

ADB Working Paper Series on Regional Economic Integration



The People's Republic of China's Financial Policy and Regional Cooperation in the Midst of Global Headwinds

Iwan J. Azis

No. 114 | June 2013



ADB Working Paper Series on Regional Economic Integration

The People's Republic of China's Financial Policy and Regional Cooperation in the Midst of Global Headwinds

Iwan J. Azis*

No. 114 | June 2013

¹This is a shorter and modified version of a paper by the author for the KCMI-CASS Conference on Financial Policy under New Leadership held in Seoul on 25 April 2013

*Head of the Asian Development Bank's (ADB) Office of Regional Economic Integration (OREI), 6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines. iazis@adb.org, ija1@cornell.edu

The ADB Working Paper Series on Regional Economic Integration focuses on topics relating to regional cooperation and integration in the areas of infrastructure and software, trade and investment, money and finance, and regional public goods. The Series is a quick-disseminating, informal publication that seeks to provide information, generate discussion, and elicit comments. Working papers published under this Series may subsequently be published elsewhere.

Disclaimer:

The views expressed in this paper are those of the author and do not necessarily reflect the views and policies of the Asian Development Bank (ADB) or its Board of Governors or the governments they represent.

ADB does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use.

By making any designation of or reference to a particular territory or geographic area, or by using the term "country" in this document, ADB does not intend to make any judgments as to the legal or other status of any territory or area.

Unless otherwise noted, "\$" refers to US dollars.

© 2013 by Asian Development Bank
June 2013
Publication Stock No. WPS135805

Contents

Abstract	iv
1. Introduction	1
2. The People's Republic of China's New Direction In Financial Policy	2
3. The People's Republic of China–Asian Interdependence and its Implications	7
4. Capital Flow Contagion and Returns Spillovers	11
5. Regional Cooperation and Market Liquidity	13
6. Concluding Remarks	16
References	17
ADB Working Paper Series On Regional Economic Integration	27
Table	
1. The Dynamics of the People's Republic of China–Asian Interdependence	26
Figures	
1. CPI Inflation and the Exchange Rate in the People's Republic of China	18
2. G3 and the People's Republic of China Total Outflows	19
3. Intervention and Sterilization	20
4. Trade Pattern—the People's Republic of China, Asia, and the Rest of the World	21
5. The People's Republic of China and Asia's Coefficient of Interdependence	22
6. Larger and More Volatile Capital Flows Post–Global Financial Crisis	23
7. Shock Spillovers and Persistence—Lehman Collapse and Eurozone Debt Crisis	24
8. Volatility Spillovers and Persistence—Lehman Collapse and Eurozone Debt Crisis	25

Abstract

Although growth deceleration in the People's Republic of China (PRC) is inevitable, if the country's new direction of financial policy (on exchange rate, capital flows, banking, capital market) can be achieved, it will be good not only for the country but also for the rest of Asia. This is consistent with the increased degree of Asia's integration and interdependence. But given the nature of financial contagion and spillovers across countries and asset classes, the financial headwinds from global crisis may require regional cooperation in safety nets provision, as the domestic policy in the PRC and other Asian countries is likely insufficient. Equally essential is the cooperation among Asian regulators to secure financial stability and enhance market liquidity. If coordinated well, such cooperation can also strengthen Asia's collective voice to ensure that harmonization of international rules does not mean applying the same laws in all jurisdictions, and that the global debates on bank-centric regulations do not have adverse consequences on Asian capital markets.

Keywords: PRC financial policy, global headwind, Asia interdependence, regional cooperation, financial regulation

JEL Classification: G15, G18, E52, E58, F31, F36

1. Introduction

After years of registering double-digit growth rates, economic growth in the People's Republic of China (PRC) has begun to decelerate steadily. This worries many countries, including those in Asia, since the PRC's interdependence with the rest of Asia has deepened over the years. With no major investment programs announced at the recent National People's Congress, fears of a hard landing for the PRC's economy are also heightening.

The PRC is clearly at a crossroad. The reforms and rebalancing that are necessary will lead to slower growth, while averting downward pressure from global headwinds requires a sustained push for growth. It will not be an easy balancing act. However, analyzed more carefully, the deceleration is actually consistent with the country's demographic changes and rebalancing efforts to shift sources of growth toward more consumption and services. Thus, it is as much about natural trends as it is policy-driven.¹

One encouraging development is that the PRC's new financial policy is a step in the right direction. It supports efforts to allow the exchange rate and the prices of goods, factors, and financial assets to move more flexibly; opens up capital markets and improves the use of technology in finance; encourages outflows; and reigns in institutional bottlenecks that can undermine the effectiveness of monetary and fiscal policies. The short-run effects of the new financial policy may hurt growth, but if handled carefully, it can lead to more balanced and sustainable growth, which is good not only for the PRC, but also for Asia and the rest of the world.

But the lingering Eurozone crisis and uncertainty about the United States' (US) recovery spell trouble for the PRC and other emerging Asian economies. Ultra-easy money policy as a response to the crisis has led to massive capital flows, posing problems and policy dilemmas in the receiving countries. Capital market shocks and volatility in the US and Europe also affect Asian markets, refuting the notion that the effects of the global financial crisis (GFC) worked only through trade channels.

After highlighting the key issues in the PRC's financial policy and its new direction in the next section, this paper argues that increased interdependence between the PRC and Asia implies that there will be significant impacts in the region from the PRC's financial policy. If the new policy direction makes the PRC's growth more stable, balanced, and sustainable, it will be good for Asia. By juxtaposing PRC policy in an increasingly interdependent Asia with the crisis response in advanced countries, this paper further argues that ultra-easy money policies in the latter poses some risks of financial instability. Unless some countervailing measures are taken, contagion through capital flows and return spillovers from shocks in US and Eurozone capital markets make Asia

1 In early 2010, the PRC's policy makers began to reach a consensus on the need to tolerate slower growth. They are reluctant to take more aggressive measures to support economic growth primarily due to lessons learned from the 2009 stimulus package. In announcing a 7.50% growth target for this year, Premier Li Keqiang clearly said that the nation must maintain that pace through 2020. This is quite a departure from the era that former Premier Wen Jiabao once labeled "unbalanced, uncoordinated, and unsustainable" growth.

more vulnerable than most people think. Strengthening capital markets and making them more liquid is a particularly important domestic countervailing measure. But the huge size of capital flows and high volatility of financial market post-GFC make domestic policy alone inadequate. Regional cooperation in financial safety nets is imperative. Cooperation among regulators is equally important, given the region's financial sector's exposure to global market, the need to harmonize market practices, and the importance of strengthening liquidity.

2. The People's Republic of China's New Direction in Financial Policy

One of the most debated aspects of the PRC's financial policy has been exchange rate policy. Many argue that the best course of action is to let the renminbi float, with its price in US dollar terms determined by the market. This would help not only reduce the PRC's trade surplus and its trading partners' deficits, a major source of global imbalances, but also lessen the People's Bank of China's (PBOC) burden in fighting inflation and equilibrating the foreign exchange market. On both counts, however, the validity of the argument is debatable. Of course, an appreciated renminbi would make the PRC's exports more expensive, but whether that will effectively reduce PRC-US trade imbalances is still doubtful. Most studies show either mixed results or inconclusive findings.²

The effect of renminbi appreciation on inflation is equally unclear. Toward the end of the fixed exchange rate system under Bretton Woods in the 1970s, markets expected that the dollar would depreciate. The impact at the time was particularly significant in Japan as capital inflows surged, causing the yen to appreciate. The intervention by the Bank of Japan (BOJ) led to a massive increase of foreign reserves and raised the money supply to a level that caused wholesale price index (WPI) inflation in Japan to exceed the US rate for the first time. The loss of monetary control due to foreign exchange market intervention makes appreciation and inflation at the same time possible: the well-known "trilemma." Applied to the current state of affairs in the PRC, since the exchange rate system is still in transition as it moves away from a fixed system, an abrupt appreciation could be equally inflationary.

The problem with that seemingly reasonable recommendation for appreciation is its neglect of the PRC's inability to lend in its own currency in the same manner that the US and Germany can. Being a surplus country, this means two things for the PRC: (i) firms and agents hold dollar assets, and (ii) the expectation of renminbi appreciation is strong. Unable to unload foreign currency assets due to currency mismatches, firms and agents obviously prefer to have a stable rate to avoid losses from appreciation. However, as pressures (from outside) mount, expectations for appreciation increase and the market's "one-way bet" attitude intensifies the pressure. In addition to strong capital inflows, this has been the case until recently, leaving no choice for the PBOC

² Cheung, Chinn, and Fujii (2008) are among those who found little statistical evidence that the renminbi is undervalued.

but to intervene and resulting in reserves accumulation and a loss of monetary control.³ Being a “virtuous” country, therefore, the PRC has to endure “a conflict of virtue” (McKinnon and Schnabl 2004; McKinnon 2005).

It is not surprising that keeping the renminbi stable is a current policy priority. The government can then focus on rebalancing the supply and investment (S–I) gap, which will eventually help lower trade imbalances, while the monetary authority can regain monetary control to deal with inflation.⁴

Indeed, inflation remains one of the PRC's most challenging risks. During the fixed exchange rate period of 1994–2004, efforts to quash inflation were effective (Figure 1) until outside pressure and market expectations for the renminbi to appreciate mounted, from which point inflation started to creep up and turned volatile, indicating a loss of monetary control. Since then, large capital inflows, especially foreign direct investment (FDI), and increases in the PRC's surplus intensified the pressure on the renminbi, forcing a roughly 6% annual appreciation (deeper real appreciation). Mounting burdens on the PBOC set in motion measures to encourage capital outflows by the private sector and the newly established China Investment Corporation (CIC).⁵ Attempts were also made to share the burden with commercial banks by raising the required reserves in both local currency (sharing the burden of sterilization) and foreign currency (sharing the burden of intervention).

With the advent of ultra-easy money and quantitative easing policies in the US and other advanced economies following the 2008 Lehman collapse, the appreciation trend was halted. This was meant to counter the sharp fall of export growth due to weak global demand. At the same time, inflationary pressures began to mount following the massive stimulus package introduced in 2009.⁶ In response, the government raised the reserve requirement.⁷ The growing burden on the PBOC to intervene in the foreign exchange market was partly softened by the removal of restrictions on capital outflows.

As seen in Figure 2, capital outflows from the PRC have indeed increased since the GFC amid low volatility. While outflows from the Eurozone, Japan, and the US

3 With the euro and yen weakening since Q4 2012, it is likely that the PBOC will continue to place its foreign reserves into US Treasuries despite the low 1.85% yield. Indeed, data from October 2012 through January 2013 show that the PRC's purchase of US Treasuries increased by \$110.9 billion, the largest increase over a 4-month period since July 2011, which was just before it sold \$161 billion from August 2011 through September 2012. By early this year, the recorded holdings had reached \$1.26 trillion.

4 The effectiveness of lowering the S–I gap rather than tinkering with the exchange rate to reduce current account imbalances between the PRC and the US is no mystery. A number of prominent scholars have laid out their analysis on the subject, among them is Harvard University's Martin Feldstein (Feldstein 2011).

5 The CIC is the PRC's second-biggest investor overseas, ranking only behind the arm of the central bank that manages the country's foreign exchange reserves. This sovereign wealth fund has about \$500 billion of assets under management.

6 Despite the effectiveness of the policy package to lift gross domestic product (GDP) growth from 6.10% in Q1 2009 to 10.70% in Q4 2009.

7 A “differentiated reserve requirement” was launched in 2004 to inhibit the deterioration of asset quality by raising banks' reserves and limiting the expansion of loans by financial institutions with a capital adequacy ratio (CAR) of less than 4.00%.

(collectively, the G3) fell sharply during the GFC, outflows from the PRC decreased only slightly. One of the reasons for this relative stability is the policy-driven nature of outflows, unlike the case of private flows, which almost exclusively search for risk–return. In more recent years, however, non-CIC outflows increased significantly.⁸ Although detailed information on the breakdown of outflows is scarce, data from the PRC’s balance of payments are suggestive. The shares of equity and debt outflows among PRC residents and SOEs, as well as bank lending abroad, have surged.⁹ As shown in Figure 3, the resulting accumulation of net foreign assets (NFA) has fallen since mid-2011. By 2012, reserve accumulation declined to \$85 billion, compared with \$300 billion in the preceding year.

In terms of FDI outflows, which were nearly \$50 billion in 2011, the majority have traditionally gone to neighboring Asian countries.¹⁰ But during the last few years, there have been clear signs of diversification. Unlike Japanese FDI, the fastest-growing component is not in the manufacturing sector, but rather in business service industries to facilitate exports and in natural resource industries to support growing domestic demand.¹¹

While increased outflows can help soften the PBOC’s burden to intervene in the foreign exchange market, problems of currency mismatch due to the PRC’s inability to lend in its own currency remain (i.e., immature creditor problems). In this context, efforts to increase the use of the renminbi as an international medium of exchange are pursued. The sheer size and rising influence of the PRC in the global economy make it natural for an increased use of the renminbi in international transactions, which was only allowed for the first time in 2009, despite the fact that capital account liberalization is being conducted more gradually.¹² Compared to the PRC’s share of global trade, which is roughly 10.00%, only 0.60% of global payments are settled in the renminbi, which clearly suggests that there is ample room for further increase. One estimate shows that by 2015 the share of the PRC’s trade settled in renminbi could reach 20.00%–30.00%. For the PRC’s trading partners in Asia, the increased use of the renminbi would allow Asian financial institutions and the corporate sector to better manage their exposure to the PRC.

8 As an example, last year the PRC government approved Wenzhou in Zhejiang province to start a pilot program that will allow residents of the city to privately invest overseas. Data on cross-border flows also show that capital outflows going to bond markets in other Asian countries, especially the Republic of Korea, have been on the rise.

9 One estimate suggests that resident lending abroad doubled to \$270 billion between 2011 and 2012. But the overall rise in overseas assets is due to investment by PRC financial institutions (IIF 2013).

10 Although Hong Kong, China is the largest recipient, it is mostly used as the PRC’s offshore platform. The ultimate destinations of these investments are third countries. Similarly, the bulk of investments going to Latin America are first coursed through the British Virgin Islands and the Cayman Islands for their tax haven incentives and then reinvested in third countries. This is unlike the PRC’s FDI in Asia (production networks) and Africa (natural resources).

11 Although growing, the portion of FDI going to industrial countries is still small due to high barriers to entry.

12 Hence, the renminbi becoming an international reserve currency is not likely, at least not in the near future, although some central banks already keep a portion of their reserves in renminbi (e.g. Chile, Malaysia, Nigeria) despite the fact that it cannot be treated like regular reserves due to the renminbi’s lack of convertibility.

Greater acceptance of the renminbi as a trade settlement currency will also have important implications for financial market interactions in the region. As an investment currency (store of value), the renminbi's share has been steadily increasing. Current offshore renminbi deposits are estimated to reach CNY1.5 trillion, and the issuance of CNY-denominated *dim sum* bonds in Hong Kong, China is also generally on the rise. (Although such issuance has periodically declined due to slower global demand and lowered expectations for currency appreciation.) Banks' transactions in renminbi have increased as well, as have the regional and international presence of PRC banks outside of Hong Kong, China. For example, the Bank of China and ICBC have grown their Singapore operations, opening up the possibility of establishing Southeast Asian hubs. The PRC has also signed agreements with countries as diverse as Argentina and the United Arab Emirates to expand its banks' operation. But to promote efficiency in the offshore renminbi market, a single fungible market is needed. Market frictions and fragmenting liquidity across markets (e.g., the current use of CNH and CNT codes) are not helpful.¹³

Expanding local currency swap agreements is another trend. The PBOC has established local currency bilateral swap lines with other central banks around the world to facilitate the use of the renminbi in international trade and financial transactions, indicating efforts to make other countries' central banks comfortable with CNY-denominated instruments. In addition to the agreements with other Asian countries, the BRICS—Brazil, Russia, India, the PRC, and South Africa—have announced that they will establish more local currency swap agreements among themselves and establish a financial safety net by creating a joint pool of reserves to mitigate against risks.¹⁴ Indeed, given market uncertainty and growing interdependence between the PRC and the rest of the world, the risk of contagion from external shocks is significant.

The good news is that the PRC still has relatively ample room to use fiscal policy should the external environment worsen. The currently high reserve ratio can also be used (lowered) to counter any dampening effect on domestic demand without threatening inflation. The bad news is that the remaining internal rigidities, combined with global headwinds, may stand in the way of making policy outcomes sustainable. When the time comes to unwind stimulus policy, standard policy measures should be effective and able to safeguard the outcome. However, this is not an easy task for the PRC given the relatively large portion of financial transactions taking place outside the banking sector. Some of these transactions are recorded off-balance sheet, while others are simply in the form of informal credits. One estimate suggests that the transactions in the "shadow banking" sector have quadrupled in size since 2008 to reach a staggering CNY20 trillion (\$3.2 trillion), or 40.00% of the PRC's gross domestic product (GDP).¹⁵

13 The PRC's plan to have a single centralized cross-border renminbi payment infrastructure and international payment system (CIPS) in 2014 is a positive development in this direction.

14 The announcement was made following the G20 meeting in Los Cabos, Mexico. Note that pooling resources is a more effective and sustainable safety net than a swap mechanism because the latter is arranged to alleviate temporary (not permanent) funding pressures in domestic currencies. While swap mechanisms may help reduce the need for reserves accumulation, they are not always made as long-term commitments.

15 Although shadow banking in the PRC is less than the lending made by hedge funds and investment banks in advanced economies, if not properly addressed the trend can endanger the PRC's financial stability. It has been reported that some banks created asset pools, through vehicles labeled "wealth

Lending in the shadow banking sector may reflect public demand for financial services, therefore it will benefit financial development in the country. On the other hand, its rapid growth can threaten financial stability and undermine monetary policy targets. Hence, another balancing act is needed. It is likely that the authorities will try to reign in the system by requiring banks to provide greater disclosure of their off-balance sheet activities. This also underlines the importance of monitoring systemic risk, which is part of macroprudential policy.

The growing public demand for financial services also indicates that there is a need and the potential for the PRC's capital market to develop further. The policy to allow banks more flexibility in setting interest rates is a positive step; it will allow prices to play a greater role in clearing the capital market. As the PRC's role and influence in the world economy grow, the capital market needs to be better integrated with international markets, which is also consistent with renminbi internationalization. For this to happen, policies to ensure stable long-term investments are needed. Raising the limits on investments in stock markets by foreign institutional investors is one example. Quotas for exchange-traded funds raised offshore that can be invested in the domestic capital market have been gradually raised.¹⁶ Further increases in the quotas can have a positive impact on the PRC's "A" shares in the short- to medium-term. As part of capital account liberalization, such a policy will boost inflows of long-term institutional funds by giving more choices in purchasing assets. It will also increase the number of intermediaries offering services to investors. These inflows can raise liquidity and help stabilize prices since there will be more offshore renminbi channeled back into the PRC.

Gradual liberalization is also occurring in the PRC's bond market. Outside Japan, the PRC has the largest local currency corporate bond market in Asia at around \$1 trillion, followed by the Republic of Korea (\$899 billion). Although government bonds remain the largest sector, where their issuance fluctuates with particular policies, corporate bonds have grown more steadily in recent years. The trend is likely to continue due to efforts made by officials to improve market infrastructure.¹⁷ But more needs to be done as financial innovation enables more intermediation to take place outside of standard bank deposits and loans. The key issue remains investors' valuation.

The PRC is clearly at a crossroads between the need for reforms that will lead to slowing economic growth and trying to avert downward pressure from increased global

management products" that are held mostly off-balance sheet, where inflows from new investors are used to repay old investors and both are offered high yields in order to cover up failed investments. This is similar to Ponzi schemes that led to the US subprime crisis in 2007/08.

16 Early this year, the State Administration of Foreign Exchange (SAFE) approved a quote of CNY70 billion worth of exchange-traded funds for 24 Renminbi Qualified Foreign Institutional Investors (RQFIIs). Another sign of further liberalization was last year's decision to allow banks in Hong Kong, China to lend renminbi directly in three special economic and financial zones in Guangdong province. Note that the RQFII scheme is only open to fund management and securities firms, where investors must invest some percentage of renminbi funds raised in fixed-income securities and the remaining portion in stocks.

17 For example, realizing the importance of information and data, attempts have been made to update the government's data collection system for capital transactions that will cover capital account business processed by foreign exchange regulators and banks. Pilot programs have been launched in the city of Dalian and the provinces of Liaoning, Zhejiang (except Ningbo), and Shaanxi.

headwinds. It is not an easy balancing act. Yet, the direction seems clear: gradually allowing prices of goods and factors to move more flexibly by using a mixture of policy measures rather than a single policy, and responding to external shocks countercyclically by giving more consideration to the longer-run effects and social repercussions of policies.

The urgency to deal with social issues cannot be overemphasized given the high degree of income and wealth disparity, and mounting problems with the provision of social services. Long-run considerations are important concerning the sustainability of policies as well as for maintaining financial stability. Future countercyclical measures are likely to be different from those in 2009 where spending increases were made mostly by local governments through debt financing, causing local government borrowing to surge.¹⁸ Applying the same approach under future countercyclical measures will not only threaten overall financial stability, but also aggravate local governments' financial problems, jeopardizing the provision of social services.

What are the implications of the policy directions described above for the rest of Asia? If effectively implemented, these policies will not only help the PRC to weather the slowdown in the world economy and minimize contagion effects, but they will also allow the PRC to meet most of its 12th Five-Year Plan targets. As Asia becomes more interdependent, an economically strong and stable PRC is good for Asia, and vice versa.

Yet, some external factors are beyond the region's control. The dual shocks from the Lehman collapse and Eurozone crisis are notable examples. The policy responses to the shocks triggered massive capital inflows to emerging economies including Asia. Unlike in the past, future contagion and spillovers effects through trade and financial channels may be so severe that domestic policies alone may not be adequate. The remaining discussions focus on the PRC's interdependence with Asia and the risks of financial contagion, leading to the conclusion that effective regional cooperation is warranted.

3. The People's Republic of China–Asian Interdependence and its Implications

Given the PRC's new economic and financial policies, two contrasting scenarios can be envisioned. The gloomy one is as follows. The PRC's strong growth in the past has been supported by high levels of investment beyond the domestic economy's capacity to consume. These could be sustained for a long time because factor prices were biased in favor of capital use and external markets absorbed most of the excess capacity. The new policy cannot effectively reverse the trend of growing disparity between capital and labor returns, declining investment efficiency, and the shrinking working-age population, which has been in decline since 2010. Combined with weaker

¹⁸ Although the PRC's banking sector may have some room to absorb the potential rise in nonperforming loans (NPLs), addressing the problem of local government finances should be a priority if prospective deficits and other issues that can threaten financial stability are to be avoided.

external demand, investment will plunge, excess capacity will haunt the PRC's economy, and growth will plummet.

The rosy scenario assumes that, supported by sweeping administrative reforms, the new financial policy makes the PRC's pattern of growth more balanced, sectorally and spatially, and more open to private and foreign participants. Macro policy remains prudent (e.g., government debt and the fiscal deficit as a ratio to GDP are kept lower than 20.00% and 2.00%, respectively), channels connecting the flow of credit to support the real sector are strengthened, and a more robust services sector boosts domestic demand and the development of small and medium-sized enterprises (SMEs). In the social sector, reforms to the social security system and medical and healthcare services are accelerated, and the supply of subsidized housing for low income families is expanded. The expected outcome may not be immediately realized due to the lagged effect on resource allocation, and the resulting growth may be slower than in the past.¹⁹ But with continued growth in labor productivity, these changes will bring about a decline in the savings rate and an increase in domestic consumption, all of which will help the PRC to rebalance and enter a more sustainable growth path.

International comparisons support the more optimistic view. The PRC's current GDP per capita, at just over one-fifth of the US' at purchasing power parity (PPP), is roughly the same as Japan's in 1966 and the Republic of Korea's in 1988. The fact that very rapid growth occurred in these two countries over the subsequent 7–9 years suggests that sustaining the PRC's high growth for several more years is not an impossibility.

The high degree of interdependence within Asia suggests that the PRC's stable and steady growth is good for Asia as a whole. The country's orderly transition and policy directions discussed in the previous section can provide favorable external support for the region. Conversely, if the PRC's transition is disruptive, the gloomy scenario is likely to be realized, in which case Asian countries may need to reassess their strategies. The risks of such a scenario are real. For example, the shift from relying on low factor costs (e.g., lending rates and energy prices) to making costs more closely resemble factors' marginal product may cause investment to decline abruptly as some activities currently seen as profitable may no longer be commercially viable. Policies directed toward reducing the role of non-formal (shadow) banking and off-balance sheet transactions as part of the comprehensive financial reform may also have a similar effect. Although these measures are needed to make monetary policy more effective, if not done gradually and selectively they can cause investment to fall sharply. The repercussions in Asia will become even greater as PRC–Asia interdependence deepens.

Indeed, economic interdependence between the PRC and Asia is not only significant, but it is also increasing over time. Looking at trade direction alone, it is clear that the PRC's exports to and imports from Asia have been on the rise (Figure 4). But the true degree of interdependence goes beyond just direct trade flows. Indirect flows, in which different sectors have different multipliers, also matter. More importantly, interregional

19 A recent study by the State Council's Development Research Center (DRC), entitled *Ten-Year Outlook: Decline of Potential Growth Rate and Start of a New Phase of Growth*, proposes that PRC's growth will slow from more than 10.00% a year between 2000 and 2010, to 6.50% between 2018 and 2022.

or intercountry multipliers should be at the core of any measures of interdependence. An increase in the PRC's manufacturing production would typically have significant backward linkages. Given strong production networks, this will raise the amount of imports from other Asian countries, the production of which will also generate backward linkages in these countries. The linkages are extensive for manufactured goods, though this is not the case for primary goods (e.g., mining products). The same distinction also ought to be made for intercountry forward linkages.²⁰

Calculated based on the World Input–Output Database (WIOD), the coefficient of interdependence depicted in Figure 5 indicates that the degree of interdependence in 2009 between the PRC and Asia is not only larger than the degree of interdependence among Asian economies outside the PRC (2.17 versus 1.85), but it has increased quite significantly from 1995 to 2009.²¹ The backward linkages, which capture the direct and indirect increase of demand for inputs from one region given a production increase in the other region, doubled during the period. At the same time, the capacity of a growing economy in one region to provide inputs and generate new activities in the other region, as captured by the forward linkages, increased from 0.12 to 0.21.

Another way to reflect the rising degree of interdependence between the PRC and Asia is by looking at the size of the intercountry multiplier for each sector. Comparing the intercountry multiplier from the PRC to Asia and that from Asia to the PRC, there were 30 out of 36 cases in 1995 where the size of the multiplier from the PRC to Asia was greater than that from Asia to the PRC, implying the greater impact of the PRC's growth on Asia than the other way around.²² By 2009, the number of cases had dropped to 23. This suggests that over the years, the PRC's dependence on the Asian economy has been growing (**Table 1**),²³ confirming the conjecture that the PRC and Asia are becoming more dependent on one another.

20 In the PRC, the property sector is among those sectors that have the most extensive forward and backward linkages; consequently, monitoring this sector's price and volume of transactions is one of policy makers' highest priorities.

21 WIOD is constructed by the Research Directorate General of the European Commission. I am grateful to Ms. Raquel Borres for her help in the WIOD reclassification and computation. The coefficient of interdependence is calculated based on the following formula:

$$\sum_{j=1}^n \phi_j b_{ij} = \sum_{k=1}^n \phi_k b_{ik}^* \text{ where } \phi_j = \frac{x_{jk}}{\sum_{k=1}^n x_{jk}}$$

where x_s are the entries of WIOD table, and b_s are the entries of the matrix inverse.

22 There are 35 sectors in the WIOD table: Wood and Products of Wood and Cork; Pulp, Paper, Printing, and Publishing; Coke; Refined Petroleum and Nuclear Fuel; Chemicals and Chemical Products; Rubber and Plastics; Other Non-Metallic Minerals; Basic Metals and Fabricated Metal; Machinery, Nec; Electrical and Optical Equipment; Transport Equipment; Manufacturing, Nec; Recycling; Electricity; Gas and Water Supply; Construction; Sale, Maintenance and Repair of Motor Vehicles and Motorcycles; Retail Sale of Fuel; Wholesale Trade and Commission Trade, Except of Motor Vehicles and Motorcycles; Retail Trade, Except of Motor Vehicles and Motorcycles; Repair of Household Goods; Hotels and Restaurants; Inland Transport, Water Transport, Air Transport, Other Supporting and Auxiliary Transport Activities; Activities of Travel Agencies; Post and Telecommunications; Financial Intermediation; Real Estate Activities; Renting of M&Eq and Other Business Activities; Public Administration and Defense; Compulsory Social Security; Education; Health and Social Work; Other Community, Social and Personal Services; Private Households with Employed Persons.

23 Note that the numbers in Table 1 are the ratios between the PRC's multipliers in each cell and the corresponding Asian multipliers. The greater-than-unity ratio reflects the capacity of a sector in the PRC to generate more activities than the corresponding sector in Asia.

One of the most important sectors in the PRC that has strong backward linkages both within the PRC and with the rest of Asia is the real estate sector. Each time an attempt is made to cool down the growth of this bubble-sensitive sector, the impact on other countries' economies is quite significant. Since the most direct conduit is through the construction sector, capital-goods-exporting economies, notably Japan and the Republic of Korea, are particularly affected. Indeed, the intercountry multipliers of the real estate and construction sectors (footnote 22) are among the highest, suggesting that the PRC's real estate sector plays an important role not only within the country, but also in the rest of Asia.

The PRC's financial policy can certainly shape trends in the real estate and construction sectors. To deal with the problems of economic and social inequality, while at the same time trying to cool down excessive growth in the real estate sector, the PRC is facing a policy dilemma. Given the country's shift toward more price-based measures, banking and capital market policies can play a pivotal role.²⁴ Yet, since the slower expansion of private investment in real estate would likely be matched by the development of public housing for low income households, fiscal policy may also play an important role. In terms of size, investment in public housing can be equally large given the huge demand, but whether the impact on construction activities will be the same as with private real estate investment remains to be seen.

It is well-known that closer ties between the PRC and Asia work largely through the expansion of production networks in the region. Free trade agreements (FTAs) may facilitate this trend, but a large portion of increased intra-Asian trade (Figure 4) has been due to the unilateral policies of individual countries. Thus, each country's exchange rate policy matters. The PRC's policy to widen the intraday trading band of the renminbi is a welcome development. It can make the currency more stable and monetary policy more independent. Not only will it remove "one way bet" behavior, but it can also provide more certainty for trade transactions. There is no reason the positive role of production networks will disappear in the coming years, although the nature of networks and technological development, and the major players involved, may adjust to the new dynamics of the regional and global economy. The PRC's financial policy to support SMEs can alter the configuration of players in future production networks, as well as the structure of the PRC's outward investment in Asia. With rising wage pressure, it is likely that more PRC-based SMEs will be operating in low-wage Association of Southeast Asian Nations (ASEAN) countries.

While it remains uncertain which of the two scenarios described earlier (gloomy versus rosy) has the greater probability to occur, growing interdependence within the region is certain. This can bring a lot of benefits, but it can also facilitate contagion. One potential mechanism of contagion is through financial channels as a result of capital flows and returns spillovers in capital markets. As far as the sources are concerned, capital flows

24 A lesson learned from the 2009 experience is that, stimulus policy funded through bank lending to local government entities could have a deleterious effect on property market, since local governments used land sales as collateral and an additional source of financing. Due to the national regulation on land use (minimum arable area to protect food production) it has been reported that local governments reclaimed land located away from urban areas for farm land, allowing them to use arable land closer to urban areas for property development.

induced by ultra-easy money policy in advanced countries are among the most significant, along with spillovers from capital market shocks.

4. Capital Flow Contagion and Returns Spillovers

Nothing can stop the heavy dose of easy money policy being applied in advanced economies. Such policy has led to, among others, massive capital flows, much of which goes to emerging Asia.

Inflows to the PRC continue to dominate, especially FDI flows that include investors taking a controlling stake in PRC companies. Portfolio inflows remain modest due to existing controls. However, things are likely to change as the PRC opens up the economy and the “push factor” from advanced economies (ultra-easy money policy) persists. Portfolio inflows can surge at the same time outflows increase. As discussed earlier, even during the GFC, outflows from the PRC continued to increase and became less volatile. While FDI outflows have increased in the post-GFC period, mostly going to neighboring Asian countries, the share of equity and debt outflows from PRC residents and SOEs, as well as PRC bank lending abroad, have also surged. It is not unlikely that a large portion of these outflows will increasingly go to other emerging Asian countries as well.

Since the collapse of Lehman in September 2008, the size and volatility of capital flows in emerging Asia have been unparalleled. The overall trend in selected countries in Asia—Indonesia, Japan, Republic of Korea, Philippines, and Thailand—clearly shows rising volume and volatility in the post-GFC period (Figure 6). Three of these countries went through a major financial crisis in 1997/98, and a large amount of capital inflows preceded that crisis. But the size and volatility of the flows during that period were nothing compared to what is happening now.

It is no secret that rising capital flows can be beneficial to recipient countries, but their volatile pattern and pro-cyclicality can act as a channel for the build-up of financial risks and imbalances. However, not all flows pose the same risks. They can be classified into the following categories: (i) equity flows consisting of direct investment and equity portfolios, (ii) debt flows comprising debt securities and other securities including derivatives; and (iii) bank flows.²⁵ Inflows are either equities-led, debt-led, or bank-led if the increase is mainly through equities, debt, or banks, respectively. For a number of reasons, the most worrying trend involves bank-led inflows and debt flows intermediated by banks.

With additional funds coming from inexpensive sources (non-deposits), banks are more willing to take risks. If the flows are used to augment banks' loans, it can stimulate the economy even when exports are adversely affected by currency appreciation. Banks' willingness to lend is also increased because borrowers' portfolios improve as the

25 See Forbes and Warnock (2012). However, unlike in their analysis, this paper distinguishes “debt” from “banks” because the latter are more prone to deleveraging and pro-cyclicality, and therefore have a more direct impact on the real sector.

currency appreciates.²⁶ The problem, however, is when a reversal occurs due to deleveraging or other reasons, leading to disrupted loan flows and a credit crunch. This has occurred recently in some Asian countries when European banks had to deleverage and began calling back funds to strengthen their capital positions. A rising share of non-core liabilities may also drive banks to invest in securities and other risky assets. Data show that since 2007/08 the share of banks' non-loan risky assets in some countries has indeed increased. Either way, greater vulnerability is created. Even when growth and macroeconomic conditions are strong, as in most of emerging Asia during the GFC, the risks emanating from such vulnerabilities remain large.

How should emerging Asia respond? What most countries can do and have done is to refocus their policy on the asset and liability side of banks' balance sheets. On the asset side, in addition to reducing loan-to-value ratios, efforts have been made to contain the excessive expansion of credit and other forms of risky investment. On the liability side, mitigating the increase of banks' non-core liabilities is critical.²⁷ Some sort of capital controls can also help. They can take the form of quantitative controls or more indirect controls. Among the latter, a sterilized intervention is the most common. Almost all emerging Asian economies have conducted such a policy. Another type of measure increasingly proposed and more directly related to debt- and bank-led flows is to impose a levy on such flows. The basic principle is not to prevent the flows but to reduce their volume.

Financial contagion also works through shock and volatility spillovers in capital markets. This was the case in Asian markets during the Lehman shock and the Eurozone crisis. Using multivariate GARCH estimates, Azis et al. (2013) revealed this significant transmission of spillovers. For example, the shock spillover delivered by US debt markets is significant in bond markets in the PRC, India, the Republic of Korea, and some ASEAN countries. With the exception of India, the same conclusion holds when using the Eurozone crisis as the shock origin. It was further found that cross-market spillovers are equally significant: the two external shocks affecting Asian money markets eventually found their way to the region's local bond markets. Since most Asian banks have substantial holdings of local government bonds, any instability in currency and money markets translates into instability in local bond markets.

In the case of US and Eurozone corporate bond markets, the effect of generated shock spillovers is more direct, validating investor perceptions that most Asian government bonds are in the same asset class as high-yielding US and European Union (EU) corporate bonds. The Republic of Korea, Malaysia, and the Philippines were particularly impacted during the Lehman shock. Along with the PRC and Thailand, they were impacted during the Eurozone crisis. The spillovers also occurred in equity and currency markets. During the Lehman crisis, the shock in US corporate bond markets affected the former while the US Treasury bond shock affected the latter.

26 The amplified effect of cross-border flows on the supply of credit due to the changing risk behavior of banks is shown in Bruno and Shin (2012).

27 See Azis (2013) and Forbes and Warnock (2012).

Equally disturbing are the volatility spillovers. Another study reveals that the coefficients for volatility spillovers are generally larger than for the shock spillovers (Azis et al. 2013). During the Lehman crisis, there was a direct volatility spillover from US Treasuries into the bond markets of the PRC, Indonesia, Philippines, and Thailand. During the Eurozone crisis, the same countries plus Malaysia were affected. After the Lehman shock, the US corporate bond market had significant volatility spillovers into bond markets in all Asian countries under observation. There was also a high degree of spillover across domestic financial markets, suggesting heightened contagion during the period. The EU government bond market showed significant volatility spillovers not just into Asian local bond markets, but also into Asian equity, currency, and money markets, demonstrating a broader threat of contagion from mature markets.

Figures 7 and 8 summarize the cross-market shock and volatility spillovers, respectively, and interactions among different markets in Asia during the Lehman collapse and Eurozone debt crisis.

Combined with increased and volatile capital flows, spillovers in capital markets heighten the vulnerability of the Asian financial sector, threatening the region's financial stability. They can undermine efforts to strengthen capital markets by reducing the over-reliance on bank financing. Failing to do the latter endangers the supply of long-term financing for much needed infrastructure development. As banks receive more inflows, the pro-cyclicality can threaten the stability of lending. Combined with other foreign currency debts, rising bank-led flows can return Asia back to the double-mismatch position that brought the region into crisis in 1997/98.

5. Regional Cooperation and Market Liquidity

While Asia weathered the recent GFC quite well, signs are beginning to emerge that the region's vulnerability is increasing as global uncertainty and capital flows rise. With rising asset prices and foreign borrowing, surging household debt, banks' increased non-core liabilities, and volatile capital markets, Asia's resilience is being seriously tested. In her recent remarks about the impact of the global crisis, the International Monetary Fund's (IMF) Christine Lagarde (2013) pointed to the risks emerging in different parts of the world including "the potential spillover effects for Asia."

This is where regional cooperation can play an important role. Strengthening domestic financial safety nets remains the best line of defense. But when pressures from massive capital flows and global uncertainty are so huge, that first-line of defense can be inadequate. When the power of an individual country's safety nets is nowhere near a match for the damaging force that enormous flows of capital can exert, regional cooperation in the form of collective financial safety nets becomes critical. ASEAN+3's Chiang Mai Initiative Multilateralized (CMIM) is a noted example.²⁸ However, the facility is unfortunately inadequate and still suffers from inherent inconsistency (Azis 2012b, 2013). Policy makers not being fully aware of the danger of financial contagion may be

²⁸ ASEAN+3 comprises the 10 member states of ASEAN plus the PRC, Japan, and the Republic of Korea.

one of the reasons for this, and the fact that the region has been doing relatively well during the recent GFC is likely another. Yet, given the current uncertainty and fragility of the global financial system, the author is of the opinion that another round of financial turmoil is about to occur, with the details of where and when it unfolds yet to be determined. The price that will be paid when the next crisis occurs will be much higher than the costs needed to avert its worst effects by making the region's collective safety nets stronger and more effective.

Financial safety nets should also deal with crisis prevention. Regional surveillance to be conducted by the ASEAN+3 Macroeconomic Research Office (AMRO) and the development of regional bond markets through the Asian Bond Market Initiative (ABMI) are examples of regional cooperation in crisis prevention. Unfortunately, the surveillance tasks are more difficult than before, because the next crisis may be rooted in new vulnerabilities and transmitted through new channels that we may or may not be able to detect.²⁹ Even in ASEAN+3 economies with relatively robust macroeconomic and financial sectors, the new contagion channels may not mirror past events. The need to strengthen AMRO's capacity to conduct regional surveillance is absolutely urgent.

One of the objectives of developing local currency bond markets is to prevent a recurrence of financial crisis by reducing double mismatches and providing an alternative long-term financing instrument to recycle regional savings within the region. When the region's authorities proposed ABMI, there was a clear intention to do away with short-term borrowing in foreign currencies, a widespread practice that led to the Asian financial crisis in 1997/98. To establish a common platform to pursue the standardization of market regulations and practices, the region's authorities subsequently set up the ABM Forum (ABMF). To facilitate efforts to circulate excess savings within the region, they also established guarantee programs under the Credit Guarantee and Investment Facility (CGIF). It remains to be seen how all these initiatives can help strengthen the regional bond market to make it deeper and more efficient through greater cross-border bond issuance.

Indeed, financial markets in emerging Asia need more depth and breadth precisely because vulnerability induced by capital flows is on the rise. Otherwise, the build-up of bubbles is inevitable since a good deal of the inflows will not be channeled to productive sectors. Recent developments offer mixed signals. In the context of ABMI, for example, a wide range of improvements have already been made, from rules to facilitate bond issuance by strengthening corporate governance and transparency in the listing and disclosure rules, to ensuring consistent adoption of standards and practices to harmonize Asian bond standards by involving the region's existing self-regulating organizations (SROs).

But the opposite trend can also be observed. In line with the shift in global reforms from rule-making to implementation, and to allow better and more effective risk management, the global over-the-counter (OTC) derivatives markets have gone through a structural

²⁹ Unlike a goods market, a financial market is a different animal featuring complex interrelations with asymmetric information and high levels of unpredictability that may generate seemingly non-rational decisions by agents.

shift with the establishment of central counterparties (CCP) for clearing, swap trading, and trade repositories for reporting.³⁰ One of the primary roles of CCPs is to serve as a safety net. Yet, with CCPs and trade repositories proliferating in emerging Asia, not only will costs be higher, but fragmentation and failure to detect wider systemic risks in cross-border markets can also increase.

Regional cooperation among regulators is needed, for example, in recognizing some market infrastructure entities to operate across different jurisdictions in order to secure transparency and effective surveillance by regional regulators, and to benefit from economies of scale. Harmonizing financial market practices within the region is important to boost intra-Asian investment, but given the region's exposure to global markets, interoperability in market infrastructure beyond the region is also essential. Asian regulators will need to work together on this front. One example is the joint efforts by the Australian Securities and Investments Commission, Reserve Bank of Australia, Hong Kong Monetary Authority, Hong Kong Securities and Futures Commission, and Monetary Authority of Singapore last year to file complaints about OTC trading reforms in the US enacted primarily through Title VII of the Dodd–Frank Act. Their main argument is that these reforms have extra-territorial implications for Asian regulatory bodies and market participants, and could create complexity, cost, fragmentation, and risk in international markets. (Similar concerns were raised earlier by Japan's Financial Services Authority). This response demonstrates a strong Asian front against regulatory over-reach. More crucially, it exemplifies the importance of maintaining a cohesive regulatory strategy among regional bodies.

As revealed by many studies, including one from the author of this paper (Azis 2013), limited liquidity is among the most important obstacles to the development of Asian capital markets. To develop liquidity, greater pricing efficiency and transparency is important. Technology can help achieve this as well, as can regional cooperation. As capital accounts and financial markets in Asia become more open, highly connected global markets imply both opportunities and risks. For market participants who perform complex portfolio valuation and mitigating risks in multiple jurisdictions—and, hence, in multiple time zones—there is an increasing need to use better technology in risk management (e.g., moving collateral across markets). From regulators' perspective, better and faster technology for collecting and managing information is also required. Given some 85% of trades in Asia are still executed by voice, rather than through electronic platforms, there is plenty of room for regional cooperation in this area.³¹

30 While a CCP effectively mitigates and manages counterparty risk, it also consolidates counterparty risk within the derivatives market at a single point. Thus, effective supervision and crisis management mechanisms are critical for CCPs. Because of their global nature derivatives markets run the risk of regulatory arbitrage, with CCPs competing based on their risk management and margining approaches. Under this premise, the G20 mandated that OTC derivatives reform on a global basis should avoid overlapping and contravening legislation between institutions in different countries.

31 Efforts to increase liquidity and circulation of the renminbi in Asia can also be strengthened by regional cooperation. As shown in the case of the PBOC's rule to allow ICBC Singapore to be the renminbi clearing bank in Singapore, renminbi liquidity in the Asian market and the integration of offshore renminbi within Asian local currency markets can be enhanced.

6. Concluding Remarks

A soft landing for the PRC's economy has allowed Asia to maintain strong growth and sustain its production networks in the midst of global headwinds. While the PRC's growth deceleration is consistent with its demographic changes, it is also policy-driven in that financial policy increasingly emphasizes the quality of growth. The new direction of this financial policy, if well implemented, is likely to make growth more stable, balanced, and sustainable. This can be favorable for Asia but it also warrants expectations of lower growth potential for the PRC. From the perspective of global rebalancing, the PRC's orderly adjustment from investment- and export-dependence to relying on more balanced sources of growth is also preferable.

The main argument in this paper is threefold. First, the new direction of the PRC's financial policy toward a more open and flexible system, while allowing the gradual internationalization of its currency, is good not only for the PRC, but also for the rest of Asia. The implementation of this policy, however, may face internal and external challenges, ranging from institutional factors that can undermine the effectiveness of the policy to how to strike the balance between mitigating downward pressure from global headwinds and reaching the necessary level of growth to meet rising needs for economic and social infrastructure development. Second, increased and more volatile capital inflows in emerging Asia, driven by ultra-easy money policy in advanced countries, among other factors, can be a source of financial instability. So can the spillovers from shocks emanating from US and Eurozone capital markets. They both can threaten the region's resilience and complicate policy choices. To the extent that in the midst of the global financial system's ongoing deleveraging, and as market sentiment tends to be driven by macro and regional event risks rather than the fundamentals of micro units in particular countries, the need for regional cooperation to provide financial safety nets is greater than ever. Lastly, cooperation among financial regulators is also essential to secure financial stability and enhance market liquidity by strengthening both the intra-Asian cross-border flows and the interoperability in market infrastructure beyond the region. Put in the context of the current debate about global financial regulations, such closer cooperation should also be geared toward forming Asia's collective and persuasive voice to ensure that harmonization of international rules takes into account the diversity of conditions of member jurisdictions, and to allow Asian policy makers involved in policy formulations and co-operate as a group. The proposed bank-centric regulations should not have adverse consequences on Asian capital markets. The principle to retain is an equivalence of outcomes rather than applying the same laws in all jurisdictions.

References

- I.J. Azis. 2013. Inadequate Regional Financial Safety Nets Reflect Complacency. *ADB Working Paper*. 411. Tokyo: ADBI.
- . 2012a. Entering the Uncharted Territory. *Perspectives from Around the World* 023. Tokyo: Research Institute of Economy, Trade, and Industry (RIETI) of the Ministry of Economy, Trade, and Industry.
- . 2012b. Asian Regional Financial Safety Nets? Don't Hold Your Breath. *Public Policy Review*. 8 (3).
- . 2009. *Crisis, Complexity, and Conflict*. United Kingdom: Emerald.
- I.J. Azis, S. Mitra, A. Baluga, and R.Dime. 2013. The Threat of Financial Contagion to Emerging Asia's Local Bond Markets: Spillovers from Global Crises. *ADB Working Paper Series on Regional Economic Integration*. 106. Manila: ADB.
- V. Bruno and H.S. Shin. 2012. Capital Flows and the Risk-Taking Channel of Monetary Policy. *BIS Working Papers*. 400. Geneva: BIS.
- Y.W. Cheung, M.D. Chinn, E. Fujii. 2008. Pitfalls in Measuring Exchange Rate Misalignment: The Yuan and Other Currencies. *NBER Working Paper*. No. 14168. Cambridge: National Bureau of Economic Research.
- M. S. Feldstein. 2011. The Role of Currency Realignment in Eliminating the US and PRC Current Account Imbalances. *NBER Working Paper*. 16674. Cambridge: National Bureau of Economic Research.
- K.J. Forbes and F. Warnock. 2012. Capital Flow Waves: Surges, Stops, Flight, and Retrenchment. *Journal of International Economics*. 88 (2).
- Institute of International Finance. 2013. Capital Flows to Emerging Market Economies. *Research Notes*. Washington, DC: IIF.
- C. Lagarde. 2013. Fulfilling the Asian Dream—Lasting Growth and Shared Prosperity. Paper presented at the Boao Forum for Asia Annual Conference. Hainan. 7 April.
- R. McKinnon. 2005. *Exchange Rates under the East Asian Dollar Standard: Living with Conflicted Virtue*. Cambridge: Massachusetts Institute of Technology Press.
- R. McKinnon and G. Schnabl. 2004. A Return to Soft Dollar Pegging in East Asia? Mitigating Conflicted Virtue. *International Finance*. 7 (2). pp. 169–201.

Figure 1: CPI Inflation and the Exchange Rate in the People's Republic of China

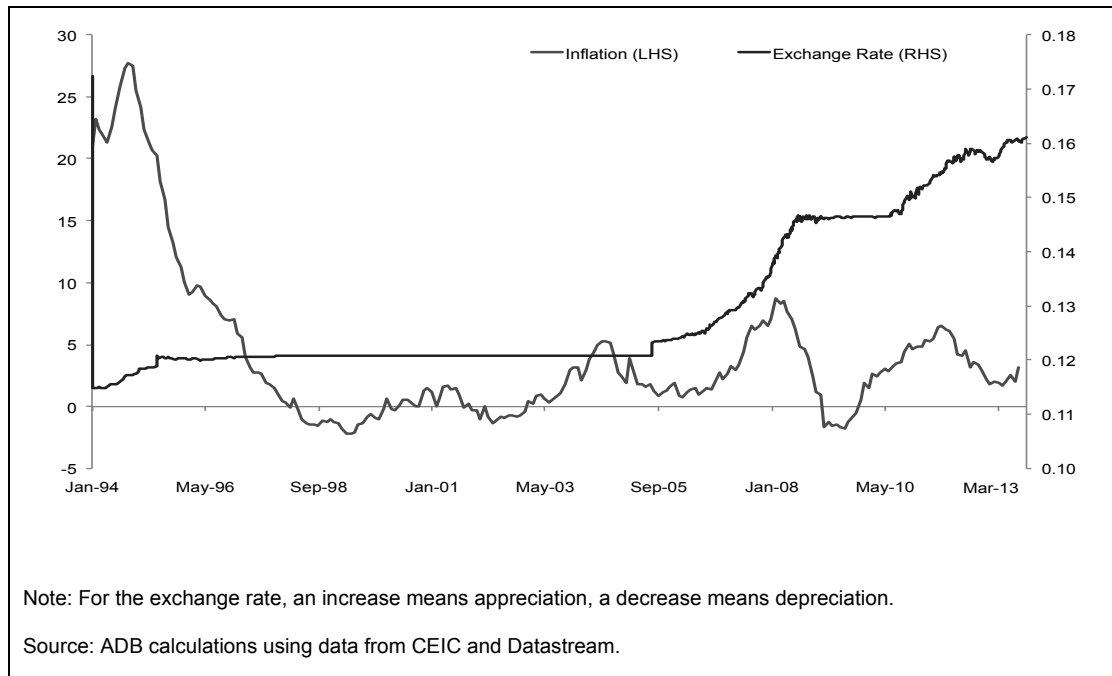


Figure 2: G3 and the People's Republic of China Total Outflows (\$ billion)

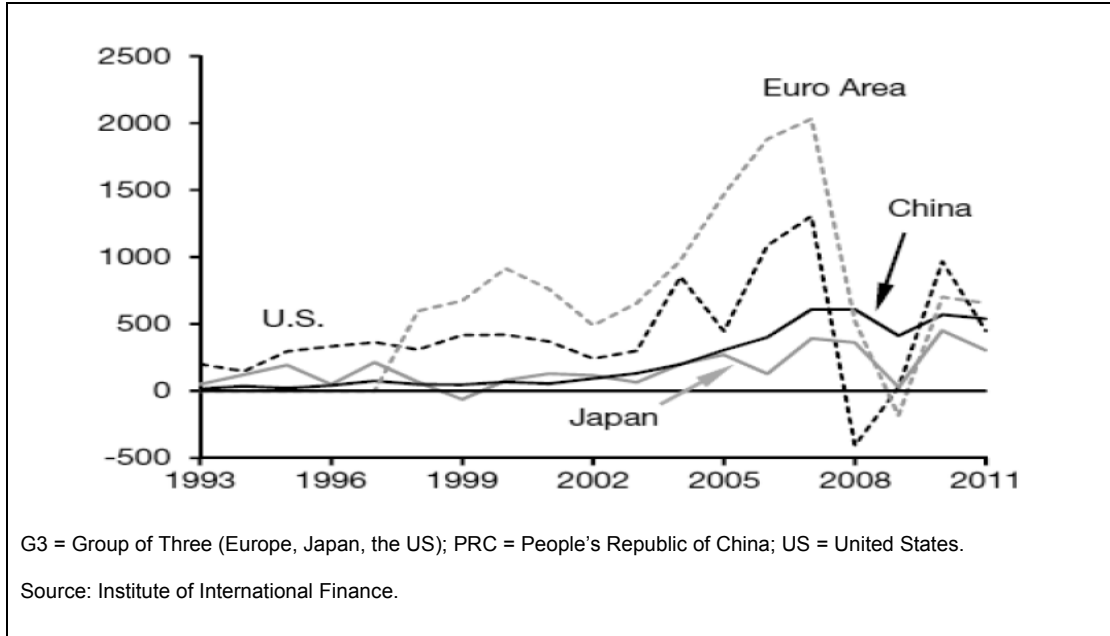


Figure 3: Intervention and Sterilization (CNY billion)

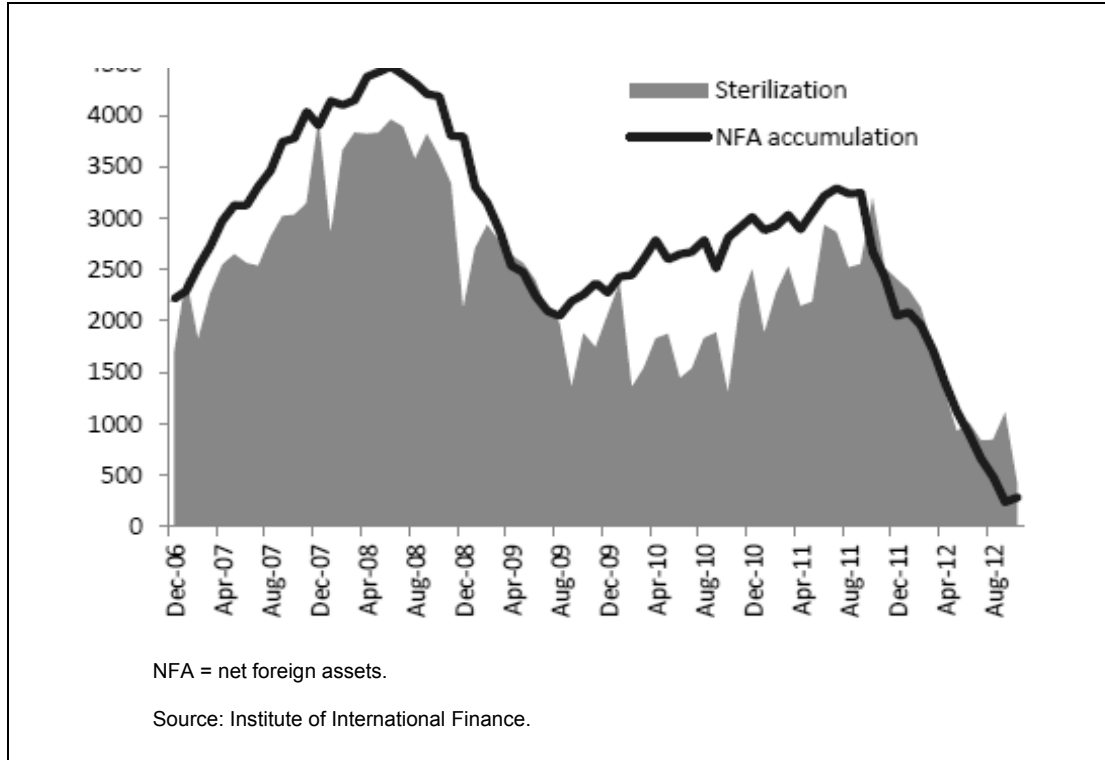


Figure 4: Trade Pattern—the People's Republic of China, Asia, and the Rest of the World

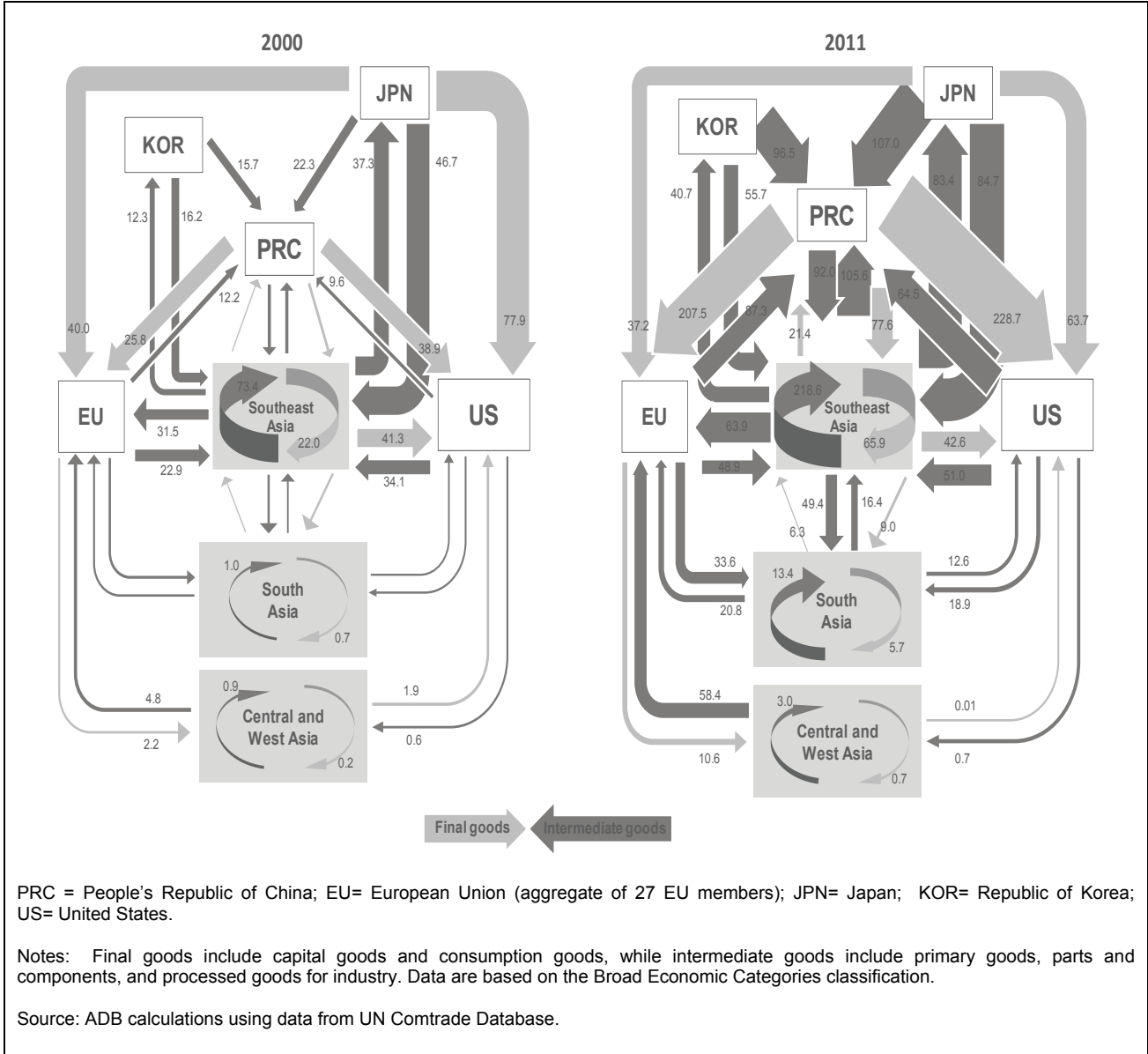
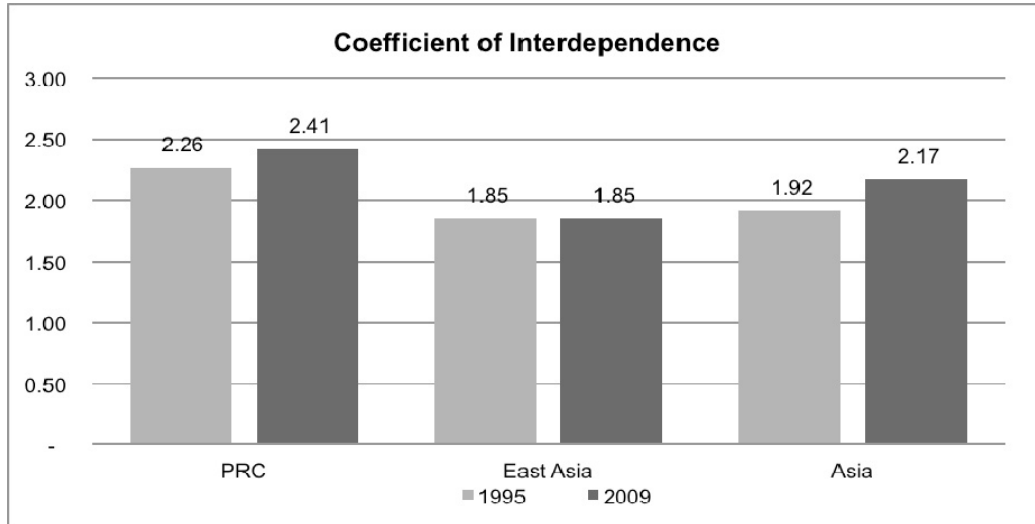


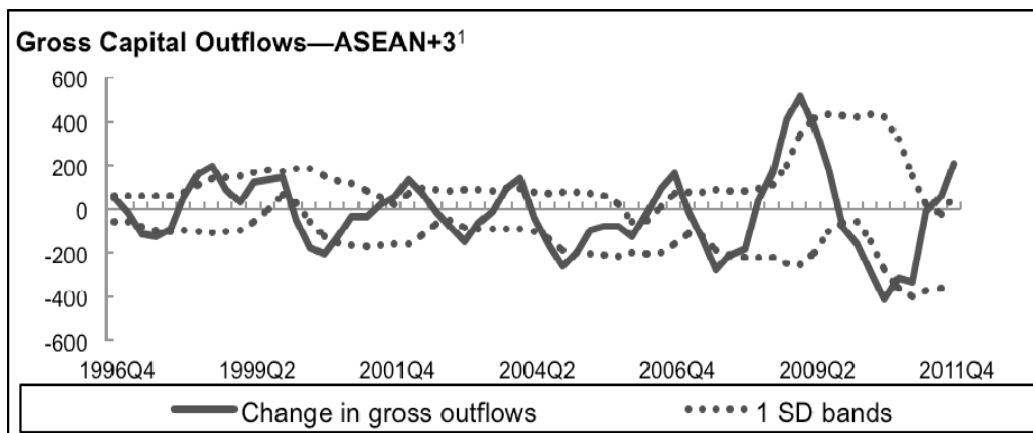
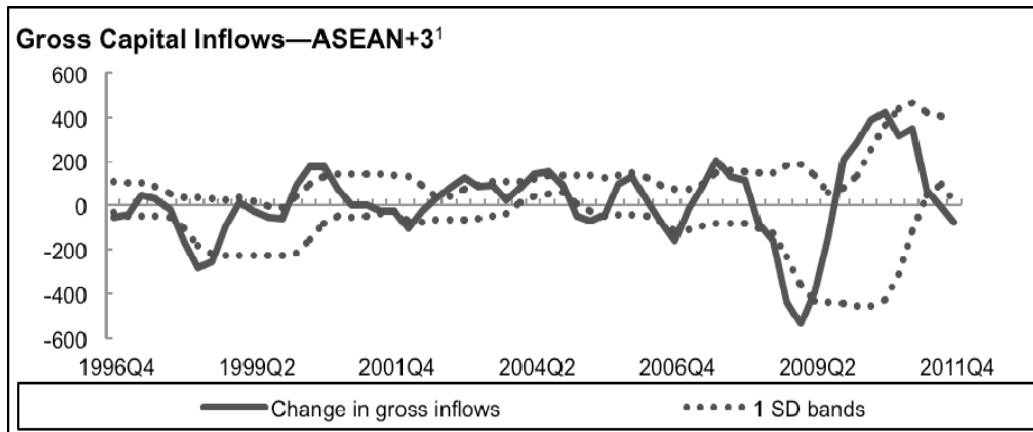
Figure 5: The People's Republic of China and Asia's Coefficient of Interdependence



PRC = People's Republic of China.

Source: Author's calculation based on WIOD.

Figure 6: Larger and More Volatile Capital Flows Post-Global Financial Crisis



ASEAN = Association of Southeast Asian Nations, GFC= global financial crisis.

¹ASEAN+3 comprises the 10 member states of ASEAN plus the PRC, Japan, and Republic of Korea.

Source: Azis (2012a).

Figure 7: Shock Spillovers and Persistence—Lehman Collapse and Eurozone Debt Crisis

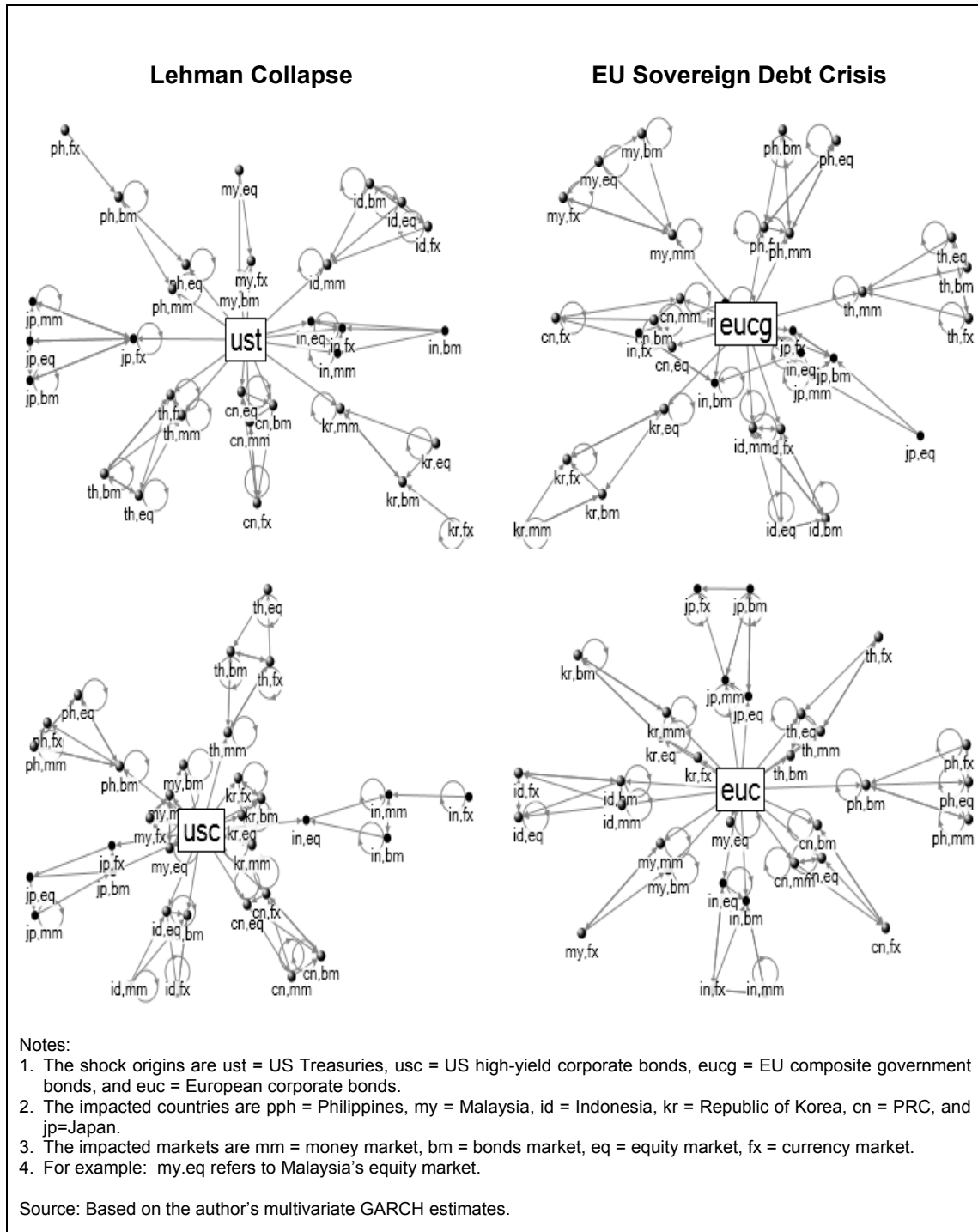


Figure 8: Volatility Spillovers and Persistence—Lehman Collapse and Eurozone Debt Crisis

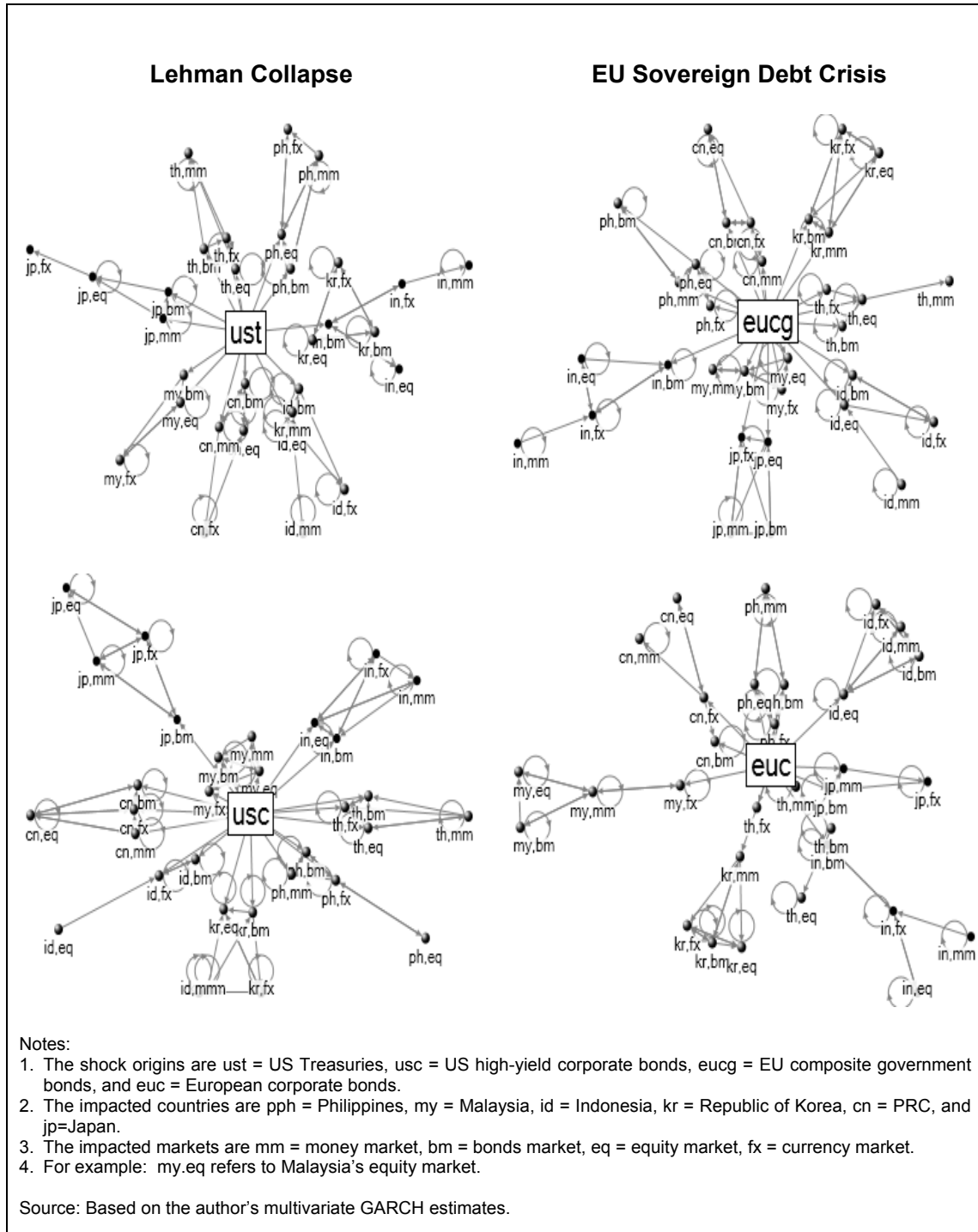


Table 1: The Dynamics of the People's Republic of China –Asian Interdependence**Cross-border ratio: PRC to East Asia/East Asia to PRC**

1995		Agriculture	Mining	Manufacturing (light)	Manufacturing (heavy)	Construction	Others
		East Asia to PRC					
Agriculture	PRC to East Asia	0.53	3.12	1.87	3.27	3.30	5.90
Mining		0.97	0.18	0.99	0.73	0.96	1.57
Manufacturing (light)		5.54	11.45	8.79	11.73	11.54	23.27
Manufacturing (heavy)		15.21	16.07	13.29	16.58	16.61	32.42
Construction		14.54	14.90	21.23	26.11	27.22	35.19
Others		7.76	8.29	11.29	13.56	14.24	17.86

2009		Agriculture	Mining	Manufacturing (light)	Manufacturing (heavy)	Construction	Others
		PRC to East Asia					
Agriculture	East Asia to PRC	0.24	0.95	0.56	0.57	0.78	1.22
Mining		0.16	0.16	0.22	0.18	0.25	0.38
Manufacturing (light)		0.83	2.17	1.29	1.28	1.70	2.82
Manufacturing (heavy)		1.19	2.44	1.47	1.44	1.83	2.79
Construction		3.29	4.15	5.43	4.52	6.17	6.95
Others		0.96	1.40	1.56	1.35	1.78	2.00

Source: Author's calculation based on WIOD.

ADB Working Paper Series on Regional Economic Integration*

1. "The ASEAN Economic Community and the European Experience" by Michael G. Plummer
2. "Economic Integration in East Asia: Trends, Prospects, and a Possible Roadmap" by Pradumna B. Rana
3. "Central Asia after Fifteen Years of Transition: Growth, Regional Cooperation, and Policy Choices" by Malcolm Dowling and Ganeshan Wignaraja
4. "Global Imbalances and the Asian Economies: Implications for Regional Cooperation" by Barry Eichengreen
5. "Toward Win-Win Regionalism in Asia: Issues and Challenges in Forming Efficient Trade Agreements" by Michael G. Plummer
6. "Liberalizing Cross-Border Capital Flows: How Effective Are Institutional Arrangements against Crisis in Southeast Asia" by Alfred Steinherr, Alessandro Cisotta, Erik Klär, and Kenan Šehović
7. "Managing the Noodle Bowl: The Fragility of East Asian Regionalism" by Richard E. Baldwin
8. "Measuring Regional Market Integration in Developing Asia: A Dynamic Factor Error Correction Model (DF-ECM) Approach" by Duo Qin, Marie Anne Cagas, Geoffrey Ducanes, Nedelyn Magtibay-Ramos, and Pilipinas F. Quising
9. "The Post-Crisis Sequencing of Economic Integration in Asia: Trade as a Complement to a Monetary Future" by Michael G. Plummer and Ganeshan Wignaraja
10. "Trade Intensity and Business Cycle Synchronization: The Case of East Asia" by Pradumna B. Rana
11. "Inequality and Growth Revisited" by Robert J. Barro
12. "Securitization in East Asia" by Paul Lejot, Douglas Arner, and Lotte Schou-Zibell

13. "Patterns and Determinants of Cross-border Financial Asset Holdings in East Asia" by Jong-Wha Lee
14. "Regionalism as an Engine of Multilateralism: A Case for a Single East Asian FTA" by Masahiro Kawai and Ganeshan Wignaraja
15. "The Impact of Capital Inflows on Emerging East Asian Economies: Is Too Much Money Chasing Too Little Good?" by Soyoung Kim and Doo Yong Yang
16. "Emerging East Asian Banking Systems Ten Years after the 1997/98 Crisis" by Charles Adams
17. "Real and Financial Integration in East Asia" by Soyoung Kim and Jong-Wha Lee
18. "Global Financial Turmoil: Impact and Challenges for Asia's Financial Systems" by Jong-Wha Lee and Cyn-Young Park
19. "Cambodia's Persistent Dollarization: Causes and Policy Options" by Jayant Menon
20. "Welfare Implications of International Financial Integration" by Jong-Wha Lee and Kwanho Shin
21. "Is the ASEAN-Korea Free Trade Area (AKFTA) an Optimal Free Trade Area?" by Donghyun Park, Inwon Park, and Gemma Esther B. Estrada
22. "India's Bond Market—Developments and Challenges Ahead" by Stephen Wells and Lotte Schou- Zibell
23. "Commodity Prices and Monetary Policy in Emerging East Asia" by Hsiao Chink Tang
24. "Does Trade Integration Contribute to Peace?" by Jong-Wha Lee and Ju Hyun Pyun
25. "Aging in Asia: Trends, Impacts, and Responses" by Jayant Menon and Anna Melendez-Nakamura
26. "Re-considering Asian Financial Regionalism in the 1990s" by Shintaro Hamanaka

27. "Managing Success in Viet Nam: Macroeconomic Consequences of Large Capital Inflows with Limited Policy Tools" by Jayant Menon
28. "The Building Block versus Stumbling Block Debate of Regionalism: From the Perspective of Service Trade Liberalization in Asia" by Shintaro Hamanaka
29. "East Asian and European Economic Integration: A Comparative Analysis" by Giovanni Capannelli and Carlo Filippini
30. "Promoting Trade and Investment in India's Northeastern Region" by M. Govinda Rao
31. "Emerging Asia: Decoupling or Recoupling" by Soyoung Kim, Jong-Wha Lee, and Cyn-Young Park
32. "India's Role in South Asia Trade and Investment Integration" by Rajiv Kumar and Manjeeta Singh
33. "Developing Indicators for Regional Economic Integration and Cooperation" by Giovanni Capannelli, Jong-Wha Lee, and Peter Petri
34. "Beyond the Crisis: Financial Regulatory Reform in Emerging Asia" by Chee Sung Lee and Cyn-Young Park
35. "Regional Economic Impacts of Cross-Border Infrastructure: A General Equilibrium Application to Thailand and Lao People's Democratic Republic" by Peter Warr, Jayant Menon, and Arief Anshory Yusuf
36. "Exchange Rate Regimes in the Asia-Pacific Region and the Global Financial Crisis" by Warwick J. McKibbin and Waranya Pim Chanthapun
37. "Roads for Asian Integration: Measuring ADB's Contribution to the Asian Highway Network" by Srinivasa Madhur, Ganeshan Wignaraja, and Peter Darjes
38. "The Financial Crisis and Money Markets in Emerging Asia" by Robert Rigg and Lotte Schou-Zibell
39. "Complements or Substitutes? Preferential and Multilateral Trade Liberalization at the Sectoral Level" by Mitsuyo Ando, Antoni Estevadeordal, and Christian Volpe Martincus

40. “Regulatory Reforms for Improving the Business Environment in Selected Asian Economies—How Monitoring and Comparative Benchmarking can Provide Incentive for Reform” by Lotte Schou-Zibell and Srinivasa Madhur
41. “Global Production Sharing, Trade Patterns, and Determinants of Trade Flows in East Asia” by Prema-chandra Athukorala and Jayant Menon
42. “Regionalism Cycle in Asia (-Pacific): A Game Theory Approach to the Rise and Fall of Asian Regional Institutions” by Shintaro Hamanaka
43. “A Macroprudential Framework for Monitoring and Examining Financial Soundness” by Lotte Schou-Zibell, Jose Ramon Albert, and Lei Lei Song
44. “A Macroprudential Framework for the Early Detection of Banking Problems in Emerging Economies” by Claudio Loser, Miguel Kiguel, and David Mermelstein
45. “The 2008 Financial Crisis and Potential Output in Asia: Impact and Policy Implications” by Cyn-Young Park, Ruperto Majuca, and Josef Yap
46. “Do Hub-and-Spoke Free Trade Agreements Increase Trade? A Panel Data Analysis” by Jung Hur, Joseph Alba, and Donghyun Park
47. “Does a Leapfrogging Growth Strategy Raise Growth Rate? Some International Evidence” by Zhi Wang, Shang-Jin Wei, and Anna Wong
48. “Crises in Asia: Recovery and Policy Responses” by Kiseok Hong and Hsiao Chink Tang
49. “A New Multi-Dimensional Framework for Analyzing Regional Integration: Regional Integration Evaluation (RIE) Methodology” by Donghyun Park and Mario Arturo Ruiz Estrada
50. “Regional Surveillance for East Asia: How Can It Be Designed to Complement Global Surveillance?” by Shinji Takagi
51. “Poverty Impacts of Government Expenditure from Natural Resource Revenues” by Peter Warr, Jayant Menon, and Arief Anshory Yusuf
52. “Methods for Ex Ante Economic Evaluation of Free Trade Agreements” by David Cheong

53. "The Role of Membership Rules in Regional Organizations" by Judith Kelley
54. "The Political Economy of Regional Cooperation in South Asia" by V.V. Desai
55. "Trade Facilitation Measures under Free Trade Agreements: Are They Discriminatory against Non-Members?" by Shintaro Hamanaka, Aiken Tafgar, and Dorothea Lazaro
56. "Production Networks and Trade Patterns in East Asia: Regionalization or Globalization?" by Prema-chandra Athukorala
57. "Global Financial Regulatory Reforms: Implications for Developing Asia" by Douglas W. Arner and Cyn-Young Park
58. "Asia's Contribution to Global Rebalancing" by Charles Adams, Hoe Yun Jeong, and Cyn-Young Park
59. "Methods for Ex Post Economic Evaluation of Free Trade Agreements" by David Cheong
60. "Responding to the Global Financial and Economic Crisis: Meeting the Challenges in Asia" by Douglas W. Arner and Lotte Schou-Zibell
61. "Shaping New Regionalism in the Pacific Islands: Back to the Future?" by Satish Chand
62. "Organizing the Wider East Asia Region" by Christopher M. Dent
63. "Labour and Grassroots Civic Interests In Regional Institutions" by Helen E.S. Nesadurai
64. "Institutional Design of Regional Integration: Balancing Delegation and Representation" by Simon Hix
65. "Regional Judicial Institutions and Economic Cooperation: Lessons for Asia?" by Erik Voeten
66. "The Awakening Chinese Economy: Macro and Terms of Trade Impacts on 10 Major Asia-Pacific Countries" by Yin Hua Mai, Philip Adams, Peter Dixon, and Jayant Menon

67. “Institutional Parameters of a Region-Wide Economic Agreement in Asia: Examination of Trans-Pacific Partnership and ASEAN+ α Free Trade Agreement Approaches” by Shintaro Hamanaka
68. “Evolving Asian Power Balances and Alternate Conceptions for Building Regional Institutions” by Yong Wang
69. “ASEAN Economic Integration: Features, Fulfillments, Failures, and the Future” by Hal Hill and Jayant Menon
70. “Changing Impact of Fiscal Policy on Selected ASEAN Countries” by Hsiao Chink Tang, Philip Liu, and Eddie C. Cheung
71. “The Organizational Architecture of the Asia-Pacific: Insights from the New Institutionalism” by Stephan Haggard
72. “The Impact of Monetary Policy on Financial Markets in Small Open Economies: More or Less Effective During the Global Financial Crisis?” by Steven Pennings, Arief Ramayandi, and Hsiao Chink Tang
73. “What do Asian Countries Want the Seat at the High Table for? G20 as a New Global Economic Governance Forum and the Role of Asia” by Yoon Je Cho
74. “Asia’s Strategic Participation in the Group of 20 for Global Economic Governance Reform: From the Perspective of International Trade” by Taeho Bark and Moonsung Kang
75. “ASEAN’s Free Trade Agreements with the People’s Republic of China, Japan, and the Republic of Korea: A Qualitative and Quantitative Analysis” by Gemma Estrada, Donghyun Park, Innwon Park, and Soonchan Park
76. “ASEAN-5 Macroeconomic Forecasting Using a GVAR Model” by Fei Han and Thiam Hee Ng
77. “Early Warning Systems in the Republic of Korea: Experiences, Lessons, and Future Steps” by Hyungmin Jung and Hoe Yun Jeong
78. “Trade and Investment in the Greater Mekong Subregion: Remaining Challenges and the Unfinished Policy Agenda” by Jayant Menon and Anna Cassandra Melendez

79. "Financial Integration in Emerging Asia: Challenges and Prospects" by Cyn-Young Park and Jong-Wha Lee
80. "Sequencing Regionalism: Theory, European Practice, and Lessons for Asia" by Richard E. Baldwin
81. "Economic Crises and Institutions for Regional Economic Cooperation" by C. Randall Henning
82. "Asian Regional Institutions and the Possibilities for Socializing the Behavior of States" by Amitav Acharya
83. "The People's Republic of China and India: Commercial Policies in the Giants" by Ganeshan Wignaraja
84. "What Drives Different Types of Capital Flows and Their Volatilities?" by Rogelio Mercado and Cyn-Young Park
85. "Institution Building for Africal Regionalism" by Gilbert M. Khadiagala
86. "Impediments to Growth of the Garment and Food Industries in Cambodia: Exploring Potential Benefits of the ASEAN-PRC FTA" by Vannarith Chheang and Shintaro Hamanaka
87. "The Role of the People's Republic of China in International Fragmentation and Production Networks: An Empirical Investigation" by Hyun-Hoon Lee, Donghyun Park, and Jing Wang
88. "Utilizing the Multiple Mirror Technique to Assess the Quality of Cambodian Trade Statistics" by Shintaro Hamanaka
89. "Is Technical Assistance under Free Trade Agreements WTO-Plus?" A Review of Japan-ASEAN Economic Partnership Agreements" by Shintaro Hamanaka
90. "Intra-Asia Exchange Rate Volatility and Intra-Asia Trade: Evidence by Type of Goods" by Hsiao Chink Tang
91. "Is Trade in Asia Really Integrating?" by Shintaro Hamanaka

92. "The PRC's Free Trade Agreements with ASEAN, Japan, and the Republic of Korea: A Comparative Analysis" by Gemma Estrada, Donghyun Park, Innwon Park, and Soonchan Park
93. "Assessing the Resilience of ASEAN Banking Systems: The Case of the Philippines" by Jose Ramon Albert and Thiam Hee Ng
94. "Strengthening the Financial System and Mobilizing Savings to Support More Balanced Growth in ASEAN+3" by A. Noy Siackhachanh
95. "Measuring Commodity-Level Trade Costs in Asia: The Basis for Effective Trade Facilitation Policies in the Region" by Shintaro Hamanaka and Romana Domingo
96. "Why do Imports Fall More than Exports Especially During Crises? Evidence from Selected Asian Economies" by Hsiao Chink Tang
97. "Determinants of Local Currency Bonds and Foreign Holdings: Implications for Bond Market Development in the People's Republic of China" by Kee-Hong Bae
98. "ASEAN–China Free Trade Area and the Competitiveness of Local Industries: A Case Study of Major Industries in the Lao People's Democratic Republic" by Leebeer Leebouapao, Sthabandith Insisienmay, and Vanthana Nolintha
99. "The Impact of ACFTA on People's Republic of China-ASEAN Trade: Estimates Based on an Extended Gravity Model for Component Trade" by Yu Sheng, Hsiao Chink Tang, and Xinpeng Xu
100. "Narrowing the Development Divide in ASEAN: The Role of Policy" by Jayant Menon
101. "Different Types of Firms, Products, and Directions of Trade: The Case of the People's Republic of China" by Hyun-Hoon Lee, Donghyun Park, and Jing Wang
102. "Anatomy of South–South FTAs in Asia: Comparisons with Africa, Latin America, and the Pacific Islands" by Shintaro Hamanaka
103. "Japan's Education Services Imports: Branch Campus or Subsidiary Campus?" by Shintaro Hamanaka

104. "A New Regime of SME Finance in Emerging Asia: Empowering Growth-Oriented SMEs to Build Resilient National Economies" by Shigehiro Shinozaki
105. "Critical Review of East Asia – South America Trade " by Shintaro Hamanaka and Aiken Tafgar
106. "The Threat of Financial Contagion to Emerging Asia's Local Bond Markets: Spillovers from Global Crises" by Iwan J. Azis, Sabyasachi Mitra, Anthony Baluga, and Roselle Dime
107. "Hot Money Flows, Commodity Price Cycles, and Financial Repression in the US and the People's Republic of China: The Consequences of Near Zero US Interest Rates" by Ronald McKinnon and Zhao Liu
108. "Cross-Regional Comparison of Trade Integration: The Case of Services" by Shintaro Hamanaka
109. "Preferential and Non-Preferential Approaches to Trade Liberalization in East Asia: What Differences Do Utilization Rates and Reciprocity Make?" by Jayant Menon
110. "Can Global Value Chains Effectively Serve Regional Economic Development in Asia?" by Hans-Peter Brunner
111. "Exporting and Innovation: Theory and Firm-Level Evidence from the People's Republic of China" by Faqin Lin and Hsiao Chink Tang
112. "Supporting the Growth and Spread of International Production Networks in Asia: How Can Trade Policy Help?" by Jayant Menon
113. "On the Use of FTAs: A Review of Research Methodologies" by Shintaro Hamanaka

*These papers can be downloaded from (ARIC) <http://aric.adb.org/archives.php?section=0&subsection=workingpapers> or (ADB) <http://www.adb.org/publications/series/regional-economic-integration-working-papers>

The People's Republic of China's Financial Policy and Regional Cooperation in the Midst of Global Headwinds

Is the appreciation of the renminbi the best policy route for the People's Republic of China (PRC)? It is only up to a point; terrible ideas started out as good ones until they were pushed to extremes. Other financial policies reflect the country's new direction. With Asia's deepened interdependence, the changes also affect the rest of Asia. But financial contagion from global crisis may have even a greater impact due to cross-market contagion and spillovers in cross-asset classes, making regional cooperation imperative.

About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two-thirds of the world's poor: 1.7 billion people who live on less than \$2 a day, with 828 million struggling on less than \$1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.