing. In February 1968, a yen conversion limit (a type of oversold position limit), setting a maximum limit on the value of foreign currency assets that could be converted into yen, was instituted.

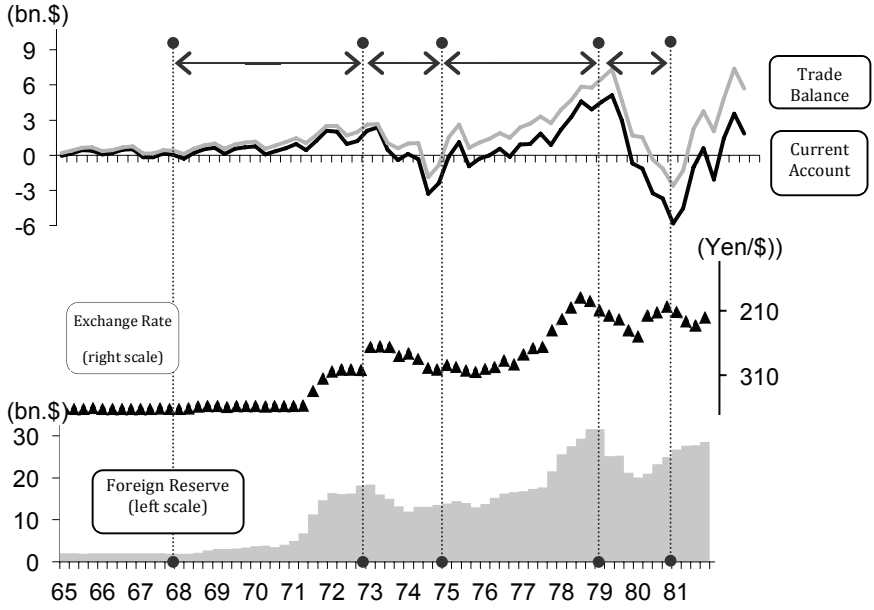
Despite these measures, however, there was a sudden surge in the inflow of short-term capital. This inflow generally took three forms:

1) opening of free-yen accounts;

2) purchase of public/corporate bonds by non-residents; and

3) a massive inflow of export prepayments.

Figure 1: Japan: Short-term Capital Controls and Developments in Balance of Payments, Exchange Rate, and Foreign Reserves 1965-1981



Source: MOF "Balance of Payments" IMF International Financial Statistics

The government responded by introducing the maximum limit on the outstanding balance of free-yen accounts, a de-facto ban on the acquisition by non-residents of certain securities and a prohibition of the conversion into yen of foreign currency received as prepayments.

A switch to a policy of encouraging capital inflows after the first oil shock: Period III (1975–79)

While most of these measures were subsequently relaxed, Japan's balance of payments substantially deteriorated after the move to a float, amidst rising inflation caused by a policy of economic expansion, and the yen started to significantly depreciate after the breakout of the first oil crisis in October 1973. In response to this development, the government changed the direction of foreign exchange management policy by 180 degrees from the one discouraging inflows to the one encouraging inflows, by, for example, significantly lowering the deposit reserve rate for increases in free yen account balances.

A return to a strengthening of inflow restrictions consequent to the resurgence of short-term capital inflows: Period IV (1979–81)

Regulations were eased as Japan's current account almost restored the balanced position in the latter half of 1974. However, a massive inflow of short-term capital resumed from October 1977 and restrictive measures on capital inflows were strengthened again, including imposition of a deposit reserve rate of 50 percent on increases in non-resident free yen accounts (increased to 100 percent in 1978).

A return to a policy of encouraging capital inflows in response to the independent fall of the yen consequent to the second oil crisis.

Conversely, when the second oil shock occurred in 1979 and the yen independently followed a downward path, the subsequent measures taken to encourage the inflow of capital included lowering the deposit reserve rate for increases in free-yen accounts (100 percent to 50 percent, then to 0 percent).

Subsequent Situations

Thus, from the end of the 1960s through the 1970s, the government was engaged in a series of policy reversals on regulations on foreign exchange and capital account transactions, in order to prevent the short-term capital flows from destabilizing the market under significant shocks. But this policy was also a subject of much criticism domestically and abroad.

From the end of the 1960s through the 1970s, the government was engaged in a series of policy reversals on regulations on foreign exchange and capital account transactions, in order to prevent the short-term capital flows from destabilizing the market under significant shocks.

SUMMARY

The key points of Japan's experience as discussed above include:

- Substantive capital accounts liberalization started in the early 1960s and liberalization was completed in the late 1990s, taking nearly 40 years. It proceeded through three stages: current account liberalization, a switch to a generally liberalized system, and abolition of remaining restrictions.
- With regard to the type of capital account transactions, the liberalization of inward investment generally preceded the liberalization of outward investment; liberalization of direct investment preceded to liberalization of other investment; and investments with higher risk were treated cautiously until the last stage of liberalization.

- Almost throughout the liberalization process, the authorized foreign exchange banks were used as an effective foreign exchange management mechanism.
- Non-resident free-yen accounts were introduced at an early stage, and later became one of the key channels for the short-term capital inflows. Portfolio securities investment and trade-related payments also became key channels for the short-term capital flow.
- Regulatory measures were frequently adopted in order to manage short-term capital flows and seem to have had certain effects in preventing market instability.
- Regarding the internationalization of the yen, while the yen settlement was allowed as early as 1960, and the government made efforts to remove obstacles to internationalization of the yen partly in response to the request from the U.S., international use of the yen has not come to the level that matches the size of Japan's economy.

IMPLICATIONS FOR CHINA

Characteristics of China's Capital Account Liberalization and Commonality with Japan

Around the mid-1980s, not many years after the adoption of market-opening reform policy in 1978, China had total state control of external transactions. Subsequently, it liberalized the current account transactions in 1996, and gradually liberalized capital account transactions, while maintaining its overall regulatory framework.

In terms of the three-stage division of Japan's liberalization process, China's liberalization has passed the first stage and is now in the second stage. Regarding characteristics of liberalization process, there are many commonalities, including the adoption of a firm gradualism, and sequencing of liberalization by type of transactions with inward direct investment coming first and the cautious treatment given to risky investment. China's liberalization has been somewhat accelerated since the 2000s, but the most distinctive feature is the fact that the pace of liberalization regarding the internationalization of the renminbi seems to be faster than the pace of liberalization in other areas.

Implications from Japan's Experience

(a) Control of risk

In liberalizing a capital account, the most important thing is control of concomitant risk. Instability of capital flows varies depending on the type of transactions, and in Japan's experience, important unstable inflow channels included capital flows through foreign exchange banks, purchase of securities by non-residents, and trade-related capital flows. The following are important considerations regarding risk control:

First, the effective management of unstable capital flows will be enhanced if capital transactions are conducted only through financial institutions including banks.

Second, if such unstable capital flows are to be liberalized, thought should be given to whether such indirect measures as reserve ratio or foreign exchange position limit are sufficiently effective in managing capital flows. In the case of Japan, it was direct quantitative measures that finally effectively managed short-term capital flows in turbulent periods. A decision must be made whether or not to maintain such quantitative regulatory tools for risky flows.

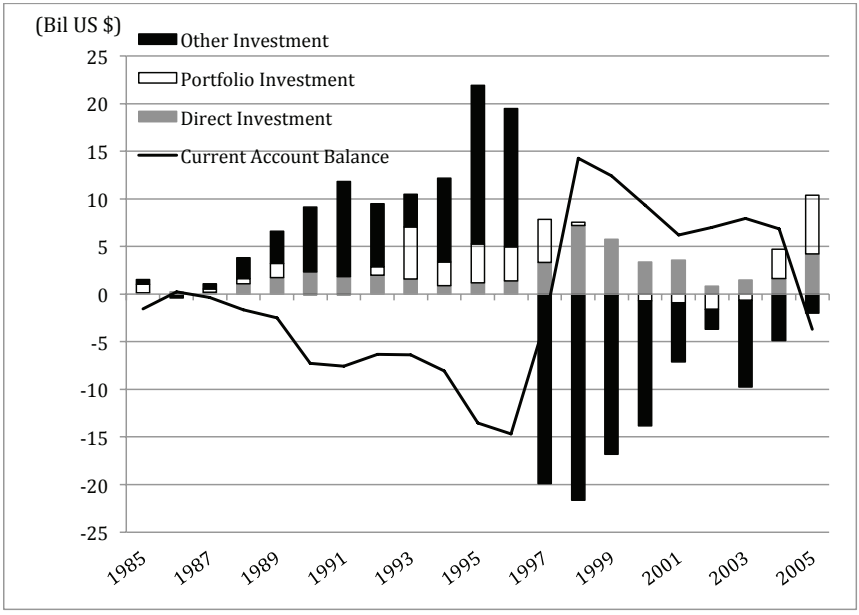
Third, consideration must be given to maintaining a regulatory system for the unlikely adverse events as was instituted in the 1979 reform in Japan. In this regard, it is noteworthy how China will handle negotiations of a bilateral investment treaty with the U.S. The U.S. insisted to the very final stage on total abandonment of capital transaction regulations in the negotiations with Singapore and Chile, and this became a major issue.

Regarding the risk control, it should be noted that, in the case of Thailand before and after the Asian crisis, the largest source of short-term inflows and outflows was "Other investment," mainly composed of bank credit (Figure 2, p. 44).

The less affected countries in the Asian currency crisis (China, Vietnam, and India) had a system of quantitatively regulating foreign borrowings by banks. While China experienced a significant outflow of "other investment," amounting to -$43.70 billion in 1998 due mainly to the outflow of trade credit, quantitative restriction on foreign borrowing by banks might have helped China weather the serious effects of the crisis.

However, the situation may have changed for China. In 2012, China experienced a huge outflow of other investment amounting to $260 billion. A major part of the

Figure 2: Thailand—Balance of Payments



Source: IMF International Financial Statistics

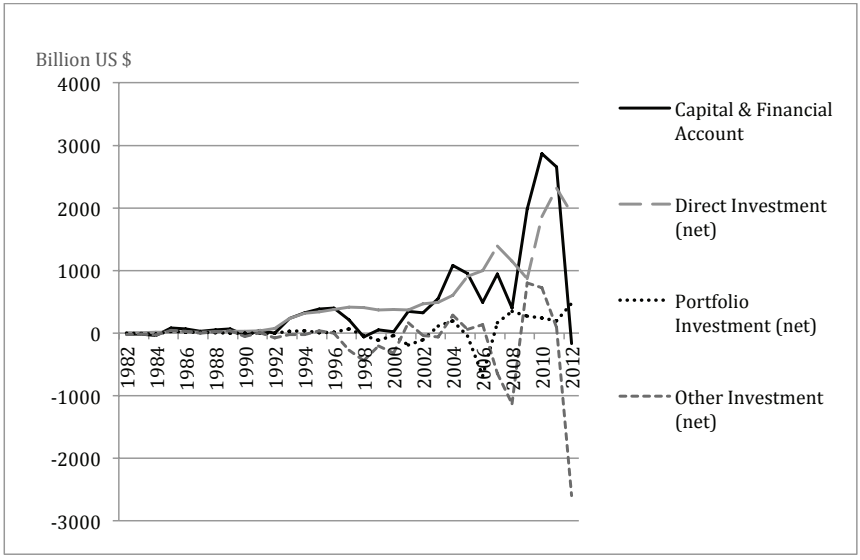
outflow (63.1 percent) was accounted for by currency and deposits, 31.6 percent by loans, and only 7.5 percent by trade credits. Volatility of other investment flows seems to have significantly increased and abrupt reversals of these flows have become a real possibility for China. This will become more acute if non-residents are allowed to hold and dispose the renminbi based on the change in their expectation regarding such factors as future renminbi exchange rate movements.

(b) Internationalization of the Renminbi

As stated before, the pace of liberalization of regulations for increasing use of the renminbi in international transaction seems to be faster than the pace of liberalization in other areas. When promoting internationalization of the renminbi, it is necessary to allow holding and free disposal of the renminbi by non-residents. In light of Japan's experience with the free yen account, free holding of the renminbi by non-residents will lead to an abrupt rise and fall of capital flows, significantly affect liquidity position of financial institutions and the stability of foreign exchange rate, and can also influence effectiveness of monetary policy.

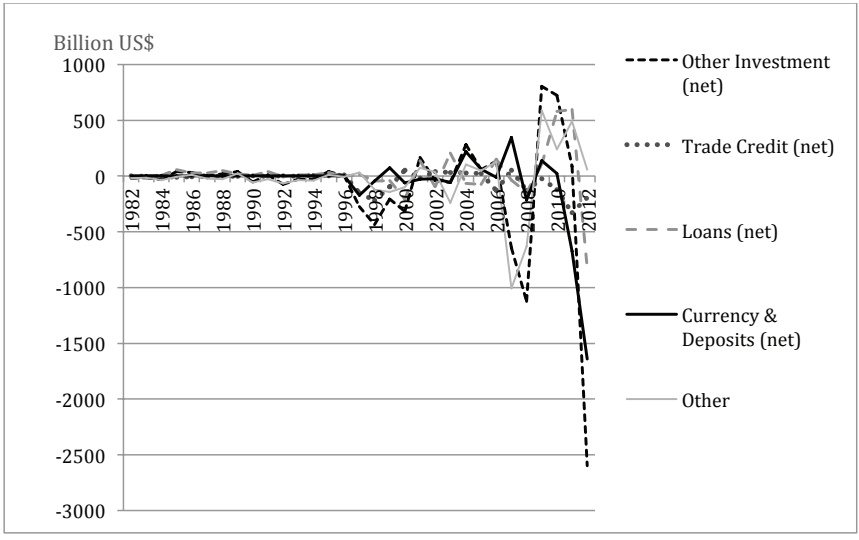
Furthermore, as was observed in the discussion at the time of the Yen-Dollar Committee, it is difficult to promote internationalization of a currency separately

Figure 3: China—Capital and Financial Account (1982–2012)



Source: SAFE, Chinese Government

Figure 4: China—Breakdown of Other Investment Flows (1982-2012)



Source: SAFE, Chinese Government

from the liberalization of domestic financial and capital markets. We may note that liberalization of interest rate was started in 1979 and completed in 1994, i.e., overlapped with the third stage of capital account liberalization. Also, the

specialized financial institutions system, which included a separation between commercial banks and long-term credit banks, was abolished by the end of the 1990s. Capital account liberalization means dismantling of barriers between liberalized overseas markets and regulated domestic markets, and therefore, makes liberalization of domestic markets inevitable.

The objectives of the policy of promoting internationalization of the renminbi need to be clearly defined. Is it for economic goals based on assessment of benefits/costs and risk, or for political goals such as strengthening autonomy of the nation?

(c) Foreign Exchange Rate Determination System

Under what is called the "Impossible Trinity" argument in international finance, it is not possible to achieve three goals at the same time: stability of exchange rate, free flow of capital, and independent monetary policy. In other words, a country has to choose two out of three goals. If we assume that China, as a big economy with its own economic cycle, cannot give up independent monetary policy in the same way as Japan, it has to choose either free capital flows or a stable exchange rate. While it may not be a choice between all or nothing and there may be some middle ground in between, it must be asked whether China is ready to modify its currently very stable exchange rate regime (classified as a crawl-like system by the IMF) in accordance with the schedule of capital account liberalization.

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3. Latin America's Lessons from Capital Account Liberalization

José Antonio Ocampo and Bilge Erten

INTRODUCTION

Since the mid-1970s, Latin America has been one of the recurrent victims of boom-bust cycles of international finance. A significant part of that story is, of course, how these cycles have been managed by the region's recipient countries. This includes important episodes of capital account and domestic financial liberalization or regulation, as well as diverging macroeconomic policies, even in the same country over time. From this experience, the region has accumulated major lessons, which have been subject to a significant debate (see, for example, Ffrench-Davis and Griffith-Jones 2011).

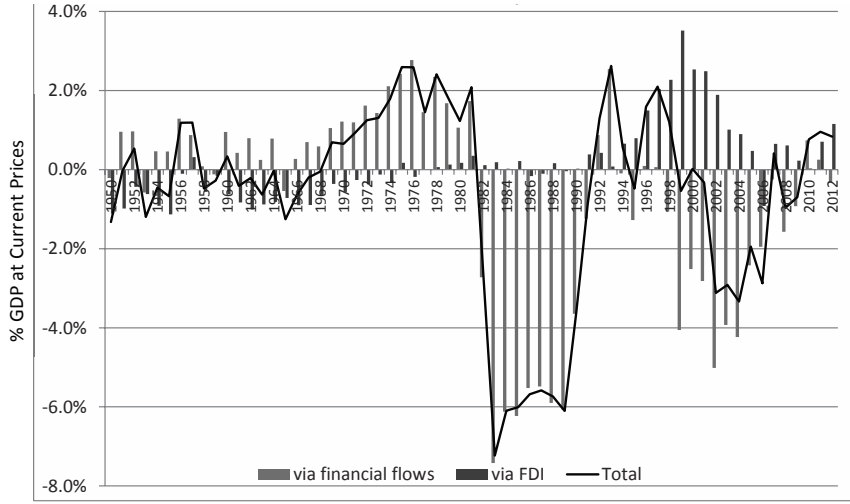
This paper briefly analyzes the experience of Latin America in sailing through the choppy waters of international finance and the effects of capital account liberalization. It focuses on the seven largest economies (referred to here as LA7): Brazil and Mexico, the two largest, and Argentina, Chile, Colombia, Peru, and Venezuela, the mid-sized countries of the region. It is divided into four sections, the first of which is this introduction. The second section looks at the history of boom-bust cycles in international finance and the associated history of capital account regulations and liberalization. The third looks more carefully at the four episodes of capital account abundance that have taken place since the mid-1970s. The last presents brief conclusions.

CAPITAL ACCOUNT VOLATILITY AND MANAGEMENT

Figure 1 (p. 48) presents an overview of the history of capital flows into Latin America over the post-WWII (World War II) period. It presents an estimate of the net resource transfer, defined as net capital flows minus the associated capital services, i.e. interest payments and profit remittances. Due to the absence of significant international private financing until the development of the Eurodollar market in the 1960s, and the limited supply of official financing, capital flows to Latin America were very small until the mid-1960s. They picked up in the

late 1960s and early 1970s but boomed only after the first oil shock, when Latin America became one of the favorite destinations for the recycling of petrodollars.

Figure 1: Net Resource Transfer, 1950–2012



Source: Authors' estimates based on Economics Commission for Latin America and the Caribbean (ECLAC) data.

Since the 1970s, the region has experienced four financial cycles.[1] The first two were intense boom-bust cycles. The first one started in the mid-1970s and was interrupted by the massive sudden stop after the Mexican default of August 1982 that unleashed the Latin American debt crisis of the 1980s. The major mechanism of financing during the boom was syndicated loans from commercial banks. The turnaround of the resource transfer was impressive: from a net positive transfer of around 2 percent of GDP during the boom to a negative one of around 6 percent of GDP during the debt crisis. The second one started with the effective creation of a market for Latin American bonds that was a by-product of the 1989 Brady Plan, and ended with the contagion from the East Asian financial crisis, particularly after the Russian default of August 1998. The boom was interrupted temporarily by the December 1994 Mexican crisis. The turnaround of financial flows was slightly less dramatic than during the previous crisis: from peak resource transfer through financial flows of around 1-2 percent of GDP during the peak years to negative resource transfers of around 3.5 percent of GDP in 1999–2003. Furthermore, on this occasion, large FDI flows helped moderate the bust.

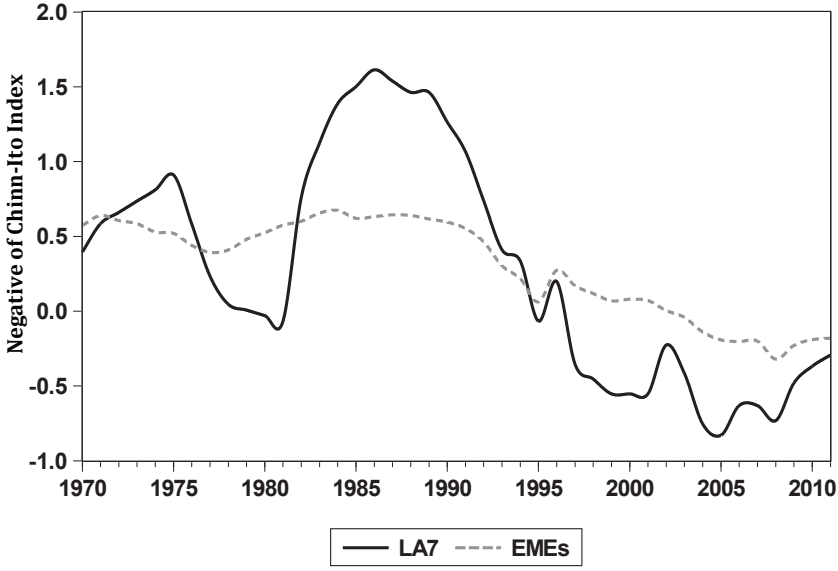
1 Since the 1980s, see Bustillo and Velloso (2013).

In contrast to these major boom-bust cycles, the two most recent ones have been rather moderate in magnitude. The third cycle started in the mid-2000s and ended with the North-Atlantic financial crisis, particularly after the Lehman Brothers collapse of September 2008. The fourth took off in the second semester of 2009 and started to weaken with the announcement of United States' Federal Reserve tapering that began in May 2013.

Like most countries in the world, the practice of Latin America during the first decades post-WWII was extensive foreign exchange (FX) and capital account controls. Among the larger countries, there were two exceptions: Mexico, which accepted, from the very beginning of the history of the IMF, the obligations of current account convertibility, and Venezuela, given its abundant oil resources.

Figure 2 compares the strength of capital account regulations of the LA7 since 1970 to the average of emerging market economies (EMEs), using the negative value of the Chinn-Ito index of capital account openness.[2] (The individual country indices are presented in Annex Table A.1). It shows two periods of capital market liberalization, which coincided with the capital account booms of the second half of the 1970s/early 1980s and 1992–1997. During the first of these lib-

Figure 2: Capital Account Restrictiveness in Latin America (LA7) and EMEs



Source: Negative of Chinn-Ito index of capital account openness. http://web.pdx.edu/~ito/Chinn-Ito_website.htm

2 See Chinn and Ito (2008). For further information, see http://web.pdx.edu/~ito/Chinn-Ito_website.htm

eralizations, Argentina, Chile, and Peru joined Mexico and Venezuela in terms of capital account openness. In contrast, Brazil and Colombia remained relatively closed. On average, the LA7 were more closed than EMEs in the mid-1970s but had become more open by the early-1980s. Capital account liberalization was matched by domestic financial liberalization in several countries, which was particularly sharp in Argentina and Chile. This liberalization phase came to a close with the debt crisis of the 1980s, which led even the traditional liberalizers, Mexico and Venezuela, to close their capital accounts.

The liberalization of the 1990s was broader-based, as it also included Brazil and Colombia. Nonetheless, these two countries, together with Chile, developed new instruments to regulate capital flows: a system of taxes on capital flows in Brazil, and unremunerated reserve requirements (URRs) on capital inflows in Chile and Colombia. They were complemented with other regulations on FX transactions, which included restrictions on domestic financial deposits in foreign currency. In contrast, Argentina and Peru ended up with semi-dollarized domestic financial systems, a legacy of their own hyperinflations of 1989 and 1990; this was not the case of Brazil, which went through its own hyperinflation in the early 1990s. The other four countries did not experience hyperinflation[3] and never ended up with semi-dollarized domestic financial systems. Overall, as a result of the liberalization of the 1990s, Latin America came back to consistently having a more liberalized capital account than the average of EMEs.

In contrast with the liberalization of the 1970s/early 1980s, this one was only reversed in Argentina and Venezuela, in the first case as a result of the collapse of its convertibility system and default on its external debt in 2001–2002, which also eliminated the semi-dollarization of its financial system. In contrast, Chile further liberalized its capital account and has not used URRs since the late 1990s, due in part to its free trade agreement (FTA) with the U.S. The disparity between countries that further liberalized and those that adopted stronger regulations widened during the capital account boom of 2003–2008. Based on the Chinn-Ito index, Brazil, Chile and Colombia further liberalized their capital account during the boom, as Argentina and Venezuela continued to build up more restrictive policies. However, Colombia again used URRs in 2007–2008; it is now more constrained to do so due to its recent FTA with the U.S. Peru started to actively regulate inflows through differential reserve requirements on deposits in dollars and (since 2004) short-term borrowing abroad by domestic banks

3 Chile also underwent a period of three-digit inflation in 1973-76, Mexico in 1987–88, and Venezuela close to that in the late 1980s, but none of them ended up in hyperinflation.

versus deposits in the domestic currency (sol) in the financial system. Accordingly, when deposits or short-term borrowing in dollars rise, authorities tend to increase the reserve requirements on these liabilities relative to deposits in soles, and the opposite when the former tend to fall. After the North-Atlantic financial crisis, Brazil started to use very actively its major regulatory instrument, i.e. taxes on capital flows.

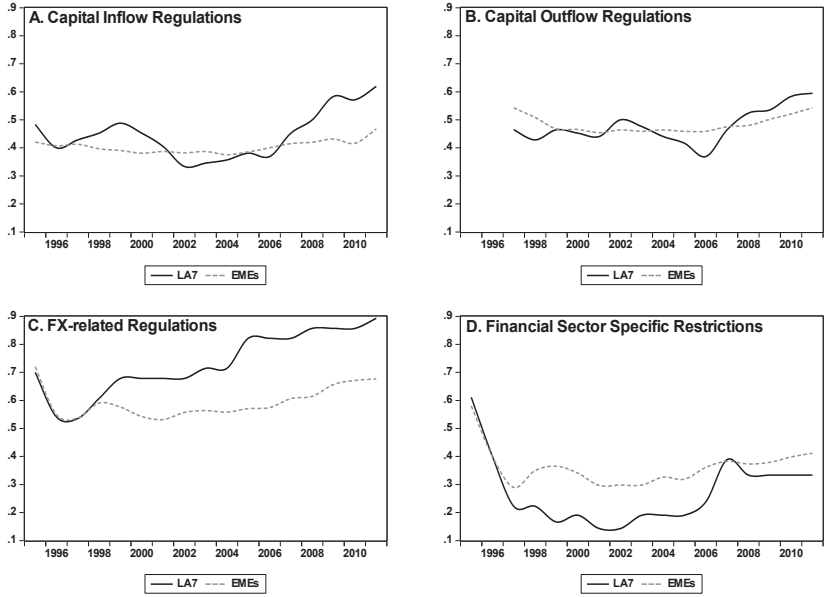
A more detailed picture of the evolution of capital account regulations since the mid-1990s is provided by Figure 3, (p. 52) which shows the evolution of four types of regulations: (i) capital inflow restrictions, (ii) capital outflow restrictions, (iii) FX-related regulations, and (iv) financial sector regulations.[4] The first two cover regulations across six asset categories: money market instruments, bonds, equities, financial credits, collective instruments, and direct investment. The third covers restrictions on lending locally in FX, on the purchase of locally issued securities denominated in FX, differential treatment of deposit accounts in FX, and limits on FX positions. The last refers to the differential treatment of accounts held by non-residents versus residents, limits on borrowing from abroad, and restrictions on maintenance of accounts abroad.

Figure 3 indicates that the most widely used instruments are FX-related regulations, and more so in Latin America than in EMEs as a whole, whereas the least used are financial-sector regulations, where the region is below the pattern of EMEs. The earliest turnaround was in FX-related regulations, which started to be increasingly used during the late 1990s crisis. Capital inflow and outflow regulations had also a reversal in the downward trend during the 2000s, which speeded up after the North-Atlantic financial crisis. This recent rise in the use of capital flow regulations makes the region appear today more restrictive than the average of EMEs. A look at the evolution of regulations on inflows and outflows shows that Argentina and Venezuela have strengthened regulations significantly, but other countries have moved moderately in the same direction. Consequently, Latin America has ceased to be a region with significantly more liberal capital accounts (Figure 2, p. 49).

The regional story is thus rich of experience in both capital account liberalization and regulations. The contrast is particularly sharp between Argentina and Venezuela, on the one hand, and Brazil and Colombia, on the other. The former transitioned from liberalized to very restrictive regimes, whereas the latter

4 The first two indices were developed by Schindler (2009), and the last two by Ostry et al. (2012). We use here our own update of these series (Erten and Ocampo 2013).

Figure 3: Capital Flow Regulations in Latin America and EMEs (index number)



Source: Updated by Erten and Ocampo (2013) with data from Schindler (2009) and Ostry et al (2012).

moved in the opposite direction. Chile is a more cyclical story, and Mexico and Peru have had the more liberalized regimes since the 1990s. The debt crisis of the 1980s was the only period of generalized regulations.

However, although liberalization became more widespread in the 1990s, the LA7 continued to use some form of regulation during particular conjunctures, with Mexico as the only exception.

LESSONS FROM CAPITAL ACCOUNT LIBERALIZATION AND REGULATION

To draw the lessons from this diverse experience, it may be better to focus on the issues that have emerged during periods of abundant external financing. The first lesson is that liberalization during external financial booms can have devastating effects. Both the liberalization of the 1970s/early 1980s and of the 1990s ended up in major crises. Largely inspired in the Latin American experience, this led in the 1980s to a literature on the "sequencing" of the liberalization of the external sector, proposing that trade liberalization should precede capital account liberalization (e.g. Edwards 1984). The mix of capital account and domestic financial liberalization can be particularly destabilizing. The experience since the 1980s is that crises are frequently "triple": difficulty in servicing

the external debt, major exchange rate realignments, and domestic financial meltdowns. Debt crises had been the typical ones in the nineteenth century; "dual" crises, involving the first two, became more common since the First World War and, particularly, the Great Depression of the 1930s; but "triple" crises really made their debut in the 1980s (Bértola and Ocampo 2012, 19–22). In turn, they are accompanied by domestic recessions, which are mixed in several cases with the inflationary pressures of sharp nominal depreciations of the domestic currency. In the 1980s, these phenomena were particularly severe in Latin America, leading five countries into hyperinflation.

The first lesson is that liberalization during external financial booms can have devastating effects. Both the liberalization of the 1970s/early 1980s and of the 1990s ended up in major crises.

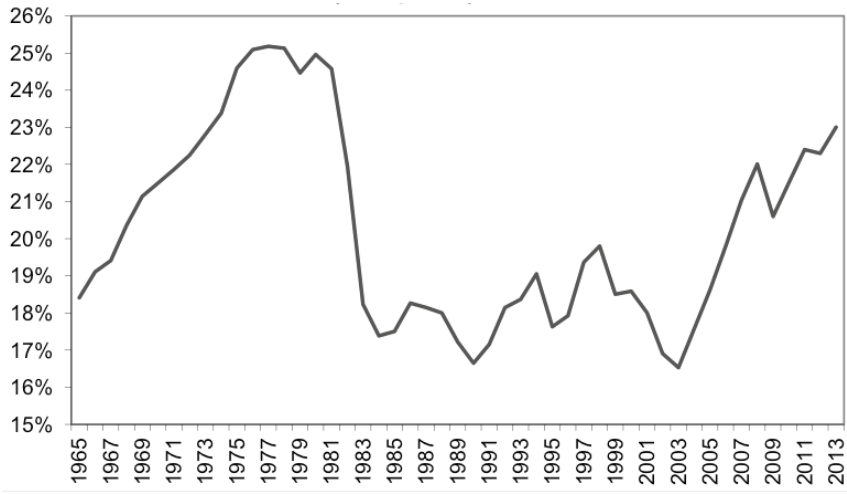
Booms in external finance are reflected in current account deficits, generally associated with exchange rate appreciation, and domestic credit expansion. Since current account deficits have their counterpart in domestic savings-investment imbalances, the current account deficit would be matched by an investment boom, a consumption boom (a plunge in domestic savings) or a mix of them. Of course, it does matter what the dominant domestic imbalance is, as this has entirely different implications for future growth and the capacity to service external debts. These imbalances are particularly hard to manage during liberalization periods, when there is "excess demand" for external liabilities that external and domestic agents exploit, entering into a "dance of the millions", to use a term that became typical in Colombia during the external debt feast of the 1920s. Domestic authorities also have no or limited experience in how to handle the domestic effects of liberalization. But even if they do, they may allow the "dance" to proceed, arguing, as the title of Reinhart and Rogoff's (2009) well-known book indicates, that "this time is different"—and, of course, are pushed to do so by domestic agents who benefit from the boom.

The debt crisis of the 1980s in Latin America is a good example of these problems. The counterparts of the shift from zero to positive net resource transfers shown in Figure 1 were increased current account deficits. There were two exceptions: Venezuela, the most important oil exporter in the region, which actually ran a current account surplus during these years, and Colombia, which ran a strong counter-cyclical policy during the 1975–1978 coffee boom, including massive controls on external indebtedness, which paid handsomely during the debt crisis of the 1980s, as it had the lowest external debt relative to GDP in the region.

The domestic counterparts of current account deficits were mostly investment booms (see, for the region as a whole, Figure 4), but also a plunge of domestic savings, particularly in Argentina, Chile, and Venezuela.[5] The first two were the countries that experienced the sharpest domestic financial liberalization in the 1970s, which led to the first set of massive banking crises (together with Uruguay). When referring to this early domestic financial liberalization in the Southern Cone, Diaz-Alejandro (1985) said it all in the title of one of his best-known papers: "Good-Bye Financial Repression, Hello Financial Crash." Fiscal costs were 55.1 percent of GDP in Argentina and 42.9 percent of GDP in Chile (Laeven and Valencia 2008). In Argentina it was also associated with massive monetary financing of the losses of the domestic financial system, leading to three-digit inflation during the early phase of the debt crisis.[6]

Open capital accounts also facilitated capital flight. Three of the countries with open capital accounts at the time—Argentina, Mexico and Venezuela—

Figure 4: Latin America Investment Ratio, 1965–2013 (2000 prices/GDP)



Source: Authors' estimates based on Economics Commission for Latin America and the Caribbean (ECLAC) data

experienced massive capital flight prior to and during the early phase of the debt crisis, which became a more important determinant of the growth of external

5 We will not present here data on savings rates of individual countries. However, the associated data can be tracked down from both the ECLAC and the World Bank.

6 We should add that, as a result of its domestic financial crisis, Mexico nationalized its financial system in 1982, and there was also a smaller domestic financial crisis in Colombia in the early 1980s, associated with its own (more moderate) domestic financial liberalization.

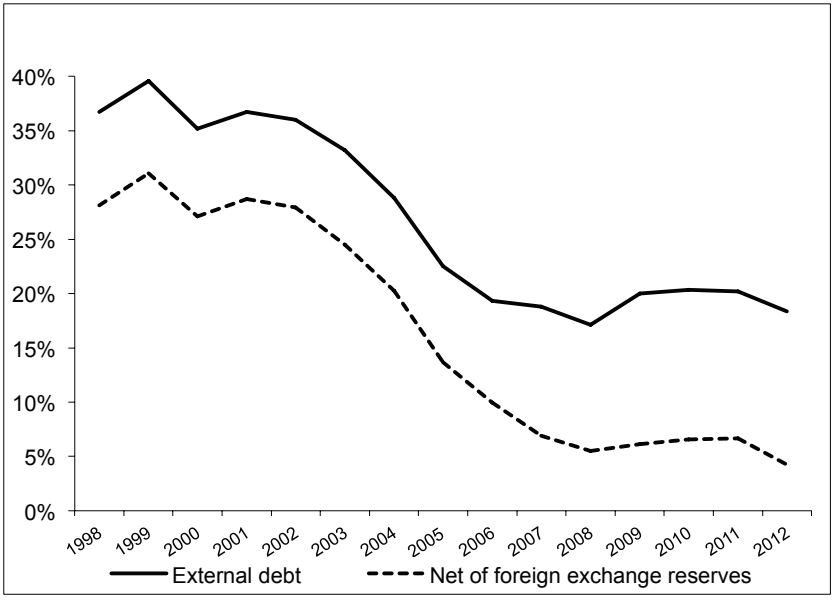
indebtedness than current account deficits (Diaz-Alejandro 1987). In Venezuela, increasing external debts took place despite the fact that the country actually ran current account surpluses prior to the debt crisis; paradoxically, before the debt crisis, the government actually encouraged the private sector to invest abroad as a way of supporting monetary contraction (Rodriguez 1985). Note, however, that among countries with open capital accounts, Chile actually avoided capital flight prior to the debt crisis thanks to high domestic interest rates and rapid asset appreciation. Peru also did, but largely because it was already facing problems prior to the debt crises, and had actually renegotiated its external debt in 1978.

During the liberalization of the 1990s, current account deficits were an important part of the story, but were now accompanied with very weak investment recoveries (see Figure 4). Econometric estimates indicate that increased external financing led to significant reductions in domestic savings, feeding consumption booms (Uthoff and Titelman 1998). Saving declines were particularly severe in Brazil, Colombia, Mexico and Venezuela. Domestic financial meltdowns occurred in all LA7 except Chile and Peru, and were particularly severe during the 1994 banking crises of Mexico and Venezuela, where fiscal costs reached 19.3 and 15.0 percent of GDP (Laeven and Valencia 2008).

The capital account boom of 2003–08 had entirely different effects. Five factors explain this result. First, for the first time the region as a whole ran current account surpluses. Second, in contrast to the previous capital surge, investment boomed (Figure 4). The mix of current account surpluses and rising investment indicate that domestic savings rates actually increased in Latin America during this boom. Third, the period of external abundance was used to both reduce external debts and accumulate FX reserves. As Figure 5 (p. 56) indicates, the external debt net of reserves fell from 27.9 percent of GDP in 2002 to 5.5 percent of GDP in 2008. The accumulation of reserves reflects the fact that most LA7 countries moved during the crises of the late 1990s and early 2000s into managed floating; this is not true of Venezuela and is only partly correct of Chile, which rather uses fiscal stabilization funds as its major mechanism of interventions in FX markets. Fourth, debt reduction was achieved by a mix of stronger fiscal accounts, the development of domestic bond markets for government securities, and the debt renegotiation of Argentina in 2005 and 2010. Finally, prudential regulation strengthened as a result of past domestic financial crises.

Better management of the boom contributed to the fact that the North American financial crisis had moderate effects on Latin America. Although the initial reces-

Figure 5: External Debt as % of GDP at 2000 Parity Exchange Rates



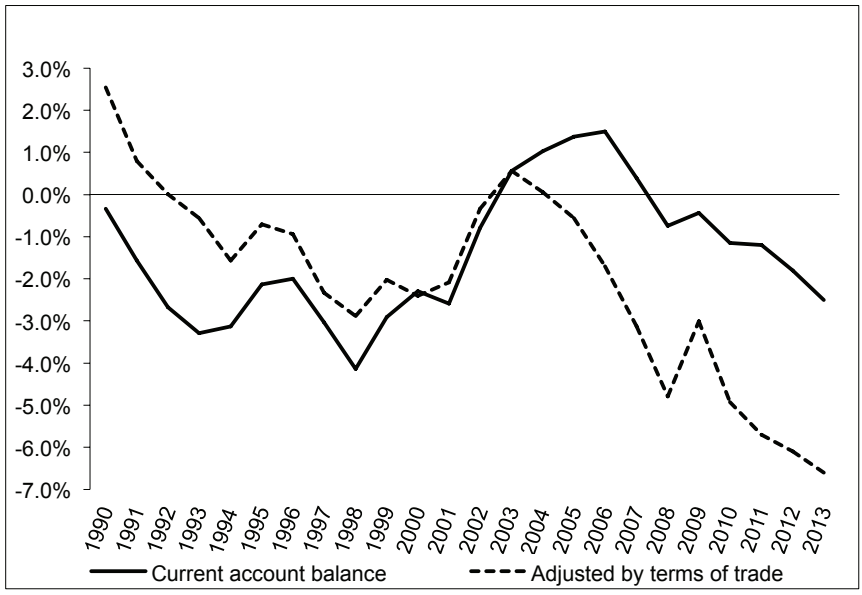
Source: Authors' estimates based on Economics Commission for Latin America and the Caribbean (ECLAC) data

sion or slowdown was strong in all countries (notably in Mexico and Venezuela), there were no major balance of payments or domestic financial crises. Nonetheless, this should be read with two caveats.

First, improvements in current accounts were essentially the result of booming terms of trade. All countries benefitted from the commodity price boom that took off in 2004, notably Chile, Colombia, Peru, and Venezuela, which are dominantly oil or mineral exporters. Figure 6 indicates that, when the effects of improving terms of trade are netted out, there was a sharp deterioration of the current account to levels that by 2008 were significantly higher than prior to the previous crisis for the region. Thus, the current account surpluses were not the result of prudent balance of payments or aggregate demand policies. Rather, Latin America essentially spent—and, indeed, by 2008 started to overspend—its booming commodity foreign exchange revenues.

The second caveat is that developed countries adopted massive market interventions to stabilize financial markets, which generated a new boom of financing toward EMEs since mid-2009. Massive support to Mexico after its December 1994 crisis had generated a similar effect in blocking contagion to other Latin American economies and shortening the crisis duration.

Figure 6: Current Account Balance Adjusted by Terms of Trade (% of GDP)



Source: Authors' estimates based on Economics Commission for Latin America and the Caribbean (ECLAC) data

The renewal of external financing in recent years has had more mixed effects than the previous surge. Now, despite still booming terms of trade, the region has again started to run current account deficits. This generates risks if commodity prices fall. However, the major current risks are those faced by Venezuela and, to a lesser extent, Argentina, the two countries that have adopted stronger capital account regulations. This illustrates an important final point. Capital account regulations can be effective, particularly in improving external debt profiles, supporting countercyclical monetary policies during booms, mitigating recessionary pressures during sudden stops in external financing and, with somewhat mixed evidence, avoiding exchange rate appreciation (Ostry et al. 2012; Erten and Ocampo 2013). However, such regulations should be used as a complement to and not a substitute for counter-cyclical macroeconomic policies. When the latter happens, the positive effects of regulations can be defeated by the distortions generated by massive black market exchange rate market premiums and/or multiple exchange rates, including the incentives for the private sector to circumvent regulations.

CONCLUSIONS

The rich history of Latin America with strong cycles in external financing and current account liberalization teaches important lessons. The most important is that surges in international capital markets generate significant pressure to adopt pro-cyclical macroeconomic management and temptation to liberalize capital account and financial regulations. When countries adopt pro-cyclical policies and fall to these temptations, crises generally follow. This is the experience of Latin America following the capital account booms of the mid-1970s/early 1980s and 1992–97.

Not all booms necessarily end up in crises. The critical issues are current account deficits and associated currency appreciation. In contrast, reduction of external debts and accumulation of FX reserves serve as an important bulwark against capital account volatility, as reflected in the reduced sensitivity of Latin America during the recent crisis. The domestic counterpart of the current account deficit is also important. The experience of the Southern Cone during the first boom and of a broader group of countries during the second was particularly problematic as the additional external financing was consumed rather than invested.

Maintaining some tools to directly manage capital account volatility is crucial. Brazil, Chile, Colombia and Peru have used some of these tools productively at different times during the past quarter century. This means that capital account regulations offer an opportunity to support counter-cyclical policies and thus help macroeconomic authorities to "sail against the wind." However, when capital account regulations are used as a substitute for such counter-cyclical macroeconomic policies, crises cannot be avoided, and may in fact become more severe.

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Annex Table A.1: Capital Account Restrictiveness in Latin America

	Argentina	Brazil	Chile	Colombia	Mexico	Peru	Venezuela
1970	-0.68	1.86	1.86	1.86	-2.44	0.81	-0.51
1971	1.07	1.86	1.86	1.86	-2.44	1.07	-1.21
1972	1.34	1.86	1.86	1.86	-2.44	1.34	-1.21
1973	1.6	1.86	1.86	1.86	-2.44	1.6	-1.21
1974	1.86	1.86	1.86	1.86	-2.44	1.86	-1.21
1975	1.86	1.86	1.86	1.86	-2.44	1.86	-0.51
1976	1.86	1.86	0.81	1.86	-2.44	1.86	-1.74
1977	0.11	1.86	0.11	1.86	-2.44	1.86	-1.74
1978	0.11	1.86	0.11	1.86	-2.44	0.54	-1.74
1979	0.11	1.86	0.11	1.86	-2.44	0.28	-1.74
1980	0.11	1.86	0.11	1.86	-2.44	0.02	-1.74
1981	0.11	1.86	0.11	1.86	-2.44	-0.25	-1.74
1982	1.17	1.86	1.86	1.86	0.81	-0.51	-1.74
1983	1.17	1.86	1.86	1.86	1.07	-0.51	0.55
1984	1.17	1.86	1.86	1.86	1.34	0.81	0.81
1985	1.17	1.86	1.86	1.86	1.6	1.07	1.07
1986	1.17	1.86	1.86	1.86	1.86	1.34	1.34
1987	1.17	1.86	1.86	1.86	0.81	1.6	1.6
1988	1.17	1.86	1.86	1.86	0.81	1.86	0.81
1989	1.17	1.86	1.86	1.86	0.81	1.86	0.81
1990	1.17	1.86	1.86	1.17	0.81	1.86	0.11
1991	1.17	1.86	1.86	1.17	0.11	1.17	0.11
1992	1.17	1.86	1.86	1.17	0.11	-1.12	0.11
1993	-1.38	1.86	1.86	1.86	-1.12	-1.38	1.17
1994	-1.65	1.86	1.86	1.86	-1.12	-1.65	1.17
1995	-1.91	1.86	-0.43	1.86	-1.12	-1.91	1.17
1996	-1.12	1.86	1.86	1.17	-1.12	-1.12	-0.15
1997	-2.18	1.86	1.86	1.17	-1.12	-2.44	-1.65
1998	-1.91	1.17	1.86	1.17	-1.12	-2.44	-1.91
1999	-1.65	1.17	1.17	1.17	-1.12	-2.44	-2.18
2000	-1.38	1.17	1.17	1.17	-1.12	-2.44	-2.44
2001	1.17	1.17	-1.38	1.17	-1.12	-2.44	-2.44
2002	1.17	0.11	-1.65	1.17	-0.06	-2.44	0.11
2003	0.11	0.11	-1.91	1.17	-0.06	-2.44	0.11
2004	0.11	0.11	-2.18	0.11	-1.12	-2.44	0.11
2005	0.11	-0.15	-2.44	0.11	-1.12	-2.44	0.11
2006	0.81	-0.41	-2.44	0.11	-1.12	-2.44	1.07
2007	0.81	-0.41	-2.44	0.11	-1.12	-2.44	1.07
2008	0.81	-0.41	-2.18	-1.12	-1.12	-2.44	1.34
2009	0.81	-0.41	-1.91	0.11	-1.12	-2.44	1.6
2010	0.81	-0.15	-1.65	0.11	-1.12	-2.44	1.86
2011	0.81	0.11	-1.38	0.11	-1.12	-2.44	1.86
2012	n.a.	n.a.	1.17	1.17	n.a.	n.a.	n.a.

Source: Negative of Chinn-Ito capital account openness index. http://web.pdx.edu/~ito/Chinn-Ito_website.htm

4. Careful with the Carry Trade: Lessons from Eastern Europe

Daniela Gabor

INTRODUCTION

Eastern Europe provides an interesting entry point to consider how capital account (KA) liberalization affects emerging countries and to draw lessons for China. First, formerly planned economies liberalized because of political objectives to join international organizations, either OECD or the European Union (Arvai 2005). Second, Eastern Europe (EE) has long been terrain for carry-trade games that are now at the center of global debates on China (BofAML 2014), carry trades driven by global banks present in their financial systems. Third, pre-Lehman wisdom stressed the positive effects of liberalization: Eastern European countries had "to learn to live with large capital inflows" to achieve rapid convergence, including financial deepening (Arvai 2005). Yet the region suffered severely when global banks began deleveraging after Lehman.

This chapter stresses three lessons:

1) the actors and cross-border relationships that give rise to capital flows should be considered carefully, particularly where driven by carry trades;

2) liberalization underpins the financialization of currency markets (financial trading, mostly offshore) that in turn financializes interbank money markets (structural excess of liquidity, asymmetrically distributed) and thus complicates the conduct of monetary policy; and

3) in light of 1) and 2), the IMF's new institutional view on capital flows management should be re-thought to fully normalize capital controls.

DRAWING PARALLELS

In early 2014, financial analysts and scholars agreed on two sources of turbulence in emerging market economies (EME) linked to quantitative easing, and tapering, in the U.S. and Europe. First, asset managers in core countries had increased appetite for EME local currency debt (Farolli et al. 2014). Non-residents' holdings of EME local currency bonds doubled from 12.7 percent in 2008 to

26.6 percent in 2012, as EME local currency debt nearly doubled to $9.1 trillion between 2008 and 2012 (Turner 2013). Second, EME banks and non-financial corporations started to tap international dollar funding markets, embarking on an international leverage binge, yet another carry trade, the third in 20 years (BofAML 2014;1; Shin 2013; Turner 2014). Driven by global banks, the second carry ended in 2008, with damaging consequences for Eastern Europe. In the third carry, China accounted for half of the $855 billion borrowed from international banks, and 10 percent of the USD1.04 trillion in bonds issued.

Recent scholarship has categorized the forms and risks of carry trades. Carry trades entail borrowing in low-interest (funding) currencies to invest in high-yielding (target) currencies (Galati et al 2007). Narrow carries involve a directional currency bet, while in broad carries investors hold assets denominated in the target currency (bonds, stocks, bank deposits—see Hattori and Shin 2007, UNCTAD 2007). (Non)financial domestic actors engage in carries by borrowing abroad or by issuing foreign currency bonds, then brought onshore to purchase high-yielding instruments or deposit with banks (Turner 2014).

In pursuit of yield differentials, carry-traders create currency mismatches and sharpen pro-cyclical effects on EME credit and asset markets.

In turn, non-resident investors (eg. asset managers) that want to hold EME local currency assets often need resident banks to "intermediate" carries. Resident banks lend them domestic liquidity through spot/derivative markets, often off-balance sheet, or on-balance sheet overnight credit. The onshore presence of global banks increases the scope for carry trades, since subsidiaries can fund proprietary trades through parent banks—internal capital markets—and engage offshore/onshore with non-resident investors (Gabor 2014).

In pursuit of yield differentials, carry-traders create currency mismatches and sharpen pro-cyclical effects on EME credit and asset markets (Turner 2014). Carry-trades reverse rapidly when funding conditions change, with systemic implications for target countries (Kaltenbrunner 2010; Ferolli et al., 2014; Turner 2014; Shin 2013). Old "trilemmas" become obsolete as central banks faced with global financial cycles must choose between independent monetary policy and capital controls (Rey 2013; also Gallagher et al. 2012).

Furthermore, carry trades financialize the markets traders rely on. McCauley and Scatigna (2011) observed that activities in high-yielding currency markets are

increasingly driven by financial motives rather than international trade, with the bulk of trading offshore in key financial centers.

A BRIEF EASTERN EUROPEAN CONTEXT

Emerging Europe liberalized capital accounts in two broad waves. Early liberalizers (Baltic states, Czech Republic) removed most controls by 1997; in turn, Hungary, Poland, the Slovak Republic, and Slovenia by 2004, and Romania and Bulgaria by 2006 (Arvai 2005). Countries shared the sequencing: first FDIs, more cautious on interest-rate sensitive inflows, in particular non-resident access to short-term funding instruments and local currency asset markets. FDIs were important in bank privatization (see Table 1).

Table 1: Foreign Bank Share of Banking Assets, Eastern Europe

	Bulgaria	Cz. Rep	Hungary	Poland	Romania	Lithuania	Estonia	Slovenia
2004	72	84	65	72	78	91	90	20
2009	79	80	64	68	92	91	91	21

Source: Bankscope

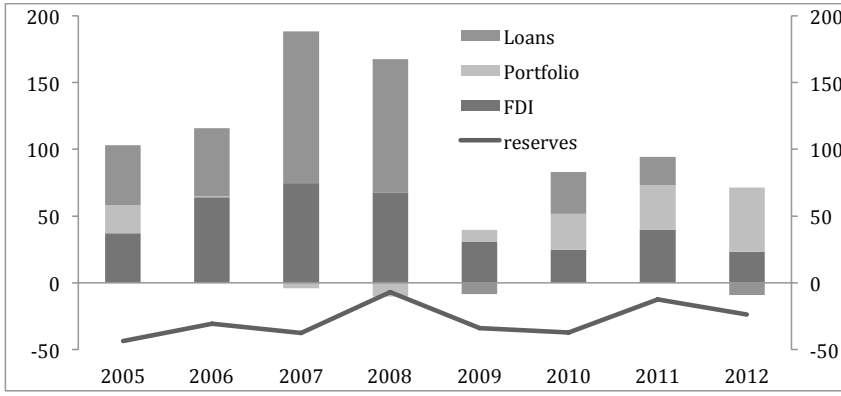
Before Lehman, this close embrace of financial globalization appeared to deliver on its promises. A few tense episodes aside (speculative attacks in 1997 in the Czech Republic, 1999 in Romania, 2003 in Hungary), EE countries grew rapidly (above 5 percent on average), running large current account deficits—except Czech Republic and Poland—funded by large capital inflows, increasingly dominated by interest-sensitive flows (see Figure 1, p. 64).

Despite diverse exchange rate regimes (Poland and the Czech Republic targeting inflation with full floats, Romania and Hungary with managed floats[1]; Baltic states and Bulgaria pegged to the euro), foreign reserves increased across the region before Lehman (see Figure 2, p. 65). Central banks resorted to direct currency market interventions (Romania, Hungary, Czech Republic) or absorbed foreign revenues from privatization and/or international debt issuance (Poland, Czech Republic). Although the theoretical consensus stressed that the systematic currency appreciation across the region was a welcome indicator of real convergence and a reward for strong fundamentals (Arvai 2005), in practice central banks sought to contain the exchange rate impact of large capital inflows.

These concerns were somewhat vindicated in the global financial crisis. Exchange rates and foreign reserves (see Figure 2) fell rapidly as portfolio investors left and

1 Hungary moved to a full float in February 2008.

Figure 1: Net Financial Flows (USD bn), Eastern Europe



Source: IMF World Economic Outlook

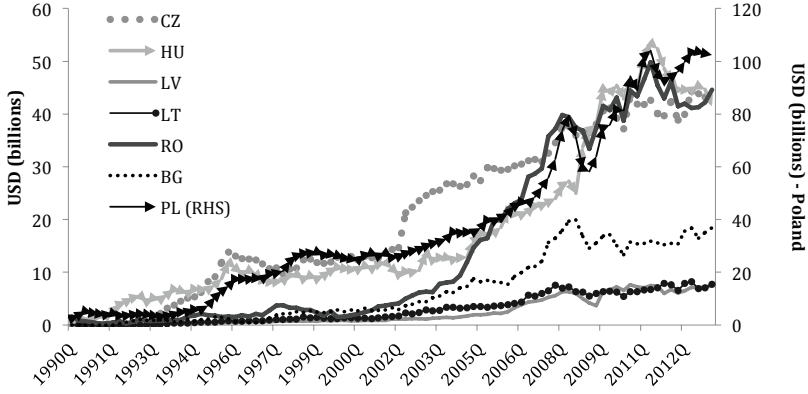
Western banks threatened to leave. Several countries (Romania, Hungary, and Latvia) turned to the IMF, while home, host regulators and parent banks initiated ad-hoc consultations (the Vienna Initiative) on how to maintain Western banks' exposure to the region. Except for Poland, capital outflows and lower demand for exports translated into a "hard landing," with an average 8.5 percent regional contraction in 2009 and a 0.18 percent growth in 2010, well below Latin America (-1.8 percent and 6.3 percent respectively) or East Asia (-0.9 percent and 8.4 percent respectively). Capital flows returned after quantitative easing (QE) in high-income countries, through portfolio flows rather than cross-border banking flows (see Figure 1), consistent with Shin's (2013) observations about the second phase of global liquidity, driven by asset managers rather than global banks.

Lesson 1: The actors and cross-border relationships that give rise to capital flows should be considered carefully.

In Eastern Europe, capital account liberalization was accompanied by the systemic foreign presence of Western European banks. This incorporated EE countries in global financial architectures, actively intermediating capital inflows to support both "traditional" (relationship) lending and carry-trades activities. After Lehman, highly interconnected, highly leveraged transnational banks acted as conduits for global financial tensions.

Throughout the early 2000s, parent banks increased exposure to subsidiaries and non-financial corporations across the region, particularly to Baltic states, Romania and Hungary, (see Figures 3 and 4, p. 66–67). Western European banks built a $1.3 trillion exposure to EE countries, with Austrian banks accounting

Figure 2: Foreign Reserves, CEE Countries, 1990–2013



Note: Poland (PL RHS) is shown separately on left axis because its foreign reserves are on a much larger scale than all the other countries.

Source: IMF and Joint External Debt Hub

for 20 percent, Italian banks for 17 percent, and German banks for 15 percent[2]. Once Lehman collapsed, parent banks contemplated withdrawing funding from EE subsidiaries, a disorderly exit regardless of country-level fundamentals (Pistor 2010). While parent banks eventually agreed, through the Vienna Initiative, to roll-over short-term funding lines to subsidiaries, their commitment varied, with substantial outflows from Baltic countries and Hungary (see Figure 3).

Cross-border borrowing from banks funded three distinctive carry-trade strategies: corporate borrowing, resident banks' intra-financial system activity, and foreign currency loans to households.

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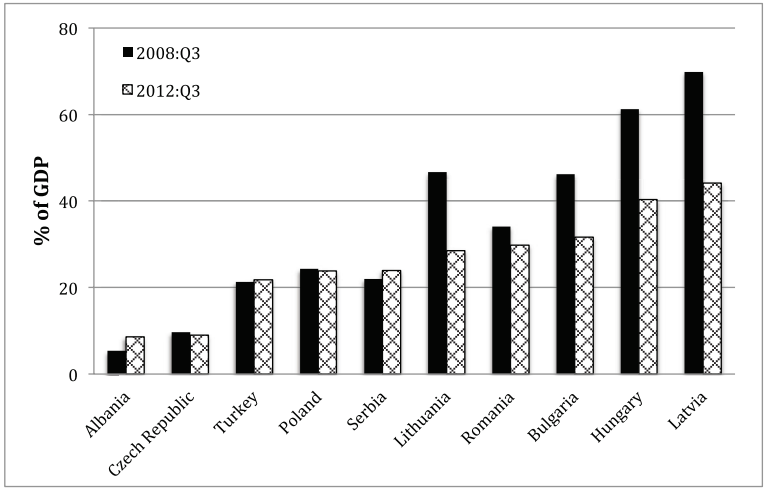
Familiar to observers of Chinese corporations (Shin 2013), external borrowing by resident non-financial corporations played an important role. Resident banks sent EE corporations to borrow directly from parent company, thus circumventing regulatory attempts to restrict credit growth (Pistor 2010; Kudrna and Gabor 2013). For instance, Romanian companies borrowed abroad around EUR 17.4bn between 2006 and 2008, a

2 Such competitive pressures pushed domestic-owned banks to follow suit; before Lehman, Latvian-owned banks raised 60% of short-term funding from non-residents.

Figure 3: Cross-Border Loans from BIS Banks, % of GDP



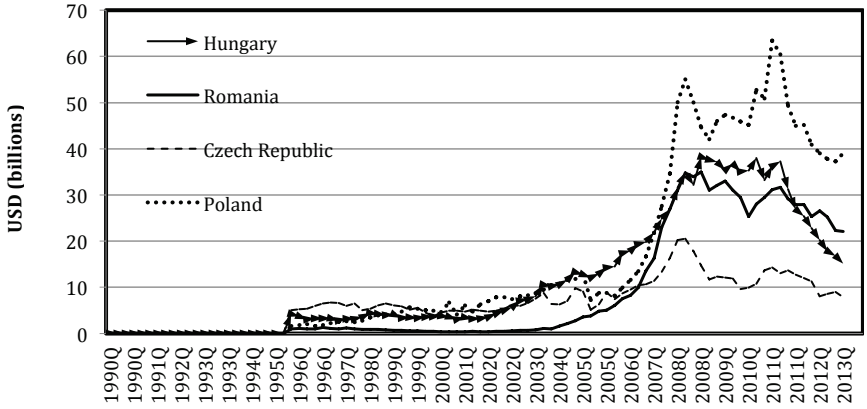
Source: IMF and Joint External Debt Hub

third of outstanding cross-border bank loans. Such forex borrowing could have supported real economic activity (hedging forex exposures, invest overseas) or be used to re-invest locally at higher rates.

Resident banks also engaged in carry games. Christensen (2004) first noted the "sterilization games" played by Czech banks as the country lifted capital controls throughout 1995–1996. Relevant for China's choice of exchange rate regimes, resident Czech banks borrowed abroad short-term to test the central bank's currency peg. Banks exchanged forex loans in the currency market, placing the local liquidity thus obtained in high-yielding, low-risk sterilizations. For two years, the central bank sterilized around USD5bn (40 percent of its foreign reserves), wishing to avoid nominal appreciation that threatened the trade balance and simultaneously meet money supply targets. It abandoned the peg in early 1996, and faced a speculative attack in May 1997. A similar scenario involving resident banks unfolded in Romania in late 1998, even though the country was only initiating its KA liberalization process (Gabor 2010).

Ever since, sterilization games have taken place across Eastern Europe (Balogh 2009; Gabor 2010). Easier to show for Romania, claims on the central bank there amounted to around 30 percent of resident banks' domestic assets throughout the early 2000s, declining as banks increased their household lending portfolios (see Figures 5 to 8, p. 68–69). Resident Czech banks held in sterilization operations the equivalent of their portfolio of government debt. Both Polish and

Figure 4: Interbank Cross-Border Loans



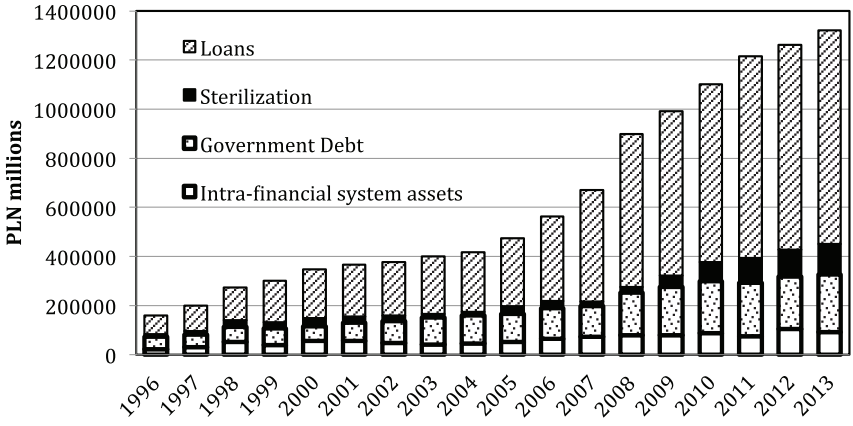
Source: IMF and Joint External Debt Hub

Hungarian resident banks engaged in sterilization operations, increasingly large after Lehman. Furthermore, foreign borrowing supported intra-financial system activity throughout the region, a sign of increased interconnectedness and leverage (Shin 2013). In contrast, local lending to corporates—the traditional business of banking—rarely went above 40 percent of total assets, figures consistent with the market-based business models of Western European banks (Haldane 2009).

Resident banks pursued another (broadly defined) carry trade: using parent or foreign market funding to extend foreign currency loans to households in countries with high local interest rates. By September 2008, banks in Latvia, Estonia, Lithuania, Hungary, and Romania had over half of the rapidly growing household loans denominated in euros or Swiss francs. Borrowers accepted the exchange rate risk where banks offered attractive lending rates, below those in local currency, and because common wisdom—akin to that on U.S. house prices—suggested that local currencies would continue to appreciate (the Balasssa Samuleson effect). Without capital controls, prudential measures were easily circumvented through, for example, loan externalization. Since Lehman's collapse, this has resulted in increasingly significant non-performing loans (and a political battle between Hungary and its resident banks to renegotiate forex mortgage loans).

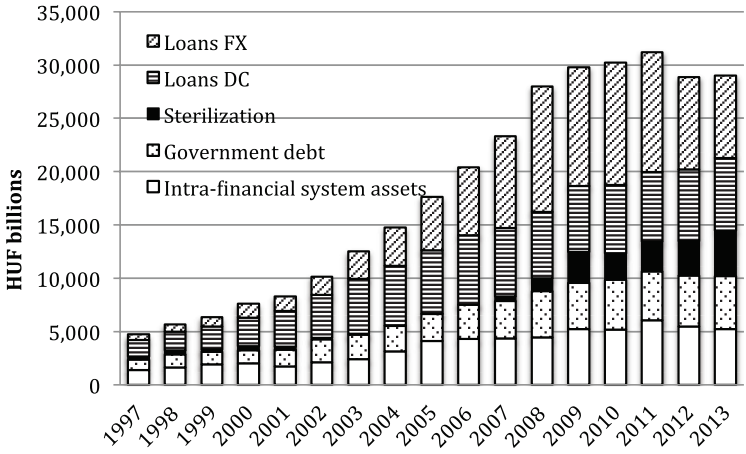
Well-known dangers materialized quickly in Eastern Europe post-Lehman: capital outflows inflicting devaluations that threatened financial stability given currency mismatches, then internal devaluations to improve external competitiveness. Interconnected banking further complicated cross-border coordination of crisis

Figure 5: Poland, Domestic Bank Assets



Source: Central Bank

Figure 6: Hungary, Domestic Bank Assets

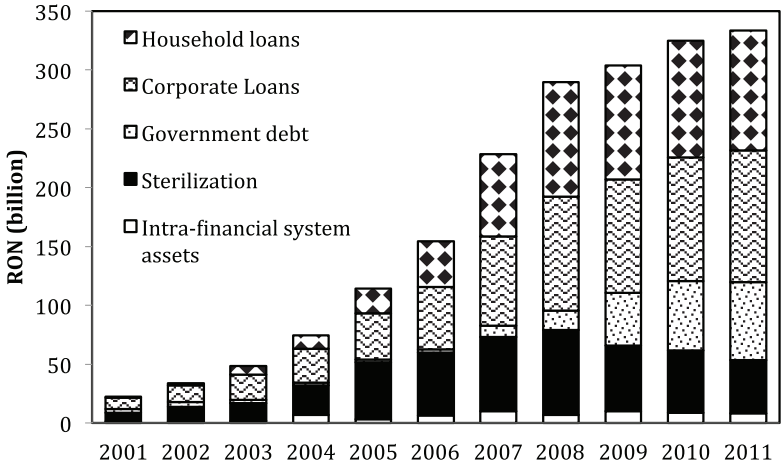


Source: Central Bank

management and macroprudential policies, since host regulators worried that restrictions on parent banks (by demanding local funding of local assets) would ignite outflows from subsidiaries. Indeed, central banks across the region vocally opposed attempts from the Austrian central bank to impose tighter loan-to-value ratios on Austrian subsidiaries (Kudrna and Gabor 2013).

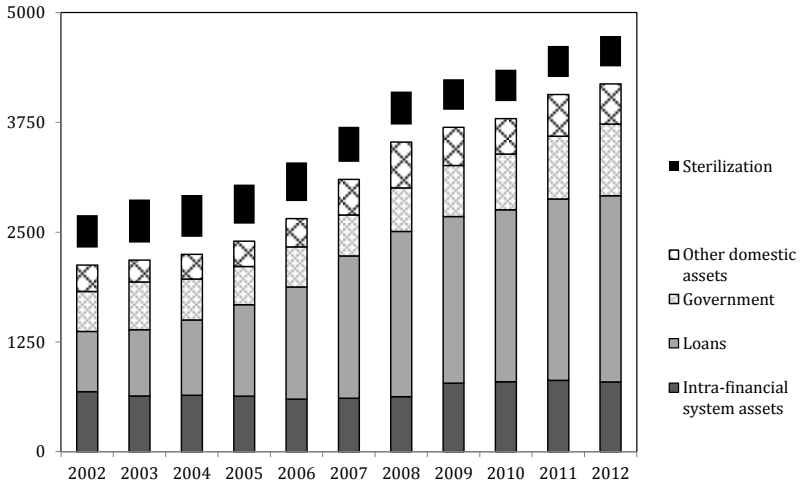
Furthermore, KA liberalization saw the entry of new systemic actors: non-resident investors. Other emerging countries view non-resident interest as a

Figure 7: Romania, Domestic Bank Assets



Source: Central Bank

Figure 8: Czech Rep., Domestic Bank Assets (CZK bn)

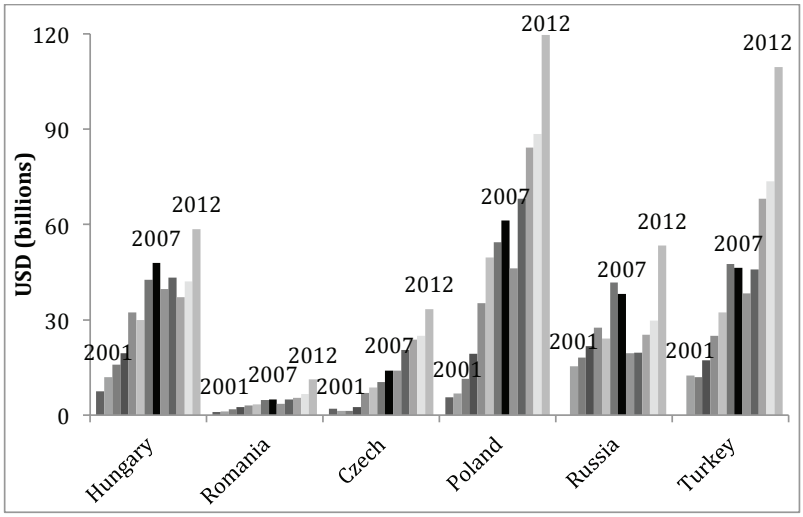


Note: for the Czech Republic (figure 8), the central bank provides separate data for its sterilization activities in its annual reports, but not as a distinctive item on the banking sector's balance sheet. Average sterilization volumes (black bars) were included to capture the magnitude of sterilization relative to bank assets.

Source: Central Bank

mixed blessing: improving the liquidity of domestic asset markets, but potentially in a pro-cyclical fashion (Shin 2013). Whereas several EME countries (eg.

Figure 9: Non-Resident Holdings of Debt Securities, 2001–2012



Note: Black column represents 2007 values.

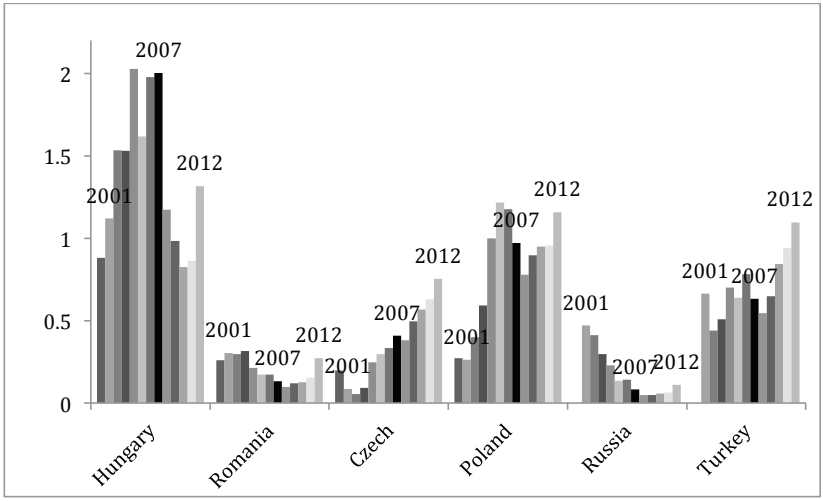
Source: Joint External Debt Hub

Peru, Thailand, Ukraine) imposed controls on non-resident holdings of local currency assets, countries with EU membership (ambitions) could not. Intra-region variations depended on depth of (domestic) debt markets. Thus, Hungary and Poland were attractive to non-residents before 2008 (see Figures 9 and 10). Romania's small sovereign debt market and sterilizations through borrowing (rather than issuing debt) translated into relatively small non-resident holdings. After Lehman, unwinding carries affected Hungary and Romania severely, illustrating well Shin's (2013) warning that EMEs reliant on non-resident inflows might come under severe stress when global monetary conditions tighten. While EE countries increased reliance on non-residents after 2009, their central banks took steps to strengthen management of volatile capital flows. Since 2012, the Czech Republic and Poland returned to currency interventions, while Hungary and Romania cut interest rates aggressively (by 500 basis points (bp) in Hungary and 300 bp in Romania). How effective these measures will be when (if?) U.S. and Europe (ECB and Bank of England) tighten remains to be seen.

Lesson 2: Capital inflows lead to financialized currency and interbank money markets, posing difficult dilemmas for central banks during sudden stops.

Recent BIS Triennial Surveys detail the financialization cum internationalization of EE currencies, with 70 percent of trading occurring offshore through OTC

Figure 10: Non-Resident Holdings of Debt Securities as a Share of Foreign Reserves, 2001–2012



Note: Black column represents 2007 values.

Source: Joint External Debt Hub

derivatives with short-term maturity. The EE experience further highlights that currency markets do not financialize in isolation but spill over into interbank money markets, affecting banks that fund assets locally.

In traditional banking, the interbank money market allows banks with funding gaps (from loan activity) to borrow from banks with excess reserves (from deposit taking). Central banks inject liquidity to meet the deficit of reserves and keep the interbank interest rate close to policy rates. Yet when central banks intervene in currency markets to manage capital inflows, it is currency interventions that create and distribute (asymmetrically) domestic liquidity. Banks with access to foreign borrowing create domestic liquidity by intermediating capital inflows, funding the carries described above. The policy rate no longer determines funding costs for these financialized banks, while central banks' energy is spent on mopping excess reserves from interbank money markets (Gabor 2012).

This sterilization predicament is familiar to the Chinese central bank. Its strategy has been to use reserve requirements (Ma et al. 2011) rather than short-term sterilization instruments in Eastern Europe. The fundamental difference, at least before Chinese non-financial corporations and banks turned to carry trades, has been that China's sterilizations reflected foreign reserve accumulation from trade surpluses. In Eastern Europe, market-based sterilizations offered another

asset class for resident banks engaged in carry games, perversely attracting further inflows.

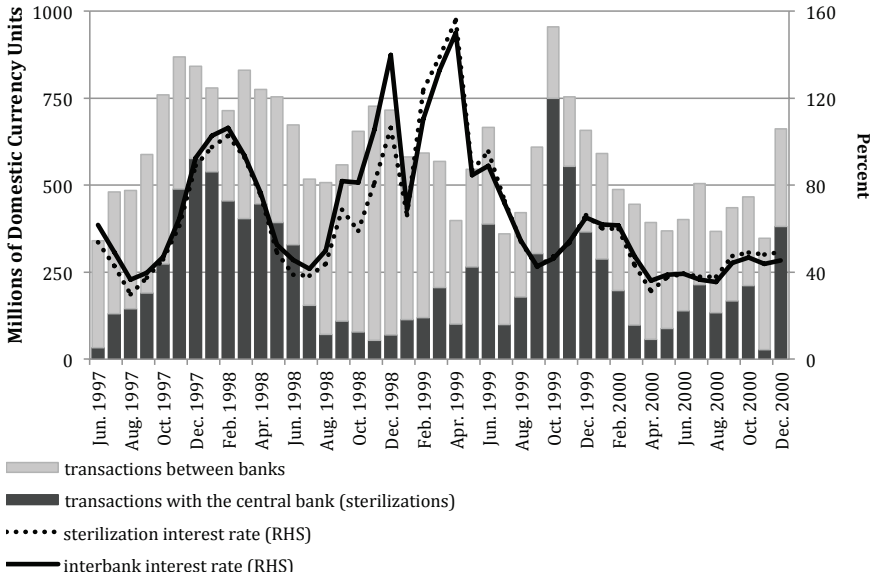
The EE lesson is that the financialization of interbank money markets can be damaging for "patient" (relationship-based) banks because episodes of large outflows also play out in the interbank money market. The typical response to sudden stops is to raise interest rates and defend the currency through foreign reserve sales that squeeze domestic liquidity. If the central bank re-injects that liquidity into money markets, it becomes the unwitting (ultimate) counterparty of short-sellers. Yet by doing nothing, it tightens interbank liquidity, and thus confronts reserve-deficient banks with high interbank rates. Consider Romania's experience in 1998, then still with capital controls and state-owned banks (institutionally similar to China). Confronted with a sudden stop after the Russian crisis, the central bank sold foreign reserves, without sterilizing the impact on money markets. The ensuing liquidity shortages and rocketing interest rates (see Figure 11) punished state-owned and private domestic banks, eventually triggering a banking crisis (Gabor 2010). Similar events unfolded across East Asia in 1997 (IMF 1997).

After Lehman, EE countries faced similar challenges to ensure that non-speculative domestic demand for liquidity would be satisfied at "normal" market rates. Several countries ring-fenced resident banks' assets (Poland, Croatia, and Turkey, see Cerutti et al. 2010) or imposed restrictions on resident banks' transactions with non-residents (Latvia and Romania, see Buiter and Sibert 2008; Gabor 2012). Indeed, the IMF now agrees that countries can target non-residents with capital controls and/or split interbank markets since "restrictions on non-resident access to funding in local currency can at times make currency speculation more difficult" (IMF 2013, 18).

Lesson 3: The IMF's new institutional view on capital controls is ineffective to manage cross-border financial linkages.

The global financial crisis led the IMF to reconsider its long-standing rejection of capital controls. Its new institutional view encourages capital controls (see IMF 2013), albeit not before countries undertake possible macroeconomic adjustments (exchange rates to equilibrium, lower interest rates, sterilized currency interventions and fiscal tightening). If China plans to rely on this macro-first approach in its strategy of liberalization/reminibi internationalization, it should consider carefully the extent to which macroeconomic policies can

Figure 11: Interbank Money Market Volumes (LHS) and Rates (RHS), Romania, 1997–1999



Source: Central Bank of Romania (http://www.bnro.ro/Raport-statistic-606.aspx)

constrain cross-border financial linkages (particularly the carry trade strategies described above).

The answer from Emerging Europe is ambiguous. Once money markets become financialized through currency interventions, resident banks can choose whether to place the liquidity obtained on currency markets in sterilization games, in market portfolios, or to lend it to non-residents. Sterilization games, the IMF's own research shows (see Christensen 2004), may prepare the terrain for speculative attacks, as in the Czech Republic.

The institutional incentives at play make it difficult to constrain cross-border linkages for banks through macroprudential policies. Both central banks and governments benefit from capital inflows, the former because capital inflows appreciate the domestic currency and keep import prices low, the latter because demand for sovereign debt increases market liquidity and reduces sovereign yields. The difficulty lies in recognizing that these benefits are cyclical. When central banks do so, they can exclude banks altogether from sterilization operations, change the maturity of sterilizations (to long-term operations), or impose capital controls that reduce the necessity and scale of currency interventions.

Structural banking reforms are also important. The IMF has recognized the "destabilizing…floods and draughts" of cross-border banking and proposed, in a Staff Position Paper (IMF 2011), two measures to mitigate its systemic implications. Regulators could either fragment internal capital markets, curbing the free movement of liquidity across banking groups, or restrict resident banks' borrowing in international interbank markets. Such measures would enact a local banking model reliant on domestic sources of funding.

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5. Should China Accelerate Capital Account Liberalization Now?

Ming Zhang

INTRODUCTION

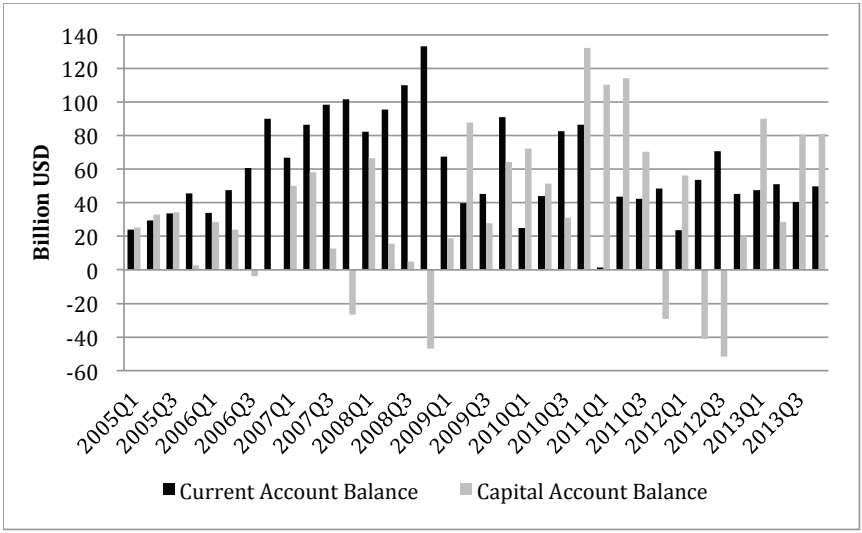
After the U.S. subprime crisis, the cross-border capital flows in China have become larger and more volatile. In 2009, People's Bank of China (PBOC) proposed a timetable to accelerate capital account liberalization in 2012, and fully open the capital account by 2020. This essay argues against PBOC's proposal, and provides seven critiques of it. Instead of speeding up capital account openness, the Chinese government should consider accelerating the RMB exchange rate and interest rate liberalization, pushing forward domestic financial market reform, implementing domestic structural adjustment, and participating in international cooperation to coordinate capital flow management.

NEW PLAN TO ACCELERATE CHINA'S CAPITAL ACCOUNT LIBERALIZATION

China's current account was liberalized in 1996. The Chinese government began to open its capital account in 1994, but the process was interrupted by Southeast Asia's financial crisis in 1997–1998. Since then, a gradual and cautious way has been adopted to open China's capital account (Zhang 2012, 2013). By early 2012, according to the 40 sub-items of capital account transactions defined by IMF, there were 14 basically convertible, 22 partly convertible and 4 not convertible in China (PBOC 2012a). Among various capital flows, direct investment and trade finance are mainly liberalized; portfolio investment is under quota controls like Qualified Foreign Institutional Investors (QFII) and Qualified Domestic Institutional Investors (QDII); and money market plus financial derivative transactions are under strict controls.

China's balance of payments has been facing some prominent changes since the U.S. subprime crisis (Figure 1, p.78): First, the current account balance declined due to sluggish external demand and fast RMB appreciation, but the capital account balance rose as the result of advanced economies' QE and China's capital account openness; consequently, the capital account balance took the place of current account balance as the major resource of foreign exchange reserve accu-

Figure 1: China's Quarterly Balance of Payments



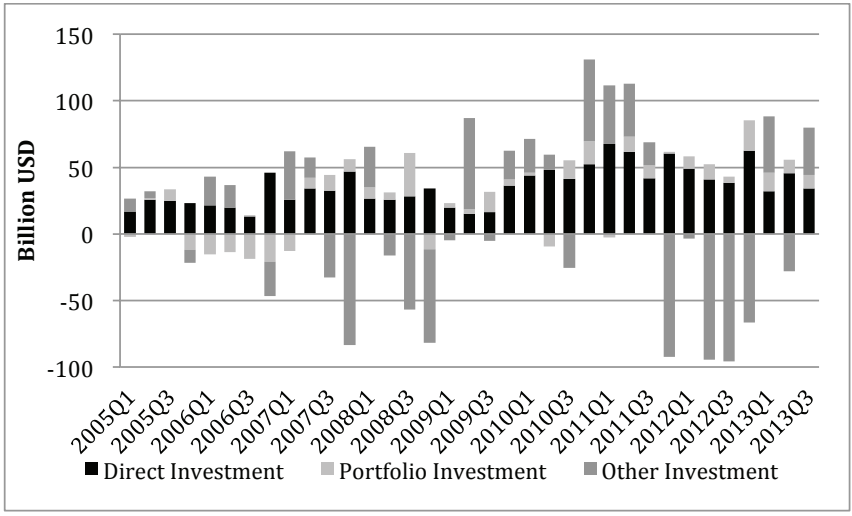
Source: CEIC Data

mulation. Second, the volatilities of both current and capital account balances increased significantly after the crisis. As shown in Figure 2, among China's capital account transactions, direct investment has been relatively stable, portfolio investment has been small and more volatile, while the other investment flow (short-term bonds and derivatives) has been the largest and most volatile.

PBOC published two reports in 2012 suggesting that China should speed up its capital account liberalization (PBOC 2012a, 2012b). PBOC (2012a) argued that the time was right to accelerate opening the capital account. The major arguments included: First, the breakout of the global financial crisis offered China a window of time to encourage outward investment because western companies were valued at low levels; second, capital account liberalization could promote not only the use of RMB in international trade and investment but also the development of offshore RMB markets; third, since China's capital account controls were increasingly ineffective, it made more sense to open the capital account; fourth, the potential risks of capital account liberalization were offset by China's stable financial system, huge foreign exchange reserve, and low foreign debt; fifth, capital account openness could push forward a domestic structural adjustment.

PBOC (2012b) further pointed out that, on the one hand, both Mundell's Impossible Trinity and Interest Rate Parity had some limitations; on the other hand, international experiences showed that there were no fixed sequencing among

Figure 2: Breakdown of China's Quarterly Capital Account



Source: CEIC Data

interest rate reform, exchange rate reform, and capital account liberalization. Therefore, RMB interest rate reform, RMB exchange rate reform, and capital account liberalization should be pushed forward in concert. In other words, the Chinese government need not follow any specific policy sequencing to liberalize the capital account.

Based on the above arguments, PBOC (2012a) put forward a new time table for capital account opening: In the short term (one to three years), the direct investment controls should be loosened to encourage the going out of domestic enterprises; in the middle term (three to five years), the commercial borrowing and lending controls should be loosened to facilitate RMB internationalization; in the long term (five to ten years), the transactions of real estates, stocks, and bonds should be liberalized, and quantity-based capital control tools should be replaced by price-based ones. Moreover, according to some market rumors, PBOC made a more radical two-step liberalization proposal to top leaders in 2013, which suggested liberalizing the capital account by 2015, and completely liberalizing it by 2020. Furthermore, as stated in the decisive document produced by the 3rd plenum of the 18th Communist Party of China Central Committee, RMB's convertibility under the capital account should be accelerated (CPC Central Committee 2013). Finally, the operation of the Shanghai Free Trade Zone would materially promote capital account openness.

In 2012 and 2013, there was heated debate in academic and policy-making circles about whether China should accelerate the liberalization of its capital account. PBOC argued for it, and some scholars, including myself, argued against it. It should be noted that, after this debate, it seems that PBOC officials have softened their stance on capital account liberalization. For example, in an internal speech made by PBOC Governor Zhou Xiaochuan, he emphasized the importance of monitoring and regulating short-term capital flows, even after the capital account has been fully liberalized.

CRITIQUES ON THE PROPOSAL OF RAPID CAPITAL ACCOUNT LIBERALIZATION

Whether China should accelerate capital account liberalization at the current stage was the hottest policy debate in domestic political and academic circles in 2013. As mentioned above, PBOC argued for it, but some scholars, including my colleagues and me, argued against it (Yu et al. 2013). Our major critiques of PBOC's new plan are as follows:

First, there is huge uncertainty about whether capital account liberalization could promote domestic structural reform. One of the most powerful arguments presented by PBOC is that capital account liberalization could push forward internal structural adjustments. In fact, PBOC's officials are market-oriented and want to pursue domestic reforms further, but they realized that it would be very difficult to deepen the reforms now because of resistance from vested interest groups. Therefore, PBOC's officials want to use capital account liberalization as an external commitment device to force domestic structural reform.

However, we really doubt whether this commitment device could work. Three very important structural reforms are needed to sustain future economic growth: income redistribution across households, government, and corporate sectors; breaking the state-owned enterprises' (SOE) monopoly on the service sector; and the liberalization of domestic factor prices. Without a doubt, capital account openness could promote the liberalization of RMB's exchange rate and interest rate, but we suspect whether it could push forward structural reforms such as income redistribution from government and corporate sector to household sector, or opening service sector to private companies.

Furthermore, if the Chinese government does speed up capital account liberalization, and if this effort triggers some financial crisis, the domestic structural reforms would very likely be suspended or even reversed after the crisis.

Second, using capital account liberalization to promote RMB internationalization is merely a tautology. Capital account liberalization and RMB internationalization are two sides of the same coin. PBOC began to promote RMB internationalization in 2009 precisely because it wanted to advance capital account liberalization. Because Chinese top leaders would understand the significances of RMB internationalization much better than those of capital account liberalization, PBOC adopted the following strategy deliberately: First, use RMB internationalization as a disguise to push capital account liberalization; second, use the need for further RMB internationalization as an excuse to push for more capital account liberalization (Yu 2013).

We argue that at the current stage, both RMB internationalization and capital account liberalization should not become the top of priorities on the Chinese government's agenda.

International experiences show that currency internationalization is the result of natural market choices, not the result of government initiatives (McCauley 2011). Our field investigation and data analysis shows that the seemingly fast development of both RMB settlement in cross-border trade and offshore RMB market so far could be largely attributed to RMB exchange rate and interest rate arbitraging between onshore and offshore markets (Zhang and He 2012). We argue that at the current stage, both RMB internationalization and capital account liberalization should not become the top of priorities on the Chinese government's agenda.

Third, the tail risk of accelerated capital account liberalization might be too huge for the Chinese economy to bear. Capital controls are a cornerstone of China's financial repression, which channels funds from households to corporations and government. Chinese households have been suffering a heavy implicit tax by assuming persistent negative real deposit interest rate, and thus have strong incentives to diversify their assets abroad if capital account controls are removed. Compared with the 3.8 trillion USD foreign exchange reserve, Chinese household savings is over 40 trillion RMB. If Chinese households initiate a massive capital outflow (always being accompanied by foreign investors), it would be very difficult for PBC to stabilize the RMB exchange rate, even if using the foreign exchange reserve. The resulting RMB depreciation would induce more capital outflow, thus forming a vicious cycle.

The existing financial fragilities will exacerbate the tail risk of rapid capital account liberalization. In the past several years, the shadow banking system is burgeoning as the result of Chinese commercial banks' collective effort to cir-

cumvent regulation and hedge off macro policy uncertainties. Although the balance sheets of commercial banks still seem healthy, vast maturity mismatches, yields mismatches, and other risks are hiding in off-balance sheet transactions such as wealth management products, bank trust cooperation, interbank borrowing and lending, etc. If there is a massive capital outflow resulting from capital account liberalization, the related interest rate hikes would pierce the shadow banking bubble and cause a painful financial crisis. In March 2014, a Chinese private company in solar energy industry (Chaori Solar) defaulted on the payment of interest of its corporate bond, which was the first default event in the Chinese corporate market in the past 20 years. In the near future, the market expects that there will be a series of defaulting in corporate bonds and trust products, which would push down the confidence on the domestic financial regime, and increase the risk of huge capital outflow if the capital account has been liberalized.

Fourth, the efficacy of China's capital account control has been declining, but it is still effective on the whole. More importantly, the Chinese government could strengthen the effectiveness of capital account control as it wishes. According to numerous sources, although there are some leakages, China's capital account control is still binding. The evidence includes the persistent and significant RMB interest rate and exchange rate spreads between onshore and offshore markets, and the large transaction costs of cross-border capital movements (Ma and McCauley 2008; Otani et al. 2011). In addition, the export growth in Q1 2013 was remarkably high because there were a lot of cross-border interest rate arbitraging activities under the guise of goods export. To deal with this, PBC and SAFE issued some new regulatory measures to identify and penalize the arbitraging activities. As a result of this effort, the export growth in Q2 2013 declined dramatically. This case shows that the Chinese government could improve the efficacy of capital controls if it wanted to do so.

Ironically, PBOC's efforts to push RMB internationalization significantly weakens the efficacy of capital account control. A two-track capital control regime was established in China after 2009. The capital flows denominated in USD are under the relatively tight regulation of State Administration of Foreign Exchange (SAFE), but the capital flows denominated in RMB are under the very loose regulation of local subsidiaries of Monetary Policy Department II under PBC. Thus the two-track regime creates a new space for regulatory arbitraging: if any resident or non-resident wants to move funds across the border, he would first transfer funds from USD to RMB. This arbitraging space also shows that if PBC wants to

strengthen capital control, it can achieve the objective by regulating more heavily on RMB denominating capital flows.

Fifth, it is bad timing now for China to accelerate capital account liberalization. The U.S. subprime crisis and European sovereign debt crisis did push down the valuation of western companies. However, thanks to the collective QE performed by advanced economies, the stock price index in developed economies reached new record highs, meaning the western companies are not cheap anymore. Additionally, China's outward direct investment faces an awkward dilemma: SOEs could get sufficient financial support from domestic banks but suffer from large suspicion and resistance from host countries; however, private companies facing less external resistances find it difficult to obtain financing assistance or even approval domestically.

From a domestic perspective, as the result of persistent high investment and weak external/internal demand, excess capacity will continue. This will result in a new NPL wave for commercial banks and reduce confidence in domestic financial health. From external perspective, the Federal Reserve in the U.S. would exit from its policy of quantitative easing and raise interest rates in the near future, increasing external attractiveness. Combining these two possibilities, if China's capital account is open, the most possible scenario would be a massive and destructive surge in capital outflows.

Sixth, China's capital account liberalization should follow appropriate policy sequencing, fulfilling at least three preconditions: liberalizing the RMB exchange rate and interest rate, and further reforming the domestic financial market. Even with a largely effective capital control, China still faced significant cross-border arbitraging flows in the past several years. The roots of arbitraging activities lie in the exchange rate intervention and interest rate regulation by PBC, which creates significant exchange rate and interest rate spreads between onshore and offshore markets. If the Chinese government liberalizes the capital account before liberalization of the RMB exchange rate and interest rate, there would be larger and more volatile arbitraging flows, leading to undesirable boom-bust cycles of both asset prices and inflation.

The Chinese government should also speed up financial market reform before fully opening the capital account. Otani et al. (2011) suggest that capital account liberalization should be accompanied by a strong and stable domestic financial market, especially with a deep and liquid secondary market for financial assets.

Cappiello and Ferrucci (2008) argue that if domestic financial liberalization has not been effectively implemented, then capital account liberalization would only provide excessive arbitraging opportunities. Kose et al. (2006) argue that capital account liberalization could stimulate economic growth only in those economies in which domestic financial markets reached certain thresholds. Thus, the Chinese government has at least two urgent tasks for the domestic financial market: first, opening the financial market to domestic private capital as soon as possible; second, adopting comprehensive macro-prudential policies to control the existing financial fragilities, especially in the shadow banking system.

One of the most important reasons why China could escape unscathed from both the Southeast Asian financial crisis and current global financial crisis is precisely that China has not opened its capital account.

Seventh, the new international trend forming after the global financial crisis is a preference for proper capital flow management as opposed to fast capital account liberalization. During or after the current financial crisis, some emerging economies such as Brazil and South Korea, which had already liberalized their capital accounts, chose to re-introduce certain capital flow management measures to deal with the increasingly volatile cross-border capital flows. In addition, even the IMF—the former trumpeter of free international capital flows—changed its tune and suggested that capital flow management could enter the tool kit of emerging market economies along with macroeconomic policies and macro-prudential regulations for those countries to combat volatile capital flows (Ostry et al. 2011).

China is no different from other emerging economies. One of the most important reasons why China could escape unscathed from both the Southeast Asian financial crisis and current global financial crisis is precisely that China has not opened its capital account. Chinese officials, especially those in PBOC, should abandon their over-confidence and complacency, show more respect to other emerging economies' experiences of capital account liberalization, and pay more attention to the new international trend regarding capital flow management.

POLICY RECOMMENDATIONS

To summarize, the PBOC's proposals should be cautious to accelerate capital account liberalization now. China's capital account should continue to be liberalized in a gradual, cautious, and controllable way. At the same time, the

Chinese government should overcome various difficulties and promote the following reforms:

RMB exchange rate should be liberalized as soon as possible. PBOC should decrease the intervention on the daily middle price of the RMB against the USD, and let it be determined by market demand and supply. China's current account balance to GDP shows that the current RMB exchange rate is very near to the equilibrium level. However, if PBOC continues to intervene on the foreign exchange market, the RMB exchange rate might change from an undervalued position to an overvalued position. The risk of an overvalued domestic currency is much higher than that of an undervalued one, because currency over-valuation would trigger capital outflow much more easily. Since March 17th 2014, PBOC expanded the daily fluctuation band of the exchange rate of RMB against USD from ±1 percent to ± 2 percent, which was a positive step for the further liberalization of RMB exchange rate.

RMB interest rate liberalization should be accelerated with some matched reforms. Now the key issue of RMB interest rate reform is when and how to liberalize the benchmark deposit interest rate, which is critical for the transition to a different economic model. However, interest rate liberalization might introduce new risks. The Chinese government should promote the following two complementary reforms to facilitate interest rate liberalization: first, a national deposit insurance company should be established to allow the bankruptcy and liquidation of domestic financial institutions; second, a comprehensive and effective macro-prudential regulatory regime should be built to avoid the asset bubbles that often follow interest rate liberalization. In March 2014, PBOC governor Zhou Xiaochuan stated that the deposit interest rate would be liberalized in the next one or two years, which showed that PBOC is determined to accelerate interest rate liberalization.

Domestic financial market reforms should be pushed forward in time. The establishment of private commercial banks and other private financial institutions should be welcomed. Some high-risk shadow banking products should be allowed to default to divide clearly the responsibilities of the parties involved, and to avoid exacerbating moral hazards. The off-balance sheet transactions should be disclosed more transparently and completely. Chinese financial institutions, especially commercial banks, should start deleveraging process, accumulate more capital, and prepare enough NPL provisions.

Domestic structural adjustments should be pushed forward in spite of strong resistance from vested interest groups. More national income should be redistributed from government and corporate sectors to the household sector, which means that the government should cut the tax burden of households, and SOEs should pay more dividends to the government to fill the gap in the social security account. The SOEs' monopoly in many service sectors such as telecommunications, transportation, finance, education, and medical care should be broken, and private companies should be welcomed to enter those sectors. Domestic factor prices, including the prices for energy and land should be liberalized as soon as possible. No doubt the above structural reforms would be very difficult because of resistance from vested interest groups. However, it is the time to face up to them and tackle them now, because the Chinese economy cannot afford further delay of these important structural reforms.

The Chinese government should actively participate in the international cooperation to coordinate capital flow management efforts. In a financially globalized world, not only the domestic monetary policy but also cross-border capital flow management measures adopted by large economies could have negative spillover effects. China should join in the international coordination on cross-border capital flow monitoring, early warning, and regulation, which could not only increase the effectiveness of capital flow management, but also improve China's image as a responsible major player in the global financial community.

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6. Capital Account Liberalization in China: Some Considerations

Vivek Arora and Franziska Ohnsorge

INTRODUCTION

Capital flows have increased significantly in recent years and are a key aspect of the global economy. In China, for example, capital flows have increased substantially since 1994, when FDI began to be increasingly liberalized. Now other parts of the capital account are being gradually liberalized as the Qualified Foreign Institutional Investors (QFII) and Qualified Domestic Institutional Investors (QDII) initiatives are being expanded, and other plans are moving forward with the March 2013 National People's Congress envisaging an eventual goal of full capital account liberalization and the Third Plenum decision in November 2013 laying out a broad strategy.

Because capital flows have a bearing on economic and financial stability both in individual economies and globally, an important challenge for policymakers is to develop a coherent approach for handling them.

In the rest of the world as well, capital flows are sizable. Advanced economies account for the bulk of gross capital flows, although their share in the total has fallen from 90 percent in the years before the global financial crisis to approximately 75 percent in recent years. Emerging and developing economies account for a correspondingly smaller share of global capital flows, but their share has risen sharply—from less than 10 percent before the crisis to 25 percent more recently. Moreover, net capital flows as a share of GDP are larger on average in emerging and developing economies than in advanced ones.

At the same time that China is embarking on a new phase of capital flow liberalization, the issue of cross-border capital flows is receiving increased attention in policy discussions worldwide at both the multilateral and bilateral levels. It is recognized that capital flows offer potential benefits to countries, but that their size and volatility can also pose risks and challenges. Because capital flows have a bearing on economic and financial stability both in individual economies

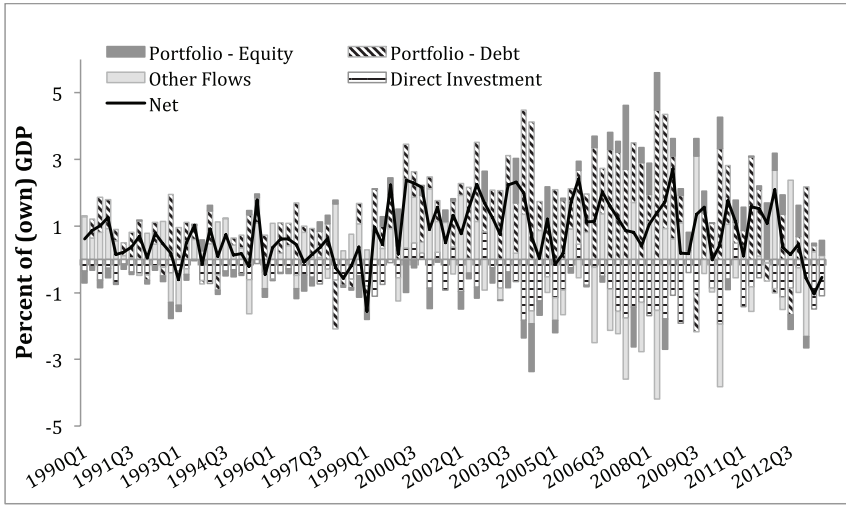
and globally, an important challenge for policymakers is to develop a coherent approach for handling them. Some progress has been made toward this end in recent years, including the G20's 2011 "Coherent Conclusions for the Management of Capital Flows." And a number of bilateral and multilateral international agreements establish norms and rules applicable to their members with respect to capital flows. However, no comprehensive global approach has existed for the liberalization and management of capital flows.

The IMF's "institutional view" on the liberalization and management of capital flows is part of the effort to fill this gap (IMF 2012a, 2013). The institutional view builds upon a body of policy and research papers based on theoretical and empirical analysis and country experience. It proposes some broad principles for the liberalization of long-standing restrictions on capital flows and for the management of temporary surges of capital inflows and of disruptive capital outflows. It considers the circumstances under which capital flow management measures (CFMs), which are measures designed to limit capital flows, are appropriate. The view will guide Fund advice to members but does not alter their rights and obligations to the Fund or under other international agreements. The view is expected to evolve in light of new experience, research, and feedback from country authorities and others. Aspects of the view may be relevant for China at this important stage in China's reforms.

China's renewed focus on capital account liberalization has rekindled research on the implications of China's liberalization for the rest of the world.[1] Bayoumi and Ohnsorge (2013) estimate possible effects of capital account liberalization on global cross-border portfolio exposures and He and others (2012) examine possible effects on global foreign direct investment and portfolio capital flows. Both papers predict substantial portfolio capital outflows if China lifts its remaining capital controls. Hooley (2013) speculates about the ramifications of China's capital account liberalization for global financial stability and, more specifically, for London as a financial center. He highlights the benefits of greater diversification of risk but also greater vulnerabilities to shocks originating in China as global exposures to Chinese assets and liabilities grow.

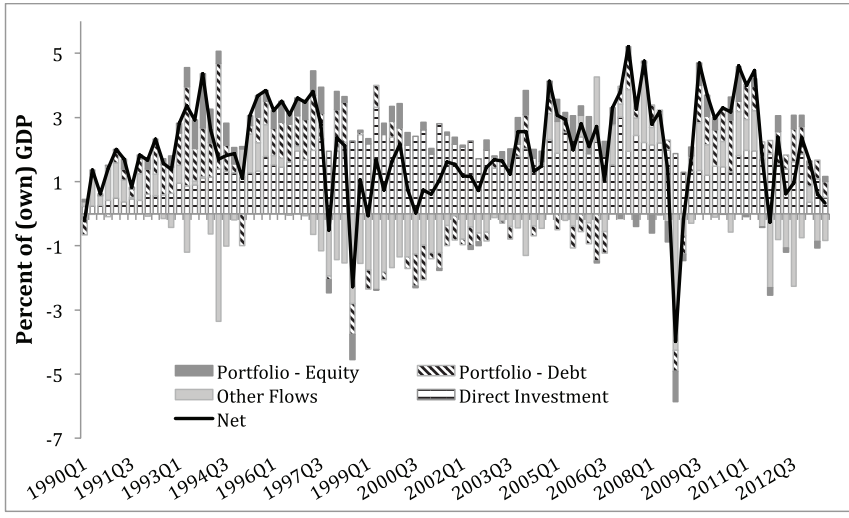
1 A large literature exists on how various aspects of China's development affect the rest of the world. For example, Arora and Vamvakidis (2011) analyze the spillover effects of China's economic growth on other countries and Arora, Tong, and Constantinescu (2013) discuss China's economic integration with South Asia.

Figure 1: Capital Flows to Advanced Economies



Source: IMF Balance of Payments Statistics, World Economic Outlook

Figure 2: Capital Flows to Emerging Markets



Source: IMF Balance of Payments Statistics, World Economic Outlook

BENEFITS AND RISKS OF CAPITAL ACCOUNT LIBERALIZATION

Capital flows can have substantial benefits for countries, including by enhancing efficiency, promoting financial sector competitiveness, and facilitating productive investment and consumption smoothing. An important "collateral" benefit

of openness is that, as countries develop, they need more advanced financial systems; and more advanced financial systems generally go hand-in-hand with more open capital flows. This benefit may explain the ongoing preference among many countries for further liberalization of capital flows.[2]

At the same time, capital flows carry risks. The global financial crisis has shown that even countries that have long been open and drawn benefits from capital flows can be vulnerable to these risks, which are magnified by gaps in their financial and institutional infrastructure. Capital flow liberalization is generally more beneficial and less risky if countries have reached certain levels or "thresholds" of financial and institutional development. These thresholds relate to factors such as income and growth, macroeconomic stability and cushions, and governance and the business environment.

POLICY IMPLICATIONS

Three main policy implications are discussed here.

First, there is no presumption that full liberalization is appropriate for all countries at all times. The extent of liberalization that is appropriate for a given country at a given time depends on its particular circumstances, especially its financial system and institutions.

Second, countries with long-standing restrictions would likely benefit from more liberalization. Many emerging economies, for example, have well-established track records of growth and macroeconomic stability, ample foreign reserves, and low debt. For them, the benefits of some further capital flow liberalization may be high relative to the costs of prevailing restrictions. In this regard, China's intentions to further open capital flows goes in the right direction.

Third, in countries that are moving forward with capital flow liberalization, liberalization needs to be well planned, timed, and sequenced in order to ensure that its benefits outweigh the risks.

Currently preferred is an "integrated approach" to liberalization that envisages achieving the pre-conditions for safe liberalization and proceeding through successive phases, which can, however, overlap. The sequencing of the various items of the capital account that are opened up is first FDI inflows, then FDI outflows and long-term portfolio flows, and finally short-term portfolio flows.

2 In light of the "impossible trinity," more liberal capital flows must involve less autonomy with respect to either monetary policy or the exchange rate.

Liberalization needs to be supported by reforms to the legal, financial, and corporate frameworks and development of financial markets. If countries find that they have liberalized too fast, in the sense that they are unable to handle the resulting volume of capital flows, then it is appropriate temporarily to re-impose capital flow management measures until the supporting reforms are put in place.

CHINA'S APPROACH IN CONTEXT

China's capital account reform strategy has followed in many respects the approach sketched out above. First, FDI was opened up, particularly since 1994, and then, over the last decade or so, portfolio flows have been gradually liberalized through schemes including the QDII and QFII. Measures have included an expansion in both the size and the range of instruments allowed under these schemes. At the same time, China has made substantial progress with setting in place the financial and other supporting reforms that are needed for mediating cross-border capital flows. In parallel, China has been moving to internationalize the renminbi, a move that would both be supported by more open capital flows and itself contribute to more open flows.

Although China has gradually been opening its capital account, it remains restricted in many respects as a number of capital flows are subject to approval requirement or quotas. Specifically (IMF, 2012b):

Foreign Direct Investment. In several areas, inward FDI and its liquidation remain subject to approval requirements. Restrictions in strategic sectors are in principle not unusual; however, some argue that the range of restricted sectors is broader than elsewhere.

Portfolio investment is controlled by quotas. Inward investment is channeled through Qualified Foreign Institutional Investors (QFII), subject to a three-month lock-in period for most shares, and an aggregate ceiling that has successively been raised since 2002. The QFII scheme introduced in 2011 allows qualified firms to invest offshore renminbi back into China, subject to an overall ceiling. Outward portfolio investment—for foreign securities purchased by residents—is channeled through Qualified Domestic Institutional Investors (QDII), subject to institution-specific ceilings. When the QDII scheme was introduced in 2006, it only allowed residents to invest in the foreign money market and fixed-income markets through institutional investors; since then, the scheme's scope has been gradually expanded. Cross-border issuance of securities requires approval.

Other investment. Foreign borrowing is subject to a ceiling (for short-term borrowing) or approval requirements (for long-term borrowing), but lending abroad is largely unrestricted. The holding of cross-border accounts requires approval. For many purposes, individuals are allowed to freely transfer abroad $50,000 per year. Real estate purchases abroad by resident individuals are allowed, as is the repatriation of proceeds from real estate sales in China by non-residents.

Figure 3: Capital Flows, Average 2005–2010 (% of GDP)

	China	Malaysia	Korea	Brazil	India	Poland	Australia	Russia	Indonesia	Turkey
Financial account	3.0	8.0	0.0	2.9	4.2	5.4	-5.1	0.8	0.9	5.3
Overall non-FDI capital account	-0.2	6.5	1.3	1.6	3.2	3.5	-3.9	1.0	0.0	2.9
Net FDI	3.2	1.5	-1.4	1.3	1.0	1.9	-1.3	-0.2	0.9	2.4
Inflow	4.0	4.7	0.3	2.1	2.2	3.0	1.3	3.0	1.8	-0.3
Outflow	-0.8	3.2	-1.7	-0.8	-1.2	-1.1	2.6	3.2	-0.8	1.0
Net portfolio investment	-0.1	0.4	0.8	1.8	1.3	1.3	-4.2	0.3	1.3	0.0
Equity	0.5	2.3	-1.9	1.2	...	...	0.8	-0.1	...	0.0
Bonds	-0.5	-0.5	1.8	0.7	...	...	-5.0	0.4	...	0.4
Net other investment	-0.1	6.2	0.6	-0.3	1.9	2.2	0.3	0.7	-1.3	2.9
Liabilities	1.8	1.1	1.5	0.9	1.0	-0.1	-1.9	-3.6	...	2.9
Assets	-1.9	4.9	-0.9	-1.1	0.9	2.3	2.2	4.3	...	0.0
International investment position: Portfolio and other investment										
Assets	15	30	21	6	1	9	47	17	4	10
Liabilities	16	64	60	33	24	54	95	36	32	46

Note: Shades of gray reflect the quartile of absolute values in each row, with dark gray indicating the lowest quartile and light gray indicating the highest quartile. Data for Australia, Russia, and Malaysia based on BPM6. For all others based on BPM5.
Source: Haver Analytics; IMF IFS; staff estimates

Whether as a result of incremental easing of controls or despite remaining controls, capital flows have been substantial. Gross FDI flows over the decade to 2012 were the fifth largest in the world after the U.S., the UK, Austria and Luxembourg. "Other" investment flows—which include the buildup or drawdown of foreign currency deposits at domestic banks—have been similar in size to those in some fully liberalized countries. Foreign currency deposits, especially, have tended to fluctuate as state-owned enterprises have adjusted their profit repatriation in response to their expectations of how the exchange rate may change. In addition to these officially recorded capital flows, some capital flows may also pass through the current account, although it is difficult to estimate their extent. Only the category of heavily restricted portfolio flows remains small by peer group standards.

At the same time as gradually lifting some of its capital controls, China has made progress with setting in place the financial and other supporting reforms that are needed for mediating cross-border capital flows. In parallel, China's moves to internationalize the renminbi would go hand-in-hand with more open capital

flows. Despite these efforts, Lardy and Douglass (2011) argue that the necessary preconditions for capital account liberalization—in their view, a strong banking system, developed financial markets, and an equilibrium exchange rate—are not yet in place.

In the past three years, the authorities have reaffirmed their intention to proceed with capital account liberalization. In the 12th Five-Year Plan issued in October 2010, they pledged to "gradually realize convertibility of the capital account." The Third Plenum Decision of November 2013 similarly pledged to accelerate capital account opening by gradually improving the convertibility of cross-border capital and financial transactions and establishing foreign debt and capital flow management under a macro prudential framework. The new Shanghai Free Trade Zone provides an opportunity to experiment with capital account liberalization in a closely monitored pilot program.

IMPLICATIONS OF CHINA'S CAPITAL FLOW LIBERALIZATION: FOR CHINA AND FOR THE WORLD

A further opening of China's capital account would be a logical step in China's economic transformation. Given China's size and importance in the global economy, a further opening of its capital account would likely have implications not only for China but for the world. Several recent papers have explored possible implications.

Bayoumi and Ohnsorge (2013) and He et al. (2012) estimate the possible effect of China lifting its capital controls on portfolio capital stocks and flows:[3]

- Capital account opening in China will likely be followed by substantial gross portfolio flows as global and domestic portfolio holdings adjust.
- During the adjustment period there may be net outflows from both equity and bond markets as domestic investors seek to diversify large domestic savings. This is in contrast to what would be expected if, say, India opened its capital account.
- Such net outflows of portfolio investment could dampen pressures for reserve accumulation from net FDI or other investment inflows or current account surpluses for several years to come.

3 There are several caveats to the analysis, of which we highlight two. First, these are partial equilibrium estimates, holding constant all factors other than capital account liberalization. Second, stock adjustments could well be phased over several years, muting their global impact, as capital flows are liberalized gradually.

Large gross inflows and outflows could generate significant movements in global asset prices. For example, Benelli (2011) examines what would happen if private portfolio capital outflows as a result of capital account liberalization were invested in emerging markets and these outflows were accumulated by drawing down reserves. He estimates a $500 billion (some seven percent of China's 2011 GDP) shift out of U.S. public debt into emerging market government debt could increase U.S. bond yields by 60 basis points and reduce emerging market bond yields by 240 basis points. Bayoumi and Ohnsorge's (2013) and He et al.'s (2012) results suggest the effects could be even larger.

Hooley (2013) explores the implications for global financial stability of such a "hard-wiring" of China into the global financial system. In addition to changing global asset prices, Chinese capital account liberalization would boost the international use of the RMB and increase the size of offshore markets that trade the RMB, including London (see also Craig et al, 2013). "RMB internationalization" as well as a greater presence of Chinese investors and borrowers in global financial markets would render the global financial system more closely integrated to China's financial system, which renders benefits but also increases the propensity for the transmission of shocks.

A cautious sequencing of liberalizing measures in all three areas (capital account, financial sector, and exchange rate) is needed.

By opening up alternative investment opportunities for savings and risk diversification into foreign products, further capital account liberalization in China could also have implications for Chinese financial markets (Hooley, 2013). At the same time, it could pose risks to domestic financial stability that would need to be monitored closely. Interest rate regulation continues to depress returns on bank deposits, which have offered negative real returns since 2003. Lardy and Douglass (2011) argue that capital account liberalization would force banks to raise deposit rates, with negative effects on bank profits. Currently, alternative instruments for household savings are the stock market, "wealth management products," and the property market. If households gained access to global financial markets, liquidity in these three domestic financial markets could shrink.

CONCLUSIONS

In conclusion, drawing on the Fund's institutional view, some key points with respect to capital account liberalization are as follows. The institutional view

is intended to provide input for our policy advice. It does not alter countries' rights and obligations to the Fund or under other international agreements. With respect to capital flow liberalization, the benefits are greatest when financial and institutional development is adequate and macroeconomic conditions strong. There is no presumption that full liberalization is appropriate for all countries at all times, but countries with long-standing restrictions would benefit from more liberalization. Liberalization should be well-planned, timed, and sequenced.

China's moves to liberalize its capital account are welcome and appropriate. The removal of long-standing capital controls could bring substantial economic benefits. However, distortions remain in the rapidly growing financial sector and the exchange rate remains managed. Hence, a cautious sequencing of liberalizing measures in all three areas (capital account, financial sector, and exchange rate) is needed.

China's capital account liberalization may have implications for other countries. Gross capital outflows from China may increase as a result of Chinese savings seeking to diversify abroad, and inflows may rise as global investors seek exposure to China's growth potential. There will be benefits from increased risk diversification as China's financial system integrates into the world's, but there will also be the potential for greater transmission of shocks in both directions. Greater capital account liberalization in China can have important benefits for China and the world, and a carefully planned and implemented approach is appropriate for maximizing the benefits and minimizing the risks.

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7. Capital Account Liberalization in China: Learning Lessons

Jan Kregel

THE PARADOX

Economic deregulation and liberalization have been the external policy recommendations of choice for two very different sets of problems facing developing economies in very different geographical locations. First, as structural adjustment embodied in the Washington Consensus, deregulation and liberalization have been proposed as the solution to failed domestic industrialization strategies, generally in the Southern Hemisphere, characterized by low growth, external and fiscal deficits, exchange rate instability, and hyper-inflation. At the same time, the same measures have been proposed as a remedy for the excessively successful policies in Asia characterized by high savings and investment rates, high growth, external and fiscal surpluses, exchange rate stability, and price stability.

Liberalization is the preferred solution to crisis and to success; thus the paradox of how the same policies, in particular relating to liberalization of the external capital account, can provide the remedy for two very different types of economic dysfunction.

Liberalization is the preferred solution to crisis and to success; thus the paradox of how the same policies, in particular relating to liberalization of the external capital account, can provide the remedy for two very different types of economic dysfunction. Indeed, one might wonder why any remedy is needed for excessively successful economic performance, and, in particular, to what extent the absence of liberalization has been the source of the success (or failure) of economic performance.

Two answers are proposed to this paradox. The first is that the combination of deregulation and liberalization is not, in fact, recommended as a remedy for the performance of the developing countries in which it is applied, but rather it is a solution for the problems facing developed countries, usually represented in the form of unsustainable global imbalances. It is instructive that these policies

are always imposed either by direct bilateral pressure of developed countries on developing countries (in the case of Asia) or via the pressure of multilateral financial institutions under the influence of developed countries (in the case of South America).

The second proposed answer to the paradox is the error of misplaced concreteness in the assessment of policy, or what is often called the "frame" of the discussion. In general, the frame is to consider as normal a deregulated, liberalized market system, and to mistake that system as a means to an end instead of being the end in and of itself. Thus, policies are formulated to achieve open markets, rather than designing more open conditions in order to achieve domestic policy objectives such as income growth, equality, or employment.

This chapter will start by considering the second explanation of framing, noting in particular that the failure to understand the operation of the market system being recommended makes policy recommendations difficult and frequently results in the operation of the law of unintended consequences. It then discusses how these policies have been applied to the second category of "successful" countries, generally Asian as noted above, highlighting how the policies have produced the exact opposite of the anticipated results because of the framing error. China appears to be in the category of countries that have managed to be excessively successful and, from the point of view of the developed countries, generated substantial global imbalances that are perceived to have damaged the economic performance of developed countries. Thus, China is facing both internal and external pressure to apply policy designed to open domestic financial markets similar to that applied to Japan and Korea.

FRAMING

Virtually all policies that recommend liberalization start from two prior assumptions: first, that a formal market can exist, and second, that there are the appropriate number of market agents with profit maximizing objectives to produce a self-adjusting mechanism capable of producing more efficient, "equilibrium" outcomes. Liberalization reduces distortions or impediments to the operation of this ideal process. However, in most cases neither of these prior conditions are satisfied, and instead of analyzing the objectives to be achieved by instruments of policy, the instruments themselves—free markets—become the objectives to be achieved. The advice given by multilateral financial institutions to developing countries showcases this error.

This type of error is most common in two areas: labor and capital markets, where it is not even clear what is being traded, much less whether such "markets" could in fact exist, let alone function effectively. And in both cases, the presumed operation of a self-equilibrating process clearly does not exist. Keynes made the case for the labor market in his General Theory, through the simple observation that the supply and demand functions are not independent of conditions in the rest of the economy. An excess supply of labor that drives down wages and reduces household incomes is supposed to increase profits and investment financing; but instead, the fall in sales will decrease labor requirements to produce the lower level of sales and increase excess capacity, reducing the incentive to higher investment. The market mechanism in this case is self-reinforcing or cumulative, rather than self-adjusting. But the problem is not so much the failure of the operation of the adjustment mechanism as it is the failure to understand that the labor market does not determine the level of employment.

Finance provides the other area. When interest rates are not free to adjust to equilibrium, financial repression is said to exist. On the presumption that low savings in developing countries impedes capital investment and higher growth, the proposed solution was for these countries to liberalize domestic interest rates and to "borrow" the savings of developed countries in international capital markets. Liberalization of global capital markets would then allow capital to flow from developed countries with high capital intensity production and low rates of return to be invested in capital poor, high rate of return developing countries.

Here the problem is that it is impossible to identify rates of return to capital. While the Cambridge controversies made it clear that there is no such thing as "capital" that is allocated in a market by comparison of rates return, they also made it clear that there is no specific positive or negative correlation between capital and its return.

Despite these difficulties in identifying just exactly what is involved in the liberalization of capital markets, either domestically or globally, the International Monetary Fund has continued to support this instrument as an objective via its 1990s recommendations to amend its Articles of Agreement to abrogate Article 6 and add capital account convertibility to the already existing commitment to current account convertibility for members.

Just like the IMF's push for capital account convertibility, China's pursuit of capital account liberalization was stymied by the 1997 Asian financial crisis. But

the government still seems determined to follow this path as the 12th Five-Year Plan announced the decision to "gradually achieve convertibility of the renminbi under capital accounts," followed by the decisions of the Third Plenary Session of the 18th CPC Central Committee to "accelerate interest rate liberalization and capital-account convertibility."

THE EXTERNAL PRESSURE

There is no case that I know of in which a developing country has decided to introduce capital account liberalization as an objective in and of itself, although China may eventually prove to be the exception that proves the rule. And there are only a few cases in which such measures have been taken voluntarily, independently of pressures from international considerations, either from developed countries or from multilateral institutions in the interests of expediency or efficiency. This is simply because liberalization of capital flows has an impact on virtually every other area of economic policy and is not a policy that can be introduced without appropriate compatible policy decisions in virtually all other areas of the economy. Thus, any discussion of "managing" capital account liberalization must go beyond the technical tools for influencing or managing capital flows, and must include the implications for "managing" other economic phenomenon. This is where the law of unintended consequences seems to apply.

In this regard, and given the pressure from the U.S. Congress to classify China as an exchange rate manipulator, the Japanese and Korean experiences of rapid liberalization starting in the mid 1980s are instructive. Under pressure from the U.S., Japan agreed to take measures to allow yen appreciation via the opening of domestic capital markets:

> …exchange rate considerations were the most important among a number of issues. Admittedly, what had so hardened the attitude of the United States was irritation regarding the alleged 'insularity' of the Japanese financial markets, which the United States rightly or wrongly considered to be a major factor behind the continued appreciation of the dollar vis-a-vis the Japanese Yen. At the same time the deterioration of the U.S. current-account balance was already obvious enough to foster protectionist sentiment in the U.S. Congress.… it is clear that the pace of financial deregulation in Japan would have been considerably slower had it not been for U.S. pressure and the resultant U.S.-Japan accord. *It may be noted that, while the original intention of the U.S.-Japan accord had been to support the yen against the dollar by encouraging the international*

> *use of the yen, in the event it had a very different impact. After the dollar had turned around in 1985 the Japanese deregulation measures helped to sustain capital flows to the United States and to curb any excessive weakness of the dollar.* (Osugi 1990, 8–9—emphasis added by the author)

Again, the presumption that liberalization of the market would bring about equilibrium in the end produced the opposite result.[1] The presumption was that market restrictions were impeding a higher flow of investments into Japan, when in fact what occurred was to allow domestic investors greater diversification and produced a much larger capital outflow.

The final element of the Japanese experience is in terms of interest rate policies. It is well known that Japan participated as the major counterpart of the U.S. in the Plaza Accords to stem the unexpected one-way appreciation of the U.S. dollar even in the presence of a rapidly deteriorating U.S. external position and that the Louve agreements were an additional attempt to control what had become an opposite momentum movement. As the U.S. went into recession and desired to loosen the monetary policy stance initiated in 1979 under then Federal Reserve chair Paul Volcker, such an action would be worsened by the then excessive decline of the dollar if U.S. rate fell relative to Japanese rates. The U.S. imposed a reduction of interest rates, which, combined with the rapid capital account liberalization, produced an equity and property boom which brought Japan's post-war high growth experience to an end. Japan had experienced average growth rates as high or higher than China's and an external surplus that was also very similar.

SOUTH KOREAN FINANCIAL LIBERALIZATION: FROM PRUDENCE TO EXTERNAL BORROWING TO ASIAN CRISIS

Similar arguments can be made in respect to the problems faced in Korea when its current account surplus with the United States in the latter half of the 1980s caused trade conflicts.

> Accusing Korea of 'manipulating' its exchange rate, the United States demanded that Korea advance its trade and financial liberalization programs and make the liberalization programs more transparent. Korea

1 That China is in a similar position was already noted in 2002: "The general impression drawn from the… characteristics of the Chinese economy is that China's initial conditions do not resemble closely the starting point leading to a stylized capital inflow problem.… In particular, the scenario of massive capital inflows upon liberalization seems less likely and less risky in China.… The main challenge for China probably lies more in successfully managing the liberalization of capital outflows through more diversified channels." (Icard, 2003)

> and the United States, to settle pending issues in their financial conflicts, agreed in August 1989 to hold financial policy talks as needed. Having had several discussions since 1989, both parties agreed to set out the three-stage Blueprint for the Liberalization and Opening of the Financial Sector.…The third-stage blueprint covers crucial areas such as interest rate liberalization, control of bank loans to chaebols, short-term finance, and foreign exchange and capital account liberalization.…It aim[ed] to achieve substantial liberalization of Korea's financial sector by 1997. (Park 1996, 252–3)

Nonetheless, South Korea's financial liberalization since the early 1980s can be characterized as cautious and slow. The cautious approach to financial opening was preferred to prevent external factors from creating additional disturbances in the process of domestic financial liberalization. Indeed, this early resistance to rapid liberalization has been used to explain the growth success of Korea relative to Mexico, where similar liberalization measures were widely embraced but without the appropriate regulatory and supervisory measures. (Auerback 2001, Chapter 3)

Despite the slow pace of financial liberalization, South Korea's financial market and financial policies accelerated in the 1990s.

> It is particularly puzzling that the Korean government acted in this way, counter to the whole thrust of Korean development policy for decades past.…the government placed great emphasis on joining the OECD, and the OECD made financial openness a condition of membership. As part of the same set of reforms, the government abolished the Economic Planning Board, the main body for making economic strategy since the early 1960s, making the Finance Ministry the economic supremo.…Domestic corporate borrowers discovered that they could borrow abroad half as cheaply as they could at home. Foreign debt escalated, most of it private and short-term—maturing in twelve months or less. In Korea, foreign debt incurred by its banks and the companies that borrowed from them exploded from very little in the early 1990s to roughly $160 billion by late 1997. (Wade and Veneroso 1998)

However, the government recognized the risk of an increase in capital inflows due to the interest rate differentials and had planned to delay until domestic reforms had produced convergence. Thus,

> Despite continued extensive capital controls, a large interest rate differential between home and abroad, coupled with the bright prospects of the economy…made Korea one of the most attractive markets among the emerging economies to foreign investors. Furthermore,…even the partial nature of capital account liberalization undertaken during the pre-crisis period (mid-1990s) triggered massive capital inflows.…Consequently, the short-term external debt grew much faster than long-term debt throughout the years, and the financial sector became the major holder of external debts. Out of the total increase in external debt during the three years (1994–96), the banking sector explains about 70 percent. (Wang and Shin 1999)

The discovery that the Korean Central Bank had virtually exhausted its foreign exchange reserves supporting the Korean financial institutions that had contracted these short-term loans led to a withdrawal of lending to South Korea and the collapse of the exchange rate and full scale crisis. The subsequent IMF support placed the blame for the crisis on the policy of industrialization and high debt ratios of Korean monopolies and called for a wholesale dismantling of the Chaebol (family-owned business conglomerate) system and the introduction of even more rapid liberalization.

Noting the paradox in the argument that structural problems caused South Korea's 1997 crisis while its very positive performances made the country a poster for liberalization policies before the crisis, Jang-Sup Shin (2013) has argued that the 1997 crisis was not caused by deep-seated structural problems, but a combination of financial liberalization leading to mistakes in risk management by the government, financial institutions and some companies.

> Korea recovered quickly from the crisis despite the IMF program, not because of it. A high interest rate policy and radical structural reforms actually worsened the situation of the Korean economy by increasing corporate failures and bad loans in the financial sector.…the IMF-sponsored reforms had a long-term negative effect on the Korean economy by decreasing its economic growth potential. The country's economic growth rate was in fact reduced to 4.7% on average during 2001–2007, about half of the growth rate during 1990–1997. Corporate investments were stagnant and the growth of the domestic economy was mainly led by an increase in household debt.

Thus, despite a conscious effort to control the pace of liberalization and to defend the economy from the damage caused by rapid capital flow reversal, Korea was pushed into a financial crisis that allowed the liberalization and rapid dismantling of the development strategy that had been responsible for Korea's successful growth performance. However, the introduction of these policies did little to resolve the problem of Korean trade imbalances with developed countries, which were quickly re-established in the recovery from the 1997 crisis.

INSTRUMENTS AND OBJECTIVES

Based on the experiences of Japan and Korea, the real question for China is how the instrument of liberalization can achieve the objectives desired by Chinese policy makers. A recent study made available by the Peoples Bank of China lists the benefits to be expected from liberalizing the capital account:[2]

- support of Chinese companies seeking to expand globally;
- encourage structural adjustments in the economy by encouraging labor-intensive companies to relocate where labor costs are lower;
- increase cross-border use of the renminbi as a step towards internationalization.

The PBOC study lists four initial conditions that make successful liberalization of capital markets possible: macroeconomic stability, large foreign exchange reserves, sound financial system, and adequate financial regulation as well as supervision.

The experience of Japan and South Korea would suggest that the last two factors are highly dubious, given that this experience derives from the period of substantial controls. There there is no guarantee that they will persist under liberalization.

Implementation is via three-step, ten-year process with the majority of the measures concentrated in the last five years: relax foreign direct investment (FDI) related to business investments over three years to allow Chinese companies to invest abroad; relax controls on commercial credit related to merchandise trade activity and support further RMB internationalization over three to five years; liberalize portfolio investments, real-estate investments, and other bank-related capital flows within five to ten years.

2 Reported in http://scepticalmarketobserver.blogspot.com/2012/03/capital-account-liberalisation-in-china.html

Other proposals include liberalizing capital inflows before capital outflows, long-term capital ahead of short-term capital, institutional investors before individual investors, and non-residents' investments in China ahead of residents' investments overseas.

It is exemplary that the PBOC report does not deal with any of the issues noted above from the experience of other Asian countries, in particular the structure of a liberalized domestic financial system, and the impact of liberalization on interest rates and exchange rates. In particular, it is interesting that the factors listed as supporting liberalization are very similar to the initial conditions noted by Icard (2003) that would lead to risks of capital outflows, making the sequencing of inflows and outflows important. The PBOC report also fails to take into account the impact of increased volatility in exchange rates and capital flows, which will have a direct impact on the role of the RMB as an invoice and settlement currency.

This Asian experience in the context of this timetable suggests three lessons. The first is that the immediate impact of liberalization will be unpredictable, which thus supports the preference for gradual liberalization. The second is that since this means the impact on the exchange rate will be unpredictable, a clear objective on exchange rate policy[3] should be the driving force in decisions on liberalization. Finally, it has been clearly demonstrated that the sequencing of measures should be different for foreign investment in domestic assets than with domestic investments in foreign assets—and be coordinated with exchange rate policy.

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3 The exchange rate has long been considered a crucial variable in industrialization strategies for developing countries and has recently been emphasized in the "New Developmentalism," which also argues against any dependence on external capital, thus negating the need for any capital market liberalization. See http://www.tenthesesonnewdevelopmentalism.org.

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8. Deregulated Finance in China: A Critical Analysis

Sunanda Sen

REFORMS AND FINANCIAL STABILITY

Financial reforms in a country cannot be presumed to contribute to stability, a point which can be borne out by developments in China's financial sector over the last few years[1]. In particular, the market, when freed from the prevailing regulations, is prone to greater degrees of uncertainty with expectations of further changes, which can be destabilizing. A look at the different stages of capital account deregulation in China signals a need for caution in such policies.

A review of the process of financial deregulation shows some major breaks in China's capital account regulation, each indicating substantial changes in the management of the currency.

The first relates to an announcement in 2005 that ended the prevailing fixed official rate of RMB at 8.27 per dollar, largely with pressures from the U.S. The exchange rate of the RMB immediately moved up and has been subject to frequent appreciations since then.

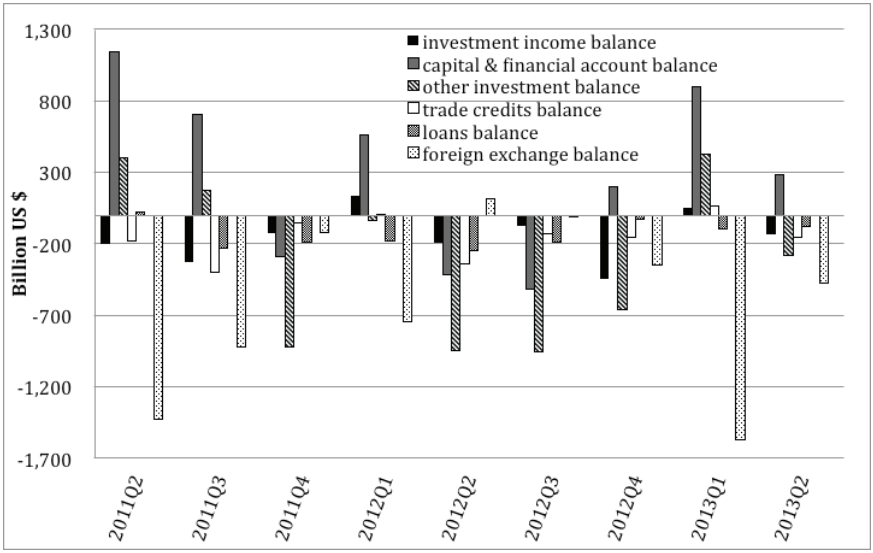
The second break in China's currency management came in 2007 as foreign currency was allowed to be held privately. However, with RMB continuing to appreciate, those private holdings did not immediately affect the RMB rate in the market via speculation (Long 2013).

The third and a major break in China's currency policy came in September 2011 with the "advent of RMB's two-way floating process" (Long and Qiaowei 2012). This ended a long-standing consensus on the uni-directional movement of the renminbi rate, which prevailed until then. The measure, in principle, permitted the currency to actually depreciate for the first time in April 2012, when it started depreciating over at least the next six months.[2] (Even after September 2011, appreciations in the RMB continued, though at a slower rate, until April 2012 (Long 2013)).

1 For more analysis, see Sen 2012 pp. 263–300

2 According to exchange-rates.org on 7/5/2012 and 1/11/2013

Figure 1: Components of China's Balance of Payments



Note: The negative turn as above in the financial balance can partly be explained by the negative investment income balance, which seems paradoxical, especially with China's large holdings of U.S. Treasury Bills. An explanation lies in the consistently lower rates of return on those bills as compared to those on the foreign holdings of Chinese assets.

Source: State Administration of Foreign Exchange, www.safe.gov.cn/wps/portal/english/

In the meantime, currency management in China had taken a new turn with a fourth change in April 2012 as the daily trading limit of the currency rate was officially widened from 0.5 percent to 1 percent. The measure, while allowing the exchange rate to move widely in either direction, was also expected, as held by Chinese experts, to encourage the use of the RMB in international markets.[3] The measure heralded the downward movements in the rate, which, as mentioned above, took place between April and August 2012.

Finally, the latest twist in China's financial management came with the announcements of a free trade zone in Shanghai at the Party Congress held in November 2013. The major reforms include the setting up of the Shanghai zone with full currency convertibility and the deregulation of the interest rate throughout the country.

3 The measure also worked as a signal for further deteriorations in the country. See for details "China widens yuan's trading bank against USD" Xinhuanet News, 14 April 2014, news.xinhuanet.com/english/china/2012-04/14/c_131526335.htm

DEREGULATION AND THE BUILT-IN INSTABILITIES

It is possible to trace some of the destabilizing forces as outcomes from the changes in China's financial sector regulations discussed above.

But first, let's focus on China's external balance, which since 2011 has been subject to some unprecedented declines in its financial account balance. The latter turned negative for the first time in Q4 of 2011 and later again, in Q2 and Q3 of 2012 (SAFE n.d). Changes as noted above in the financial balance throw open many questions, including whether there has been capital flight from China (Shibo and Long 2012).

It is not difficult to trace the sweep of speculation in China's markets over recent years. One indication is the increased inflows of portfolio capital, which of late has been as large as $929 billion in Q4 of 2012, primarily through the use of wealth management funds.

The negative turn in the financial balance can partly be explained by the negative investment income balance, which seems paradoxical, especially with China's large holdings of U.S. Treasury Bills. An explanation lies in the consistently lower rates of return on those bills as compared to those on the foreign holdings of Chinese assets (Yongding 2014).

Continuing to look at the negative flows in China's financial balance, one also observes the negatives in China's foreign exchange balance, indicating proportionate additions to stocks of official reserves, which has been continuing since Q1 of 2011 or even earlier in China's balance of payment. Additions to official reserves resulted from the consistently large trade surpluses along with the large FDI inflows the country has been receiving over years.

It is not difficult to trace the sweep of speculation in China's markets over recent years. One indication is the increased inflows of portfolio capital, which of late has been as large as $929 billion in Q4 of 2012, primarily through the use of wealth management funds. As explained in a piece in *The Wall Street Journal*, these are "typically short-term investments that banks market as a high-yield alternative to bank deposit rates, which are kept low by the government. About half are invested in low-risk assets such as government and corporate bonds and money-market products.…But many others are backed by everything from loans to developers to accounts receivable to valuables such as gold and jewels" (McMahon and Back 2013). With portfolio capital, the liabilities (as inflows) simi-

larly overshot the rise in China's assets (or outflows), thus making for net inflows.[4] All of the above generated additions to reserves, which was causing negative sums in the balance of payments via financial balance.

Looking further at the factors causing the negative financial balance in the balance of payments, one notices a reversal in "'other investments" since Q4 of 2011. This is related to several factors discussed below:

(a) A drop in net short term trade credits, the negative sum of which reached a peak at (-) $3.3 billion in Q2 of 2012. The numbers can be interpreted in terms of the drop in trade credits advanced (in China) against exports and a rise in trade credits advanced abroad against China's imports, often linked to the continued rise in the exchange rate of RMB. Not surprisingly, net trade credits showed a sharp rise between Q4 of 2011 and Q1 of 2012, evidently caused by the depreciating RMB in the interim.

(b) A negative balance in loans, short- and long-term, advanced by China since Q3 of 2011, which were found more convenient, for reasons which include the expected appreciation of the RMB.

(c) Intermittent drops in the "currency and deposits" component of "other investments" in specific years, much due to the withdrawal of foreign currency (mostly dollars) from banks, again with expected appreciation of the RMB .

(d) China's external payments were also affected by tendencies on the part of traders to advance or delay transactions according to the expected changes in the RMB rate. Forex earnings against net exports were delayed, with payments deferred by overseas importers and payments advanced by domestic importers, both to gain from the on-going renminbi appreciation, continuing until September 2011 and later after April 2012.

(e) As pointed out by Shibo and Long (2012), there has also been an issue with corporates who reacted to expectations of exchange rate changes. One notices that until the introduction of changes in September 2011, foreign companies with a long renminbi bias preferred to receive in renminbi and pay in USD, leading to an evident imbalance in renminbi receipt/payment of trade settlement. However, after September 2011, the foreign companies started paying in renminbi and receiving in USD, which showed that they preferred short

4 However short period inflows as above also contribute to vulnerabilities when there is a bunching of outflows, especially with portfolio inflows presumably positioned to make for capital gains by relying on an appreciating RMB rate, which generally prevailed in the market.

renminbi and long USD. Consequently, the RMB settlement receipt/payment ratio shifted from 1:2.2 in Jan–Aug 2011 to 1.4:1 in Sep–Dec of 2011, with the overall ratio in 2011 still 1:1.3 (it was 1:5.3 in 2010) (Long and Qiaowei 2012). With private holdings of dollars permissible since 2007, selling more dollars compared to what they received was possible with foreign currency loans from banks, which kept increasing in situations of anticipated RMB appreciation. According to Langsha and Chang (2011): "The data suggests that in aggregate Chinese importers/exporters were borrowing dollar from banks and converted them to renminbi. However, this long-lasted trend reversed in October 2011. The difference turned from large negative to slight positive." As Chinese companies reduced dollar liabilities and increased dollar assets, it resulted in a rise of outflow in the capital account. This implied that dollars might flow out from private channels and cause deficits in the capital account (Langsha and Chang 2011).

(f) Indications of the change in expectations relating to the RMB rate since September 2011 were also visible in the difference between cross-border receipt/payment balance and trade balance. The gap measured the advance or delayed payments of goods from both domestic and foreign companies, mostly positive before September 2011; the trend reversed after September as the Chinese importers speeded up the dollar payments. As could be expected, since September 2011, exporters tended to hold USD assets and repay USD loans. As a result, bank deposits denominated in USD increased much faster than loans denominated in USD.[5]

(g) Changes described above also affected the supply of liquidity in the domestic economy. Unlike the previous years when inflows of foreign currency were quickly transformed into RMB, the new pattern of private holdings of dollars after 2007 allowed less of liquidity creation due to the tendencies to hold dollars in the face of a possible rise in the dollar rate. Thus, privately held stocks, as was officially permitted, now worked to pre-empt dollars held by state and/or their conversions in RMB. On the whole, the monetary authorities in China since then have had a much reduced capacity to generate credit, a situation which calls for attention in the face of the renewed threat of a global recession originating from Euro-land.

5 "According to the SAFE report, bank deposits denominated in USD increased by 7bn monthly on average in Q4, much higher than Q1-3's average of 2bn; meanwhile, loans denominated in USD increased only by 1bn monthly in Q4, much lower than Q1-3's average of 7bn" (Langsha and Chang 2011).

(h) An expected appreciation of RMB, which continued until September 2011, also led the value of China's imports settled in renminbi at five times that of exports, which implied that non-Chinese traders were net renminbi receivers instead of payers. As a consequence, deposits by non-Chinese traders denominated in renminbi rose rapidly in Hong Kong. However, the growth in deposits decelerated in the last four months of 2011, when expectations of a renminbi appreciation was no more (Long 2012). As a result, renminbi deposits dropped in Hong Kong while deposits denominated in foreign currencies increased fast in Mainland China. It can be observed that renminbi deposits in Hong Kong and USD/renminbi exchange rate had been moving in opposite directions. Thus currency speculation worked as a major driver of the renminbi internationalization as long as the currency was moving upward, by making it a vehicle of transactions in trade.

(i) The effect of speculation on the USD/RMB rate can be seen by observing the tendencies in the intra-day rate (as market close price minus central parity), which reflect the market view on renminbi vis a vis USD. By contrasting the intra-day rate with inter-day rate (central parity minus market close price last day) which by and large reflect PBOC's view, one can decompose USDCNY movements into two parts by distinguishing market view from PBOC's view on USDCNY, which are often held with opposite positions. Data shows expectations of market depreciation on CNY by Q3 of 2012 despite official announcement that it is approaching equilibrium ("PBOC against the market on USDCNY," 23 May 2012).

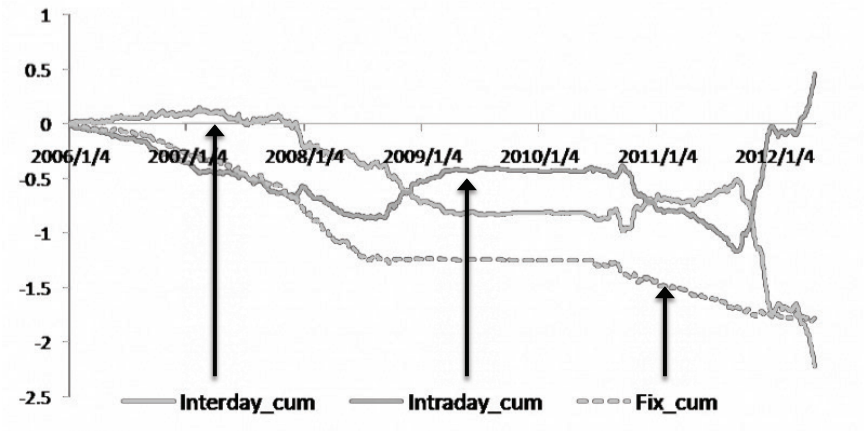
However, as mentioned in the study referenced above, by using regression one finds strong negative correlation between the time series of inter-day movements and intra-day movements (See equation below). The opposite movements of inter-day and intra-day reveal PBOC's strong will to keep the renminbi stable regardless of market trends.

$$\text{Interday}_t = -0.001 - 0.885 * \text{Intraday}_{t-1},\ R2 = 0.5180$$

Applying the above framework to basket-CNY[6] one gets much less negative correlation between inter-day and intra-day movements with R-square at less than 0.1, which indicates that PBOC (as well as speculators) still pay more attention to dollar rather than currency basket in onshore FX market, though it claims to do the opposite ("PBoC against the market on USDCNY," 23 May 2012).

6 The basket of currency consists of 50% USD, 40% Euro and 10% JPY, in accordance with China's export structure.

Figure 2: USDCNY Cumulative Inter-day and Intra-day Movement



Note: The two axes respectively indicate changes in USDCNY rates (Y axis) and dates relating to the latter (X axis).

Source: "PBoC against the market on USDCNY," 23 May 2012, http://ineteconomics.org/blog/china-seminar/pboc-against-market-usdcny

(j) As for the recent tendencies for a faster pace of FX deposits in mainland China, an explanation lies in the weakening of renminbi appreciation expectation (Long and Qiaowei 2012).

(k) Expectations of changes in the USD/RMB rate also gets reflected in the offshore markets of the currency, especially in Hong Kong. There has been a growing importance of non-resident investors in Hong Kong using the Non-deliverable Forward (NDF) route in local currency bond markets, particularly in times of strain in local currency.[7] It has been observed that the market for NDFs grew rapidly from April 2008 to April 2013, but not as much in later months. It is important to note that the NDF market tends to lead the domestic market in setting the trend for the CNY (spot rate), especially in stressed periods when the latter depreciates. However, of late, the offshore deliverable forward (DF) for RMBs have been outcompeting the NDF in terms of the volume of transactions (McCauley et al. 2014).

It is held that the differences between deliverable forward (DF) and NDF rates of the currency reflect the effectiveness of capital controls. Also that the pricing

7 This market was generally used to hedge against exchange rate fluctuations of the renminbi against the U.S. dollar. Although the Chinese currency could not be delivered, exchange rate differences against which a player was hedged were paid out in U.S. dollars. Therefore, the NDF CNY markets was actually based on future changes in the USD/CNY exchange rate. Players from mainland China could not participate in this market, although participation of onshore players in the CNH market is allowed ("China's Currency," n.d).

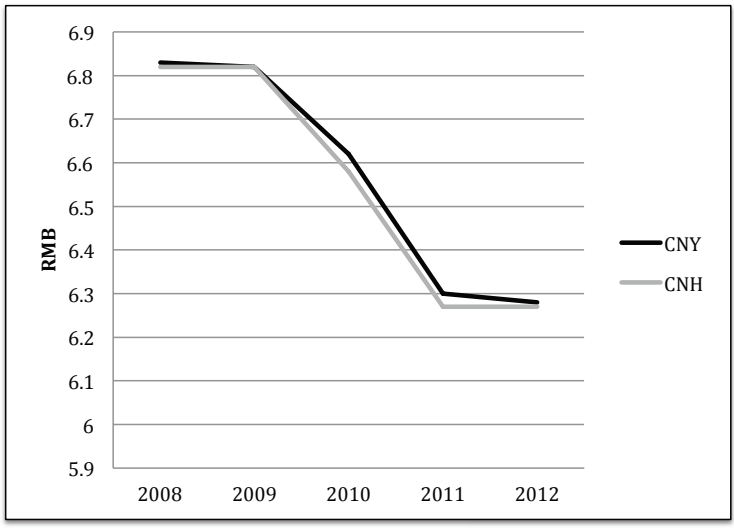
differentials tend to widen sharply in stressed market conditions, as happened with 2008–09 global financial crisis and later, in May–August 2013 during the Euro crisis combined by the selloff in emerging markets as a result of the anticipated tapering of quantative easing (QE) in the U.S. Thus, the NDF market has continued to operate in RMB's offshore market as the main "adjustment valve" for asset managers holding long positions in local bonds and for firms with unhedged dollar bonds outstanding (McCauley et al. 2014). It can be noted that with assets held under NDF by non-Chinese their sales do not get reflected in China's balance of payments.

As mentioned above, the NDF market drives the domestic market for DFs as well as spot rates during volatile periods. However, since 2010 an offshore deliverable forward market has been trading in parallel with the onshore deliverable forward and offshore NDF markets. Data for offshore markets of Hong Kong for April 2013 indicates DF at RMB 7,102 and NDF at RMB17,083 (McCauley et al. 2014).Thus the offshore DF is slowly challenging the NDF market of RMB. With prospects for a convertible RMB it may even lead to the merging of two markets. It may be noticed here that with Hong Kong having a separate spot rate of RMB (CNH), which tends to be slightly higher than the rate (CNY) prevailing in the Mainland, further channels are opened for arbitrage between the two areas; not only with carry trade by using the slightly overvalued rate in Hong Kong but also the interest rate differences between the two areas (Yongding 2014). In effect the higher rate in Hong Kong creates space for a revaluation of RMB at an unofficial level (See Figure 3 for the two rates).

Possibilities of sharper movements in the exchange rate (as started with the announcement of the two-way floating in September 2011, and especially the widening of the trading band later in April 2012) thus created more than a single channel to speculate on the anticipated movements in the currency.

Eventualities as above led to an outcome where the currency actually depreciated, for the first time, from RMB 6.30 per dollar in April 2012 to RMB 6.41 by August 2012 ("Chinese Yuan/U.S. Dollar Daily Exchange Rate", n.d). While appreciations, though at a decelerated pace, in the rate have reappeared recently, expectations are building up for a possible depreciation of the currency in future (Reuters China Money, 23 May 2012). Expectations of a downslide in RMB are reinforced with signals, as indicated above, of a deteriorating BoP with negative figures for net investment income and financial balances in the China's external accounts.

Figure 3: Exchange Rates of USD in Mainland China and Hong Kong



Source: http://themoneyconverter.com/H KD/USD.aspx

THE BIG BANG REFORMS IN CHINA'S FINANCIAL SECTOR

Recent attention has focused on a set of further financial reforms that were launched in a high-powered meeting of Chinese Communist Party leaders in November 2013. The reforms include the setting up of a Free Trade Zone in Shanghai that would allow a full convertibility of the RMB within the zone. Prior to that, in 2004 China had already started using Hong Kong as an offshore RMB center, designating the Bank of China (Hong Kong) as a RMB clearing bank. London was to follow suit in 2009. By 2012, both Hong Kong and London were officially treated as recognized offshore centers for currency exchanges, thus catering to a variety of institutions and enterprises. Singapore followed suit in 2013, with the Industrial and Commercial Bank of China designated as the RMB clearing bank in the city-state. While Shanghai FTZ happens to be one more to be launched in the genre of RMB convertibility (after Hong Kong, London and Singapore), its initiation turns out to be more than what was implied by other offshore centers.

The steps discussed above open the possibility of two-way RMB-dollar (or other currency) conversion, which will be within Mainland China. It is not yet clear if the PBOC will permit the Shanghai zone to maintain an exchange rate that differs from the rate prevailing in the rest of the economy.

Incidentally, one can draw attention here to the so-called "Dimsum bonds" denominated in RMB issued in Hong Kong (Kenny n.d.). These allowed foreigners to invest in China's capital market and in effect foreign companies located in Hong Kong could issue such bonds and get access to the rapidly growing capital market of China. As for similar possibilities in Shanghai, according to Dai Haibo, one of the Directors of the Shanghai FT zone: "Free-trade zone companies and financial institutions will be allowed to invest in Shanghai securities and futures markets, while qualified overseas individuals in the zone may open accounts to trade local securities" ("China Inaugurates Shanghai Zone," 2013). The statement is indicative of situations which may loosen the national regulations.

The Shanghai zone also intends to remove the minimum capital-regulation limits for companies registered in the zone, which by itself will provide incentive for corporates to bypass regulations in the Mainland by resorting to relocation to the zone ("China Inaugurates Shanghai Zone," 2013). Financial reforms projected by the State Committee in November 2013 also indicate a move to liberalize interest rates in China as a whole, which serves to make bank deposits relatively attractive as compared to those with the Wealth Funds offered by banks and with shadow banking channels in the market (Zhu 2013).

Since Shanghai already is the major center of currency trading in China, opening of the FTZ there indicates a gradual move towards full convertibility. It is worth mentioning that both Premier Li Kequiang and President Xi Jinping have officially agreed to use the Shanghai FT zone as a "testing ground" to allow trials of RMB convertibility in capital flows (Zhu 2013.)

CONCLUSION

What, then follows from the ongoing financial reforms in China? As for the free trade zone of Shanghai, while it may be too early to predict how the deregulation will impact the rest of the Mainland in terms of financial stability or otherwise, the discussion above provides ample evidence that policy moves in China to deregulate its capital account have been responsible for greater degrees of uncertainty and related vulnerability in the financial market.

Those include the successive deregulations in China's financial sector, with floating of the RMB (2005), private holdings of dollars (2007), the widened band for RMB (2007), and later, the announcement for "two-way floating" of RMB (2011). These have definitely created considerable leeway that helped encourage speculation on the currency rate.

Like speculation, arbitrage has also been prevalent in the foreign exchange market, affecting flows of net trade credits, loans and other investments by taking advantage of the movements in exchange rate. Some of these provide an explanation for the declines in the net financial balance and continue to cause concern regarding China's external payments. While the continuing trade surpluses have contributed, despite negative income balances (a product of arbitrage), the continuing large current account surpluses as well as increased stocks of official reserves, China's balance of payments is no longer supported by the "twin surplus" it used to be. Notes of caution, if not concern, are in order regarding the facets of China's financial sector de-regulation discussed above.

Deregulation and liberalization in China need to be looked at with caution, not only in the national interest of the Chinese economy, but also for the rest of the world.

Despite what is professed in the mainstream literature on the efficacy of free markets in generating stability and efficiency, a rudderless market under deregulation can result in movements into uncharted territories. In particular, this is true when uncertainty becomes central in the functioning of the market. The quick gains reaped by agents who manage or even manipulate the deals do not reach others who are less fortunate. It may be noted here that profits from speculation and arbitrage hardly generate real activity in the economy. The game thus is neither for a stable order in the market nor for expansions in the real economy. The boom in the real estate market of China also bears testimony to the need for caution. Deregulation and liberalization in China need to be looked at with caution, not only in the national interest of the Chinese economy, but also for the rest of the world.

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Pardee Center Task Force on Regulating Capital Flows for Long-Run Development

This is the third report of the Pardee Center Task Force on Regulating Capital Flows for Long-Run Development, a project of the Global Economic Governance Initiative (GEGI) at Boston University. Co-directed by Boston University Professors Kevin P. Gallagher and Cornel Ban, GEGI's mission is to advance policy relevant knowledge on governance for financial stability, human development, and the environment. GEGI is housed across three entities at Boston University—the Pardee School of Global Studies, the Center for Finance, Law & Policy (CFLP), and the Pardee Center for the Study of the Longer-Range Future.

Along with GEGI's Kevin P. Gallagher, the co-chairs for this Pardee Center Task Force Report are José Antonio Ocampo of the Initiative for Policy Dialogue (IPD) at Columbia University, and Ming Zhang and Yu Yongding of the Institute for World Economics and Politics (IWEP) at the Chinese Academy of Social Sciences. GEGI, IPD, and IWEP are the co-sponsors of this report, and IWEP will publish the report in Chinese.

This report, *Capital Account Liberalization in China: The Need for a Balanced Approach*, examines the benefits and risks of accelerated capital account liberalization in China. To help frame the discussion, the Task Force members—all leading scholars and practitioners from across the globe—met at Boston University in February 2014 to discuss the experiences of other emerging market countries that liberalized the capital account in the past, in order to glean lessons for China as it considers this delicate task. This report is an outcome of that meeting, presenting the Task Force members' perspectives on important aspects of capital account liberalization that China should pay special attention to, not only for its own benefit, but also in consideration of the potential impacts on other emerging markets and the overall global economy.

All three reports by the Pardee Center Task Force on Regulating Capital Flows for Long-Run Development are available in downloadable electronic versions at the Pardee Center's website, www.bu.edu/pardee/publications-library. Additional publications of the Global Economic Governance Initiative are available at www.bu.edu/gegi.

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