

INTRODUCTION

*Ramkishen S. Rajan, Shandre Thangavelu
and Rasyad A. Parinduri*

This volume is a compilation of selected papers presented in the Claremont–Bologna–Singapore International Policy Forum held at the National University of Singapore on July 30–31, 2007.¹ The particular theme of the Forum was on exchange rate, monetary and financial issues and policies. The motivation for this theme was straightforward. It has been a decade since the Asian crisis of 1997–1998, which decimated many of the regional economies. While the crisis itself had severe economic and political consequences, one of its primary causes was an inappropriate mix of exchange rate, monetary and financial policies. In particular, one of the main reasons behind the crisis was the attempt by regional economies to maintain fairly rigid exchange rates (soft U.S. dollar pegs) as well as monetary policy autonomy in the presence of large-scale capital outflows. Part of the reason behind this obvious violation of Impossible Trinity Principle arose from the fact that the capital outflows had led to severe domestic liquidity crunch, which was threatening to lead to an outright financial collapse in many economies.

In the keynote address to the Forum by *Barry Eichengreen in Chapter 1*, he briefly outlines how the East Asian countries have fared since the crisis and also highlights the potential vulnerabilities and triggers for a future

¹The funding support for the Forum was provided by the Faculty of Arts and Social Sciences, National University of Singapore.

financial crisis. He argues that the most likely place where a future crisis might emerge is in China, which has a combination of high corporate savings and investments, appreciated asset markets, weak banking system, and a rigid currency. Eichengreen suggests that a financial crisis in China could be triggered by a sharp fall in asset prices, which could set off a credit freeze and investment collapse. He goes on to draw parallels between China today and the U.S. in the 19th century when the U.S., like China today, experienced not only rapid investment-led growth, but also experienced a series of financial crises.

Apart from the need to strengthen domestic financial systems, an immediate lesson that many observers appear to have drawn from recent financial crises in emerging market economies in the 1990s is that the only viable exchange rate option boils down to one between flexibility, on the one hand, and “credible pegging”, on the other. According to this view (which was dominant in the late 1990s and early 2000s but still has a number of followers), emerging economies have to gravitate to one of these two extremes. Any currency arrangements that lie in between these polar extremes or corners (i.e., those in the “middle”) are viewed as being inherently unstable and crisis-prone. *Chapter 2 by Tony Cavoli and Ramkishen S. Rajan* compiles and discusses the *de jure* or official exchange rate regimes in the various Asian economies. Recognizing that countries do not always follow their policy pronouncements, the chapter also reviews the evidence regarding the *de facto* or actual exchange rate regimes in selected Asian countries, particularly Indonesia, Thailand, Korea, and the Philippines.

In one sense, it is apparent that many of the Asian economies continue to manage their currencies quite heavily, as evidenced by the rapid stockpiling of reserves since the 1997 crisis. The sharp switch from current account deficit to surplus for emerging Asia as a group has been well documented and is apparent from Table 1. The combination of current account surplus and renewed private capital inflows, along with active exchange rate management by the regional central banks, contributed to the rapid and significant reserve buildup in emerging Asia in recent years. Some have argued that the reserve growth in Asia is a by-product of a desire by regional central banks to smooth exchange rate movements. While concerns about “excessive” volatility of trade and foreign direct investment (FDI) may

Table 1. Sources of reserve accumulation in emerging Asia, 1995–2005 (U.S.\$ billions).

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Change in reserves	-42.6	-46.8	-35.8	-53.1	-88.2	-53.7	-90.2	-148.8	-226.5	-340.1	-281.9
Current account balance	-40.0	-40.1	14.0	114.0	106.0	85.0	88.4	127.5	166.3	183.5	240.8
Private capital flows, net	101.5	121.1	47.6	-53.8	3.1	6.5	19.6	20.8	63.5	120.3	53.8
Official capital flows, net	-4.7	-16.1	14.0	19.6	1.8	-11.7	-11.7	4.6	-17.6	1.8	5.0

Notes: Capital flows to “emerging Asia” is dominated by 10 economies, viz. the eight economies in this paper (India, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and, Thailand), as well as China and Hong Kong. It also includes a number of other countries categorized as “developing Asia” by the IMF.

Source: IMF, World Economic Outlook Database, April 2006.

be well founded (for instance, see Calvo and Reinhart (2002)), smoothing behavior by central banks should, over time, have no net impact on reserves.

The fact that reserves are continuously being built up suggests that intervention is largely asymmetric, i.e., sale of domestic currency during periods of upward pressure, but limited intervention on the downside. A far more plausible argument for Asia's reserve accumulation stems from its desire to maintain relatively stable and ultra-competitive exchange rates, so as to aggressively export their way out of the crisis and deep recession of 1997–1998.^{2,3} In fact, Asian policymakers have chosen explicitly to amass reserves for precautionary or self-insurance motives against future financial crisis (Aizenman and Marion, 2003; Bird and Rajan, 2003).⁴ Such large levels of “own liquidity” may be particularly necessary in the absence of the development of strong quasi-lender of last resort capabilities by the IMF and limited progress in monetary cooperation at the regional level (Bird and Rajan, 2002; Rajan, 2008).

Chapter 3 by Yin-Wong Cheung and Hiro Ito investigates the empirical determinants of the demand for international reserves in selected Asian and Latin American economies. They emphasize that different theories lead to quite different inferences about the appropriate level of international reserves. Their estimation highlights the importance of financial and institutional factors relative to conventional macroeconomic ones in determining demand for reserves in the post-Asian financial crisis period. The authors also find that deciphering whether Asia has been holding “excessive” reserves is a complex task, depending significantly on the choice

²In addition, part of the change in reserves in U.S. dollar terms arises from “revaluation gains” due to the depreciation of the U.S. dollar against the major currencies in which reserves might be held, especially the Euro.

³The World Bank (2005) has observed:

Intervention was initially motivated by a desire to build up a buffer stock after the Asian crisis had depleted levels of reserves.... (H)owever (r)apid reserve accumulation ... continued through late 2004, as countries sought to limit the impact of heavy capital inflows on external competitiveness, at a time when domestic demand generally remained subdued (p. 29).

⁴There has been a growing body of literature exploring various aspects of the precautionary motive for reserve hoarding. See García and Soto (2004), Jeanne and Ranciere (2006), and Li and Rajan (2006).

of benchmark. They find evidence that Asian economies tend to hold more international reserves than their Latin American counterparts do. The difference in behavior may be a reflection of the difference in the empirical determinants found for the economies in these two regions.

Regardless of the rationale for the reserves, their buildup has contributed substantially to concerns about the creation of excessive global liquidity. How justified these concerns are depends heavily on the extent to which the reserve accumulating countries have been able to sterilize the effects on their domestic monetary aggregates. *Chapter 4 by Corrinne Ho and Robert N. McCauley* investigates the extent of monetary sterilization in Asia. They note that official international reserves in Asia have grown at an unparalleled scale since 2002. They find that regional monetary authorities have been sterilizing aggressively to mop up the liquidity consequences of their reserve accumulation.⁵ It is often argued that sustained sterilization has significant fiscal and/or banking costs (for instance, see Calvo (1991)) and may not be sustainable. The authors, however, question the extent to which these concerns are relevant to Asia. They conclude that, with the exception of India “where a number of archetypal symptoms have emerged”, many other Asian economies appear to have been able to sterilize without notable costs. They go on to argue that large-scale reserve accretion in Asia (except India) may be better viewed as being a consequence of economic slack due to the decline in national investment relative to savings as opposed to an independent policy *per se*.

While the region has experienced resurgence in net capital inflows since the crisis (see Table 1), Asia remains a *net* exporter of capital to the rest of the world as evidenced by its persistent reserve accumulation. Thus, while pre-crisis capital from developed countries financed the investment needs of emerging economies, currently the flows have reversed direction; capital from emerging economies has been financing the consumption needs for the developed world, most notably the U.S. economy.⁶ What explains this “paradox of capital”⁷ and, in particular, what determines capital flows in

⁵Also see Ouyang *et al.* (2007a) for the case of sterilization of China and Ouyang *et al.* (2007b) for the case of other emerging Asia.

⁶See Kharas *et al.* (2006).

⁷As noted by Prasad *et al.* (2007) and first brought up by Lucas (1990). Also see Gourinchas and Jeanne (2007).

Asia? Are they linked to macroeconomic developments within the country, among the other emerging market economies within the region, or to the macroeconomic conditions in the major industrialized countries outside Asia, the U.S. in particular? These issues are the focus of *Chapter 5* by *Alex Mandilaras and Helen Popper*. They find that what matters the most are own country domestic financial market conditions, with domestic financial market capitalization consistently being the best predictor of the paradox. They also discuss some new research that suggests the role of macroeconomic conditions in the U.S. has also been limited; apparently the U.S. is not the key driver of the Asia-Pacific's capital flow behaviour.

While the Asian economies have bounced back from the crisis and are much healthier (in terms of macroeconomic fundamentals, corporate balance sheets, etc.), a financial crisis of sorts is now inflicting the U.S. in the form of the sub-prime malaise (discussed briefly in Chapter 1 by Barry Eichengreen). There is a danger that this crisis could lead to a prolonged slowdown in the U.S. What does this U.S. economic slowdown imply for Asia? Have Asian economies decoupled from the U.S. or are they still heavily dependent on the U.S. as an export market as well as via various financial channels. Will the U.S. slowdown derail Asian export and overall growth, or has regional demand in Asia grown sufficiently large (especially with the rise of China) to cushion the region from a recession in the U.S.?

The impact of the U.S. economy on Asia is a theme that is taken up in *Chapter 6* by *Andrew Hughes Hallett and Christian Richter*. In particular, the chapter examines the hypothesis that the links in the Asia-Pacific region have altered over the past two decades (1987–2006), particularly with the economic rise of China as a major industrial power and the emergence of Japan as a major source of finance. The authors use time-varying spectral methods to decompose the linkages between China, Japan, four advanced Asian economies (Korea, Taiwan, Malaysia, and Singapore), and the U.S. In particular, they take the U.S., China, and Japan to be the potential leading economies (“economies of first resort” as they call them) in the Asia-Pacific area, and investigate the dynamics of the links among these three economies and between them and the other emerging economies in the region. The authors find evidence that regional links with the U.S. have been weakening since the 1980s with the rise of China. However, they also find that the U.S. is still able to shape the business cycles in Asia via the control of monetary

conditions, though China and Japan influence the size of those cycles. With regard to exchange rates, the authors find little evidence of endogeneity of business cycle synchronization, i.e., pegged exchange rates *per se* will encourage economic convergence, and in fact, the reverse may be true.

While the region is still dependent on the U.S. market, has greater intra-regional trade and investment led to *de facto* macroeconomic convergence, and what in turn does this imply for regional exchange rate coordination? In *Chapter 7*, *Willem Thorbecke* focuses on the extent of intra-regional production and trade. He describes the production networks that have been established in Asia, whereby different parts of the production process of a good have been split into parts, components, and accessories (PCAs) and distributed across countries in the region. Thorbecke refers specifically to a triangular trading pattern, whereby firms located in Japan, Korea, Taiwan, and higher-income Southeast Asia economies (mainly Singapore, Malaysia, and Thailand) produce relatively sophisticated technology-intensive intermediate goods and capital goods and ship them to China and lower income Southeast Asian economies (including Indonesia, Vietnam, etc.) for final assembly. The ultimate buyers of the final products tend to be the U.S. and Europe. He notes that the export-oriented nature and fear of loss of price competitiveness of the Asian economies has given rise to a collective action problem, which has led many of countries to heavily manage their respective currencies. He argues that stable intra-regional exchange rates could facilitate the further development of regional production and distribution networks that has made East Asia a global manufacturing hub. Exchange rate stability in turn could, according to him, be facilitated if regional economies with less flexible exchange rates adopted more flexible regimes characterized by (1) multiple currencies basket-based reference rates instead of a dollar-based central rate, and (2) wider bands around the reference rate.

The need for regional exchange rate stability and the issue of regional exchange rate and monetary coordination is explored in more detail in *Chapter 8* by *Eiji Ogawa*. He notes that the policymakers in ASEAN plus three (China, Japan, and Korea) have taken steps to strengthen regional exchange rate, monetary and financial cooperation since 2000. With regard to exchange rates coordination, the ASEAN plus three Financial Ministers Meeting has established a research group to examine the feasibility of an Asian Monetary Unit (AMU) for coordinated exchange rate policy. The

chapter develops a measure to examine the degree of exchange rate divergence in the region (vis-à-vis a synthetic AMU). Using the so-called AMU Deviation Indicators, Ogawa argues that there is a growing deviation among the East Asian currencies. The author takes this to imply that there is a coordination failure in exchange rate policies in the region. He recommends the creation of an AMU in order to coordinate exchange rate policy among the monetary authorities of East Asian countries so as to facilitate the development of production networks and supply chains in the region.

In *Chapter 9*, Hans Genberg and Dong He revisit the issue of regional exchange rate regimes. As with Cavoli and Rajan in *Chapter 2*, they observe that there is a great degree of heterogeneity in the exchange rate regimes and monetary policy frameworks in the region. They note that, with the exceptions of China, Malaysia, and Hong Kong, the central banks in the region appear to have a mandate of domestic price stability as opposed to an explicit exchange rate objective. Under such circumstances — and in sharp contrast to the views of Thorbecke and Ogawa in *Chapters 8 and 9*, respectively — they argue that it would be in fact be undesirable to push for exchange rate policy coordination or any sort of regional cooperation on exchange rate policies. Attempting to do so, in their opinion, could create conflicts with domestic objectives that may lead to loss of central bank credibility and possibly even speculative attacks against the regional currencies. Instead of exchange rate and monetary policy coordination, they emphasize the need to focus on financial cooperation — developing more liquid financial markets in the region; harmonizing the objectives of monetary policy; and designing institutions that might become the foundation of deeper forms of cooperation in the long term.⁸ While their focus on the development of financial markets is uncontroversial, clearly much greater work is needed on the issue of exchange rate coordination in Asia. Should the region attempt to go the European route over time?

In *Chapter 10*, Dominick Salvatore notes that Asia's interest in monetary and financial integration has been inspired in part by the apparent success of the European Monetary Union (EMU) in establishing a common central bank (the ECB) and a common currency (the euro). He examines the process

⁸Some of these issues are also explored in Rajan (2008).

of economic, monetary, and financial integration in Europe and goes on to evaluate the costs and benefits of the EMU and draws conclusions from Europe's experience for Asia, focusing on the feasibility and possible benefits that East Asia could derive from economic and monetary integration and the best way to achieve it. He notes that one of biggest concerns in East Asia is the seeming unwillingness by regional participants to establish the institutions necessary for monetary integration to work well. This stands in sharp contrast to Europe, which spent decades to build the institutions that were viewed as critical for the adoption of a monetary union. Clearly, Asia needs to start paying much more attention to the development of region-wide institutions prior to attempting more ambitious integration efforts.

References

- Aizenman, J and N Marion (2003). The high demand for international reserves in the far east: What's going on? *Journal of Japanese and International Economics*, 17, 370–400.
- Bird, G and RS Rajan (2002). *The Evolving Asian Financial Architecture*. Princeton Essays in International Economics No. 266. Princeton University.
- Bird, G and RS Rajan (2003). Too good to be true?: The adequacy of international reserve holdings in an era of capital account crises. *The World Economy*, 26, 873–891.
- Calvo, G (1991). The perils of sterilization. *IMF Staff Papers*, 38, 921–926.
- Calvo, G and C Reinhart (2002). Fear of floating. *Quarterly Journal of Economics*, 117, 379–408.
- Garcia, P and CG Soto (2004). Large hoarding of international reserves: Are they worth it? In *External Vulnerability and Preventive Policies*, Caballero, R, C Calderón and LF Céspedes (eds.) Central Bank of Chile.
- Gourinchas, PO and O Jeanne (2007). Capital flows to developing countries: The Allocation puzzle. NBER Working Papers 13602.
- International Monetary Fund (IMF) (2006). *Regional Economic Outlook: Asia and Pacific*, IMF, May.
- Jeanne, O and R Ranciere (2006). The optimal level of international reserves for emerging market economies: Formulas and applications. IMF Working Paper No. 06/229.

- Kharas, H, RS Rajan and E Vostroknutova (2006). Finance (in East Asia). In *An East Asian Renaissance: Ideas for Competitive Growth*, Kharas H and I Gill (eds.). Washington, DC: World Bank.
- Li, J and RS Rajan (2006). Can high reserves offset weak fundamentals? A simple model of precautionary demand for reserves. *Economia Internazionale*, 59, 317–328.
- Lucas, RE (1990). Why doesn't capital flows from rich to poor countries? *American Economic Review*, 80, 92–96.
- Ouyang, A, RS Rajan and TD Willett (2007a). China as a reserve sink: The evidence from offset and sterilization coefficients. Hong Kong Institute for Monetary Research, Working Paper No. 10/2007.
- Ouyang, A, RS Rajan and TD Willett (2007b). Managing the monetary consequences of reserve accumulation in emerging Asia. Hong Kong Institute for Monetary Research. Working Paper No. 20/2007.
- Prasad, E, RG Prasad and A Subramanian (2007). The paradox of capital. *Finance and Development*, 44, March.
- Rajan, RS (2008). Monetary and financial cooperation in Asia: Taking stock of recent on-goings. *International Relations of the Asia-Pacific*, 8, 31–45.
- World Bank (2005). *Global Development Finance 2005*. New York: Oxford University Press.