Financial Integration in East Asia:

Past, Present and Possible Futures[+]

Inderjit N. Kaur and Nirvikar Singh[*]

University of California, Santa Cruz

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Abstract

This paper reviews the East Asian experience with financial integration, how economies in the region have responded to shocks, and what they may do to continue to thrive in the future. It discusses openness to capital flows as a key aspect of financial integration, briefly considering the theoretical underpinnings and empirical evidence for the benefits of openness. It then examines the East Asian experience with the two financial crises that have affected the region, and how the two episodes have differed. It concludes by considering policy options for the future, including regulatory reform and coordination, and various possible risk management policies and institutions. The analysis illustrates differences in patterns of financial development for the three largest economies of the region (China, Japan and South Korea) and discusses implications for financial integration efforts.

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[*] Corresponding author: Department of Economics, University of California, Santa Cruz, CA 95064, USA; boxjenk@ucsc.edu.

Introduction

In 1993, at the instigation of Japan, the World Bank published a study on the East Asian Miracle (World Bank, 1993). The study looked at eight "high performing" Asian economies: Japan, Hong Kong, South Korea, Singapore, Taiwan, Indonesia, Malaysia, and Thailand. It did not find a single East Asian economic model that could be used to characterize all the eight economies' experience, but offered conclusions favoring the role of high levels of domestic saving, broad based human capital, good macroeconomic management, and limited price distortions as the basis for growth. The report also gave credit to policy interventions that worked to accelerate growth, by improving the allocation of physical and human resources for highly productive investment. Integration with the world economy, especially trade openness, was also generally identified as a positive influence on the region's growth.

The "Miracle" Report continues to be debated, as do the determinants of growth, and the special circumstances that drove the East Asian experience. Since that time, China has emerged as a new economic powerhouse in the region, and has only enhanced the importance of East Asia in the world economy. Meanwhile, many of the original eight economies have continued to grow at impressive rates. This growth record was interrupted by the financial crisis that hit the region (and some other emerging market economies) in 1997-98. This episode called attention to the differences between openness to trade and openness to capital, and produced a particular set of policy responses in the region. The global financial crisis of 2007-09 had an unavoidable negative impact on East Asia as well, but it seems that the lessons of 1997-98 permitted the region to be better prepared for this second, bigger shock.

This paper reviews the East Asian experience with financial integration, how economies in the region have responded to shocks, and what they may do to continue to thrive in the future. The next section discusses openness to capital flows as a key aspect of financial integration, briefly considering the theoretical underpinnings and empirical evidence for the benefits of openness. The following two sections examine the East Asian experience with the two financial crises that have affected the region, and how the two episodes have differed. This is followed by a consideration of policy options for the future, including regulatory reform and coordination, and

various possible risk management policies and institutions. The paper ends with a summary conclusion.

Capital Account Openness

Financial integration in its essentials means openness on the capital account, so that capital flows are unrestricted. In practice, a completely open capital account does not imply perfect financial integration, since there is a home bias in investment, reflected in a positive correlation between domestic savings and investment (Feldstein and Horioka, 1980). Essentially, investors do not view foreign and domestic assets as perfect substitutes, even though they may have the same objective characteristics. Despite perceptual or institutional barriers to complete financial integration, the main defining feature of modern-day globalization has been liberalization of restrictions on capital flows, allowing large amounts of capital to move swiftly around the globe.

Capital flows now mainly consist of private capital, rather than official government flows, and the driving force is typically a search for yield. Technology has made electronic transactions and funds transfers swift and relatively low-cost, as well as enriching and accelerating the information flows on which capital allocation decisions can be based. Hence, capital account liberalization often has the feel of opening up floodgates, allowing an uncontrollable rush of capital to enter. Large flows of capital, whether inward or outward, create challenges for the conduct of domestic macroeconomic policies, and these are compounded by the volatility of these flows.

The main challenge for macroeconomic policy is encapsulated in the idea of the policy "trilemma," or "impossible trinity," based on the Mundell-Fleming model of an open economy macroeconomic framework. In the model, it is impossible for a government to simultaneously have monetary policy autonomy (and hence the ability to control the domestic inflation rate) and a fixed exchange rate when the capital account is completely unrestricted. Attempts to conduct an independent monetary policy will drive a wedge between foreign and domestic interest rates,

leading to continued capital inflows or outflows (depending on the direction of the interest differential) in the absence of an equilibrating mechanism such as exchange rate adjustment.[1]

The ability to control domestic inflation has obvious value, since inflation can be disruptive to real economic activity and have negative welfare effects. The value of a fixed exchange rate is less obvious, but it provides certainty to exporters and importers, and can also have positive impacts on real economic activity and welfare, especially in the absence of market mechanisms that allow firms engaged in international trade to hedge against currency fluctuations.

The post-World War II global economy was initially one of fixed exchange rates, capital controls and monetary policy autonomy. This regime broke down in the 1970s, and since then, theory and practice have swung back and forth between different policy combinations. At one stage, the orthodoxy had coalesced on the desirability of flexible exchange rates and openness of the capital account, the idea being that markets would equilibrate to allocate resources efficiently around the globe. Few countries adopted this policy mix, however, instead pursuing various combinations of partial capital controls, partial exchange rate flexibility and partial monetary autonomy. The latest financial crisis finally pushed the weight of expert opinion away from full capital account openness.[2]

In fact, even before the latest crisis, evidence was mounting that full capital account openness did not have identifiable positive effects on economic performance. While the earlier 1997-98 financial crisis was still unfolding, Dani Rodrik (1998) marshaled arguments against full capital account convertibility. He pointed out that financial markets are far from the textbook model of perfection, and subject to bubbles, panics and herd behavior in general, so that the theoretical case for capital account openness is difficult to make convincingly.[3]

[1] Recently, Rey (2013) has advanced the proposition that the weight of capital flows in the context of non-conventional monetary policies (essentially, what is known as QE or Quantitative Easing) makes exchange rate flexibility insufficient for domestic inflation control unless there are also controls on international capital flows. The theory and empirics of this view are still being debated.

[2] One of the most striking examples of this change was the near reversal of the International Monetary Fund's position on capital account liberalization, after the global financial crisis. For an academic statement of the changed thinking, see Ostry et al. (2012).

[3] Other arguments against full capital account liberalization by prominent economists include pieces by Bhagwati (1998), Cooper (1999), Stiglitz (2003), and Obstfeld (2009).

Looking at empirical evidence, Rodrik (1998) concluded, "There is no evidence in the data that countries without capital controls have grown faster, invested more, or experienced lower inflation." More recently, Obstfeld (2009, pp. 104-105) offered a similarly cautious assessment, after an extensive literature review, "Financial openness is not a panacea – and it could be poison. The empirical record suggests that its benefits are most likely to be realized when implemented in a phased manner, when external balances and reserve positions are strong, and when complementing a range of domestic policies and reforms to enhance stability and growth." Addressing the obverse of the issue, Aizenman, Pinto and Radziwill (2007) construct a self-financing measure, which turns out to be positively correlated with growth, even after controlling for the quality of domestic institutions, implying that domestic financial development may be the key to higher growth, rather than foreign capital.

One should also note that there is increasing evidence that the specific nature of capital flows matters. In particular, equity flows have a positive (at least short-run – which is all that theory properly predicts) impact on the host economy (Henry, 2007; Kose, Prasad and Terrones, 2009), as does foreign direct investment (e.g., Kose et al, 2009).

The East Asian experience has been particularly significant for assessing policy options and debates. At the same time, it does not provide conclusive lessons, and in some ways, East Asia is at a crossroads in terms of how to go forward in a world where global capital has attained an irreversible degree of importance in the world economy.

East Asia's Experience: 1997-98 Crisis

The financial crisis of 1997-98 affected many countries around the globe, but East Asia was among the regions that was hardest hit. Five East Asian economies (Indonesia, Malaysia, the Philippines, South Korea and Thailand) received net private capital inflows of US$ 108.1 billion in 1996, which swung to net outflows of US$ 0.2 billion in 1997, US$ 36.4 billion in 1998, and US$ 3.7 billion in 1999 (Dobson, Hufbauer and Cho, 2001, Appendix Table A.2).

The suddenness of the reversal of capital flows had impacts on domestic asset prices, exchange rates and ultimately output. Two fundamental contributors to the severity of the crisis were asset-

liability mismatches in currencies and maturities. Assets were denominated in domestic currency and were long-dated, whereas liabilities were in foreign currencies and had short maturities. These factors combined to create liquidity crunches for the affected countries. Investment rates in the affected countries fell, as did growth and even output. Even when growth rates recovered, there were apparently permanent output losses associated with the crisis (Serra and Saxena, 2003).

The responses of the different affected countries also varied. Thailand, South Korea and Indonesia all sought assistance from the International Monetary Fund (IMF), and in return for being able to borrow from that institution (complemented by support from other multilateral and bilateral donors), those three countries committed to a then-standard package of structural reforms, including floating exchange rates, higher interest rates, tighter fiscal policy in the short run, domestic financial restructuring and greater financial openness. These policies have often been criticized for increasing the costs of a financial crisis (Stiglitz, 2003).[4]

On the other hand, Malaysia took almost a completely opposite policy route. It imposed sweeping capital controls, fixed its exchange rate at an appreciated level relative to its crisis-induced low, reduced interest rates and generally sought to boost the economy. This approach was severely criticized at the time (e.g., Roche, 1998), and even when it appeared to be successful, was compared unfavorably with the IMF-induced policy changes in other Asian countries. Nevertheless, a careful empirical analysis by Kaplan and Rodrik (2001) indicates that Malaysia's policies had more favorable impacts on output, employment, wages, exchange rate, and inflation than the comparator countries of Thailand, South Korea and Indonesia.[5]

Overall, most of the crisis countries saw their investment and growth rates affected for some years by the crisis (Tables 1 and 2 – for brevity, we refer to South Korea as Korea in these tables). The exception was the growth rate of the Philippines (Table 2), which had been growing very slowly prior to the 1997-98 crisis. It is possible that the new investment and growth path in

[4] For a perspective that is a more market-friendly interpretation of the policy responses to the East Asian crisis, as well as the subsequent global crisis, see Krueger (2014).

[5] A less sanguine, albeit impressionistic view of the Malaysian experience is that of Sharma (2012), who argues that Malaysia has lost competitiveness, and is not undergoing the structural change necessary for sustained future growth.

East Asia was closer to some long run equilibrium path, and the years previous to the crisis were an unsustainable boom.[6] On the other hand, China was able to sustain investment and growth more successfully, having followed policies that were further away from the then-orthodoxy with respect to financial liberalization, and having avoided most of the effects of the crisis. Further discussion of the path of different East Asian economies after the 1990s crisis is taken up in the next section.

Table 1: Gross Domestic Capital Formation in East Asia (% of GDP)

Country	1990	1995	1996	1997–2002	2003–2006	2007
China	36.1	41.9	40.4	36.8	43.1	44.2
Indonesia	30.7	31.9	30.7	20.9	24.7	24.9
Korea	37.5	37.7	38.9	29.9	30.1	29.4
Malaysia	32.4	43.6	41.5	28.0	21.7	21.9
Philippines	24.2	22.5	24.0	20.3	15.7	15.3
Thailand	41.4	42.1	41.8	24.2	27.9	26.8

Source: Adapted from Mohan and Kapur (2010), Table 3

Table 2: Real GDP Growth in East Asia (%)

Country	1990–96	1997–2002	2003–2006	2007
China	10.8	8.4	10.5	13.0
Indonesia	7.3	1.0	5.3	6.3
Korea	7.9	4.5	4.1	5.1
Malaysia	9.5	3.4	5.9	6.3
Philippines	2.8	3.4	5.4	7.2
Thailand	8.6	0.8	5.8	4.9

Source: Adapted from Mohan and Kapur (2010), Table 4

East Asia's Experience: 2007-09 Crisis

Two distinct sets of issues may have contributed to the 1997-98 crisis, centered on the macroeconomic policy framework and on deeper institutional and structural constraints. The East Asian response to the crisis addressed these to varying degrees in different countries. One key point to recognize is that institutional reforms are much more difficult to achieve, and

[6] One complication for an assertion of this nature is that it is relatively easy to construct models of financial markets, or of economies more generally, that have multiple equilibria. Expectations can determine in which equilibrium the economy operates: optimistic expectations may support a higher growth path than pessimistic expectations.

governments sought a way to soften the trilemma of macroeconomic policy goals of exchange rate stability, monetary policy independence and financial openness. Accumulating international reserves permitted this softening of the trilemma (Aizenman, Chinn and Ito, 2008, 2010a, b). This accumulation of reserves was also accompanied by a shift in these countries' positions on the current account, moving in most cases from running deficits before the 1997-98 crisis to running current account surpluses (Table 3).

Table 3: Current Accounts in East Asia (% of GDP)

Country	1990–96	1997–2002	2003–2006	2007
China	1.2	2.3	5.8	11.0
Indonesia	-2.4	3.2	1.8	2.4
Korea	-1.5	3.3	2.0	0.6
Malaysia	-5.7	8.0	13.9	15.4
Philippines	-3.9	-2.1	2.2	4.9
Thailand	-6.8	6.1	0.4	5.7

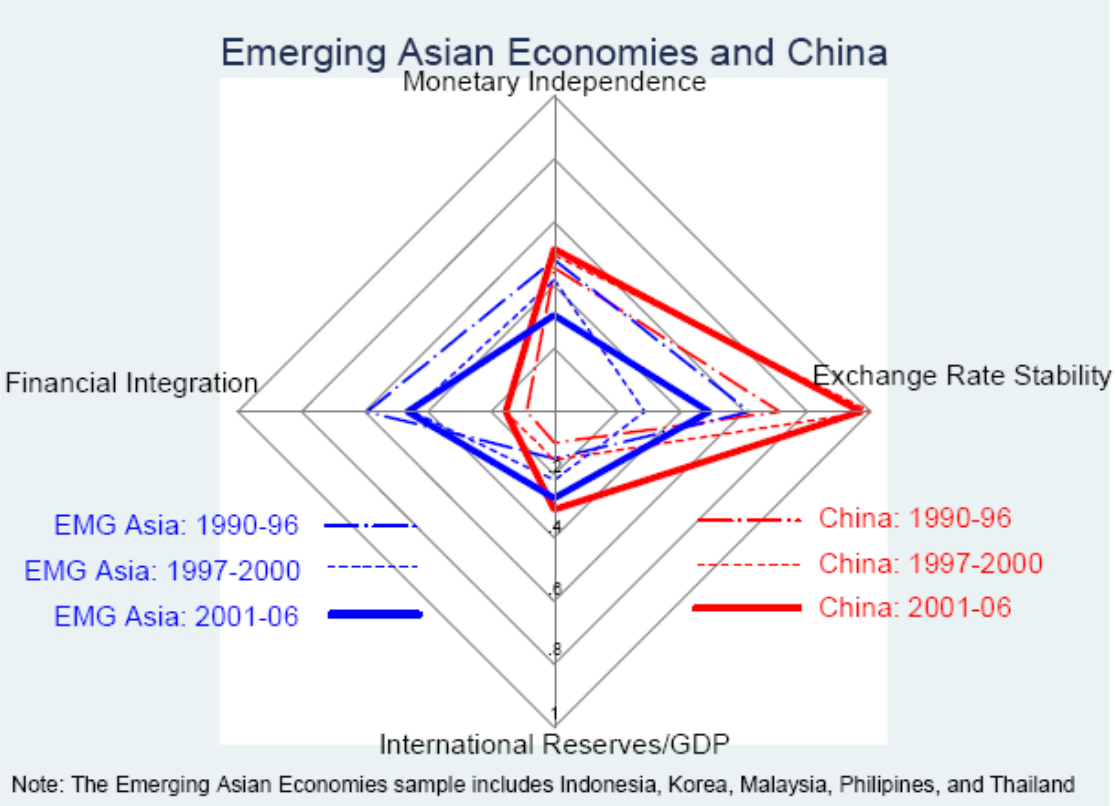
Source: IMF, International Financial Statistics

In some cases (e.g., South Korea), reforms were undertaken in the financial sector, as part of the post-1997 IMF program. Governance reforms are a larger challenge, however, as the post-1997 experience of Indonesia and the continued turmoil in Thailand indicate. With respect to the macroeconomic policy framework, since financial openness, monetary policy independence and exchange rate stability all have potentially positive impacts on national welfare (as measured by growth and stability of output and price stability) East Asian countries, like emerging economies elsewhere, have focused on balancing these objectives, achieving none fully. International reserve accumulation provided a fourth, short-term policy instrument, through adjustments in the stock of reserves, as well as self-insurance against financial instability triggered by sudden reversals in capital flows.[7]

[7] Aizenman (2010) provides an excellent summary of this development: "Prior to the financial integration, the demand for reserves provided self-insurance against volatile trade flows. However, financial integration of developing countries also added the need to self-insure against volatile financial flows. By the nature of financial markets, the exposure to rapidly increasing demands for foreign currency triggered by financial volatility exceeds by a wide margin the one triggered by trade volatility. Consequently, the financial self-insurance motive associated with the growing exposure to sudden-stops and deleveraging crises, accounts well for the international reserves takeoff in the 1990s. The East Asian crisis was a watershed event, as it impacted high saving countries with overall balanced fiscal accounts. These countries were viewed as been less exposed to sudden stop events as compared to other developing countries prior to the crisis. With a lag, the affected countries reacted by massive increases in their stock of reserves."

The East Asian model was taken to an extreme by China, which had been in a different class than the smaller East Asian economies, and hence not directly affected by the 1997-98 crisis. Figure 1 (reproduced from Figure 11 in Aizenman, Chinn and Ito, 2008) shows how China and five smaller East Asian countries responded in the run-up to the 2007-09 crisis. They differed in the degree to which they sought to maintain the three macroeconomic objectives of the trilemma, but they all made significant efforts to boost their reserves-to-GDP ratios.

Figure 1: Trilemma Indexes and International Reserve Holding



Source: Aizenman, Chinn and Ito (2008), Figure 11.

The 2007-09 crisis was different in several ways from the 1997-98 episode. The triggers in the later case were in the United States (its housing bubble and the broader financial leverage built on top of that bubble), rather than in any specific emerging market. The impact on global financial markets and aggregate demand was also more severe than in the 1990s. Nevertheless, there were some key similarities, in that global capital markets changed course suddenly and

dramatically. The East Asian accumulation of international reserves provided a buffer against this volatility of capital flows, as it was meant to.

The magnitude of the crisis, however, meant that reserves could not be a complete line of defense. The initial response of emerging markets to the financial crisis of 2007-09 was to use reserves to buffer the impacts of global deleveraging that led to capital outflows. Yet reserves were run down by only a limited amount, and policy tools shifted to imposing restrictions on capital flows and cutting interest rates (in an echo of the 1998 Malaysian response). The concern was that the reserves buffer stock, if run down too quickly, would not be available in the event of a deep or prolonged global downturn.

The different source of the most recent crisis had some implications for a difference in consequences. For example, the boom in capital flows to some East Asian countries was not as extravagant as in the 1990s, though Eastern and Central Europe, on the other hand, were the recipients of relatively large amounts of private capital before the crisis hit. In East Asia, there was also a shift away from short-term debt to more sustainable forms of capital flows, providing some buffer against sudden reversals (Committee on the Global Financial System, 2009).

The ability to use international reserves as a buffer also played a role. At the same time, the severity of the global deleveraging, and fall in aggregate demand, did have negative consequences for the region's growth. Overall, however, East Asia's economies were able to weather the storm quite well, avoiding severe domestic disruptions and seeing a rapid recovery once global financial markets settled down.

Table 4: Size of capital markets (% of GDP)

	Stock market capitalization		Domestic debt securities		Private domestic credit	
Country	**1997**	**2007**	**1997**	**2007**	**1997**	**2007**
China	22	138	9	47	94	116
Indonesia	12	49	2	21	61	25
Korea	8	117	29	117	63	109
Malaysia	92	174	56	83	158	105
Philippines	37	71	20	35	56	24
Thailand	15	80	7	53	166	84

Source: Committee on the Global Financial System (2009, Table C2)

Earlier, we noted the difficulty of instituting structural reforms in the financial sector, and even more so of reforms of governance. However, East Asia did see substantial financial deepening in the decade between the two crises (Table 4), and this development also played a role in softening the consequences of the later crisis. The extent of financial development is taken up in more detail in the next section.

Possible Futures

The recent global financial and economic crisis has caused a significant re-evaluation of the role of financial markets and financial integration in driving economic progress. There is a broad rethinking of the boundaries between state and market with respect to the regulation and conduct of the financial sector (Reinhart and Rogoff, 2009). The underlying idea is that financial markets are inherently unstable, subject to periodic, indeed regular, bubbles, panics and crashes (Kindleberger, 2000). To some extent, this perspective is a return to the one articulated by Keynes (1936) in his analysis of aggregate economic fluctuations after the 1929 crash and ensuing Great Depression, in which he emphasized behavioral factors such as “animal spirits,” and a “beauty contest” mentality nowadays described as “herd behavior.”

Many of the reforms that are being discussed are purely domestic in nature. The United States, for example, has recently formulated legislation for comprehensive (if not radical) changes in the way various components of its financial sector are regulated. On the other hand, the latest crisis also focused attention on the global dimensions of capital. Previous crisis had been mostly regionally focused, especially in Latin America (or subsets of that region), which had recurring financial crises related to currency swings and balance of payments problems, or in “emerging markets.” The 1997-98 Asian crisis also had overtones for Russia, for example. In each of these cases, the United States and Europe were relatively unscathed, and continued to represent models of financial innovation as a driver of overall economic growth. The US and United Kingdom might be lumped together as the most extreme version of this approach, but the rest of Europe also saw significant changes in adoption of a freer use of global capital, especially in numerous countries on the periphery of the European core.

The threat to major global financial centers that emerged in the most recent crisis changed the conversation about regulation of capital, and heightened the emphasis on global coordination of regulatory frameworks. Again, the United States is probably the least enthusiastic about a globally coordinated approach, but the European Union, especially given its internal problems, and those on its immediate periphery, is taking a stronger line. Furthermore, there is a strong rethinking going on with respect to domestic regulation of global capital. The IMF, the leadership of which is dominated by Europe and the US, has recently changed its position quite dramatically, shifting from a strong advocacy of free global movement of capital to a recognition that capital account restrictions may be optimal from a world welfare view (Ghosh, et al., 2008), as well as for individual countries (though one is unlikely to see any changes in US policy or perspectives with respect to its own openness to capital movements).

The weakness at the core of the global financial system also has the potential to accelerate more gradual changes in the balance of economic power that were already taking place. Whereas Japan was viewed as an emerging global economic power in the 1980s, and achieved the status of a developed country, its economy has stagnated in the subsequent two decades. China, on the other hand, has ten times the population and enormous room to grow. The rest of East Asia has demonstrated its economic resilience and dynamism. The expansion of the G-8 to the G-20 as the highest profile forum for international policy discussions is an illustration of the shift taking place. With membership determined by size and regional balance considerations, there are four East Asian members of the G-20: Japan, China, South Korea and Indonesia, though Australia can also be viewed as increasingly being part of that region.

Given the limits on G-20 membership, regional groupings will also be important in shaping policy coordination with respect to global finance. ASEAN and APEC, for example will be important forums for these discussions. Interestingly, the European Union has its own membership of the G-20, in addition to the four largest European economies that are all EU and G-20 members. The EU has, over more than five decades, gone significantly toward deep economic integration, starting with trade, but moving on to labor, capital, government transfers,

and regulations, with a Europe-level parliament and bureaucracy that in many cases takes precedence over national sovereignty.

The European model is informative for East Asia, though differences in history, geography and politics mean that it cannot ever be a straightforward guidepost.[8] However, the latest crisis and its continued ripples in Europe are instructive for East Asia's future approach to financial integration.[9] Europe achieved enough financial integration, boosted by the currency union that created the Euro. The Greek government, under the Euro umbrella, borrowed from French and German banks to fund its deficit spending. Hungarian households borrowed in Swiss francs for house purchases, in a form of interest rate arbitrage that ignored currency risk (Hungary is not yet in the Euro zone). Also outside the boundaries of the EU, Iceland's banks took deposits from households in the UK and used that money for risky, unsuccessful bets.

The European experience demonstrates that areas such as financial development and overall governance are not necessarily primary or critical determinants of the benefits and risks of financial integration. Instead a coordination of financial sector regulation and macroeconomic policy is required. In other words, whatever the level of development and quality of institutions, there are some policy mixes that are more likely to be bulwarks against financial instability. In this context, Aizenman (2010), extending the discussion in Aizenman, Chinn and Ito (2008, 2010a, b) suggests that not only do international reserves serve as a fourth policy dimension (in addition to monetary policy, exchange rate policy and the policy stance toward international capital flows), but there is a fourth objective, that of financial stability. In fact, these studies suggest that countries have been able to use the accumulation of reserves to pursue trilemma policy mixes that were more favorable than otherwise in their impacts on factors such as output volatility and inflation.

One can perhaps argue that the East Asian countries drew the right lessons from the crisis of 1997-98, not only building international reserves as buffer stocks, but also changing their approach to capital flows. They mostly ran current account surpluses, and altered the

[8] A detailed comparison of Europe and East Asia in the context of monetary and financial integration is provided by Park and Wyplosz (2008).
[9] Conversely, there are lessons from the earlier East Asian crisis experience for the current problems in Europe: see Committee on the Global Financial System (2009, Box C3).

composition of foreign capital they were attracting. The macroeconomic policy mix that was pursued, balancing the different aspects of the trilemma, was supportive of this improved mix of capital, toward more productive, more long-term uses. From this perspective, "more of the same" might be a sufficient description of "possible futures"[10]

Earlier, it was suggested that financial deepening allowed East Asian countries to soften the impact of the recent global crisis. Financial deepening potentially reduces the relative importance of foreign capital in domestic financial intermediation, enhances economies of scale and learning by doing, and increases the thickness and liquidity of financial markets. All of these can reduce financial instability. However, as the European case demonstrates (and indeed is also true of the US), financial deepening can also be accompanied by a deterioration in the quality of financial assets, with unsustainable levels of leverage and risk arising in the process of deepening.[11] This reinforces the perspective that financial deepening and financial integration, the complementary domestic and international components of financial development, should not be reduced to one-dimensional measures.

While it is impossible to provide a detailed set of ideas or recommendations, clearly some of the key issues in thinking about money and finance are the proliferation of complex financial instruments, the difficulty of identifying risk-return characteristics of these new types of financial assets, the blurring of boundaries between money and credit or banks and other financial intermediaries, and the difficulty of monitoring true balance sheet positions. East Asian countries may be in a position to take the lead in developing policy frameworks that address these issues in ways that distinguish between "good" and "bad" financial deepening and financial integration.

[10] Aizenman, Chinn and Ito (2010b) use their "trilemma indexes" to trace the changing patterns of the trilemma configurations among economies. They conclude that, "Emerging market economies, on the other hand, appear to be converging towards a "middle ground" with managed exchange rate flexibility, while maintaining medium levels of monetary independence and financial integration. Interestingly, for Asian emerging market economies, convergence is not a recent phenomenon. As early as the 1980s, the three indexes have been clustered around the middle range, though exchange rate stability has been the most pervasive policy choice." (p. 26)

[11] There is also evidence from cross-country regressions that the relationship between financial development and growth is non-monotonic, instead having the nature of an inverted U or V. See Law and Singh (2013) for an example of such evidence, and references to numerous other studies.

While new regulatory frameworks to govern financial deepening and financial integration in East Asia (and in other emerging market economies) can be developed through unilateral actions (as in the case of new US legislation, though that is in a developed country context), there is a value to policy coordination, to avoid races to the bottom. These seem to be more likely than races to the top, since there may be stronger short run political incentives to attract foreign capital and benefit from booms, rather than build institutions that will support long run growth. International or regional standards for financial regulation can avoid races to the bottom. Challenges will remain, of course, since the financial sector is a moving target. The experience of international attempts to set capital adequacy standards for the banking sector, through the Basel accords and the Bank for International Settlements, illustrate these challenges.

Coordinating macroeconomic policies is even more difficult, since it implicitly requires limits on sovereignty. The experience of the Euro zone illustrates this difficulty. While monetary policy for the Euro zone is centralized in the European Central Bank, individual central banks still conduct certain monetary operations. More importantly, the limits on fiscal deficits and debts that were supposed to accompany adoption of the Euro have not been enforceable in practice. Hence currency union and the implication of partial political union are unlikely to be a realistic option for East Asia in the near future.[12] They are also perhaps less critical than regulatory updating and harmonization for the financial sector.

The story of international reserves as a self-insurance mechanism for East Asia's economies, as a response to the 1997-98 crisis and to financial globalization more generally, raises the question of alternative mechanisms for this insurance. Aizenman (2010) mentions the possibility of swap lines and arrangements for pooling of international reserves. However, as he points out, swap lines may be of short duration and subject to moral hazard, so they may not substitute for self-insurance through accumulation of international reserves. The idea of pooling reserves for the region would amount to an Asian Monetary Fund (AMF), competing with the IMF.

The idea of an AMF was posited by Japan as far back as September 1997 (Henning, 2009), but did not get any traction, for various reasons connected to geopolitics, regional rivalries and the

[12] A detailed and balanced assessment of the issue of an Asian currency union is provided by Ogawa and Nakamura (2014).

existence of the IMF itself, though dissatisfaction with the latter was at the heart of the proposal for a regional alternative. The latest crisis, and the IMF's rejuvenation, as well as its change in approach and potential changes in shareholdings and control, have again made the IMF a more viable global institution, and it is unlikely that an AMF would gain support in the foreseeable future.

On the other hand, East Asia has made more progress, albeit slowly, with bilateral swap lines to meet short term liquidity needs. The May 2000 Chiang Mai Initiative (CMI) of the ten ASEAN countries, plus China, Japan and South Korea (ASEAN+3), created mechanisms for bilateral swap lines. In practice, the swap lines turned out to be too small to be of use during the latest global crisis, but the new crisis did lead to a multilateralization of the swap arrangements, and further increases in the total amounts pledged. A regional surveillance unit, the ASEAN+3 Macroeconomic Research Office (AMRO), was set up in 2011 to support the CMI, but is still in its infancy. From the beginning, the CMI has been architected to be linked to IMF programs, and so has avoided the pitfalls of the proposed AMF, though this linkage was weakened in 2012, when the CMI's size doubled to USD 240 billion. There is much to be worked out in terms of contributions and control, and rivalry between China and Japan will continue to affect possibilities for agreement (Rathus, 2010). Eichengreen (2003) has questioned the motivation for the CMI, particularly as a way of trying to preserve fixed exchange rate regimes among the CMI group. He argues instead for efforts at domestic financial development and deepening. In any case, the multilateralized CMI is likely to be part of the evolution of the global financial architecture going forward.[13]

The Eichengreen perspective suggests a direction for a more rigorous analysis of the possibilities of financial integration, using multidimensional measures of financial development. These measures are taken from *The Financial Development Report* (FDR, World Economic Forum, 2012). The FDR calculates an overall financial development index for 62 countries. At the most disaggregated level, this index is built up from 131 measured components, but there are two intermediate levels of aggregation, as shown in Table 5. We work with the more aggregated of

[13] A comprehensive assessment of regional economic governance issues and efforts is provided by Dobson and Petri (2014). Sussangkarn (2012) assesses the CMI and AMRO, and makes suggestions for strengthening CMI's functioning, including delinking from the IMF.

these two intermediate levels, what the FDR calls the "seven pillars" of financial development: each of these has from two to four "subpillars," as shown in the bottom row of the table, which are themselves aggregated from the lowest level of components. These seven dimensions are further grouped into three qualitative categories, also shown in Table 5, in the top row.

Table 5: Dimensions of Financial Development

	Factors, Policies and Institutions			***Financial Intermediation***			***Financial Access***
Pillars	**Institutional Environment**	**Business Environment**	**Financial Stability**	**Banking Financial Services**	**Non-Banking Financial Services**	**Financial Markets**	**Financial Access**
Subpillars	• Financial sector liberalization • Corporate governance • Legal and regulatory issues • Contract enforcement	• Human capital • Taxes • Infrastructure • Cost of doing business	• Currency stability • Banking sector stability • Risk of sovereign debt crisis	• Size index • Efficiency index • Financial information disclosure	• IPO activity • M&A activity • Securitization	• Foreign exchange markets • Derivatives markets • Equity market development • Bond market development	• Commercial access • Retail access

Source: World Economic Forum (2012)

We extract data for 11 East Asian/Pacific economies from the FDR. These are the eight "miracle" economies, plus China, Vietnam and Australia. Table 6 reports the index score for each of these economies, for each of the seven pillars of financial development, as well as the overall score. The scores are all on a normalized scale of 1 to 7, with a higher number indicating more financial development in the corresponding dimension. The countries in Table 6 are ordered by their overall financial development scores.

The overall financial development indices for the 11 countries have an ordering that mostly matches an ordering by per capita income, but China is substantially ahead of Thailand in financial development, though behind in GDP per capita (at PPP). There is considerable variation in the levels of financial development across the countries (again reflecting differences in overall development) and this will have implications for possibilities of financial integration,

just as seems to have been the case in Europe. Furthermore, the overall financial development index can mask substantial variation in the seven pillars across these countries. We therefore use the scores on the seven pillars for each of the 11 countries to examine how similar these countries are in terms of financial development. Correlations between patterns of financial development across the countries are reported in Table 7.

Table 6: Financial Development Scores

Country	*Overall*	*Institutional Environment*	*Business Environment*	*Financial Stability*	*Banking Financial Services*	*Non-Banking Financial Services*	*Financial Markets*	*Financial Access*
Hong Kong	5.31	5.77	6.03	5.35	6.15	3.76	5.04	5.08
Singapore	5.1	6.24	6.03	5.67	4.78	3.44	5.11	4.45
Australia	5.01	5.48	5.6	5.26	5.04	4.35	4.37	5
Japan	4.9	5.58	5.27	4.93	5.69	4.32	4.71	3.81
Korea.	4.42	4.18	5.41	4.08	4.37	5.04	3.78	4.06
Malaysia	4.24	5.12	4.85	5.24	4.71	3.23	2.71	3.79
China	4	4.1	3.95	4.89	4.43	4.48	2.98	3.15
Thailand	3.55	4.22	4.14	4.4	4.08	1.77	2.27	3.94
Philippines	3.12	3.94	3.44	3.87	3.02	2.68	2.18	2.74
Indonesia	2.95	3.46	3.49	4.4	2.82	2.38	1.39	2.69
Vietnam	2.92	3.44	3.32	3.26	3.87	1.53	1.99	3.06

Source: World Economic Forum (2102)

In Table 7, the country names are abbreviated: the ordering of countries is the same as in Table 6, and the abbreviations should be self-explanatory. Most of the correlations are strongly positive, suggesting that financial development, while it has different dimensions, proceeds in a somewhat balanced manner across these dimensions (the seven pillars of the FDR). There is some suggestion of higher correlations for countries that are closer to each other in levels of financial development, but this is not a strong or even clear pattern in the correlations. Indeed, Vietnam, at the bottom of the financial development table, has stronger correlations than Japan with two of the three countries above Japan in levels of financial development. Japan's slightly different pattern of development is found in an accentuated form in the case of South Korea and

China. Of the 55 pairwise correlation coefficients, 15 are below 0.35 (all are shaded in the table), and these are restricted to the two aforementioned countries: all 10 of Korea's correlation coefficients, and 6 out of 10 of China's (including with Korea). Looked at it another way, the median correlation of a specific country with the other 10 countries ranges from 0.640 (Vietnam) to 0.799 (Australia), with the exception of Korea (0.137), China (0.315) and Japan (0.542). The point we seek to make, informed by our qualitative discussion of the experience of Europe as well as of East Asia, is that the three largest economies of East Asia have appreciably different *patterns* of financial development than other countries in the region, and this represents a challenge for financial integration, beyond difficulties posed by different *levels* of financial development.[14]

Table 7: Correlations of Financial Development Patterns

	HK	***SG***	***AU***	***JP***	***KO***	***ML***	***CH***	***TH***	***PH***	***ID***	***VN***
HK											
SG	0.767										
AU	0.774	0.792									
JP	0.736	0.637	0.535								
KO	-0.055	-0.096	0.222	0.128							
ML	0.693	0.674	0.908	0.638	0.155						
CH	0.039	0.044	0.285	0.436	0.345	0.620					
TH	0.816	0.691	0.912	0.454	-0.085	0.889	0.254				
PH	0.494	0.691	0.849	0.549	0.145	0.941	0.636	0.759			
ID	0.415	0.542	0.805	0.357	0.196	0.919	0.691	0.777	0.933		
VN	0.903	0.617	0.839	0.607	-0.070	0.845	0.254	0.949	0.649	0.631	

Source: Authors' calculations from data in Table 6

[14] This difference is reinforced when one looks at correlations within the sample of countries across the different dimensions of financial development. These correlations range from a low of 0.457 between non-banking financial services and financial access to a high of 0.935 between business environment and financial markets. The four lowest correlation coefficients involve nonbank financial services, and the other 17 coefficients are all greater than 0.6. This indicates that the different dimensions of financial development are not inherently divergent – they tend to move together across the countries in the sample.

Conclusions

East Asia has taken an approach to financial globalization and financial integration that has been pragmatic in the short run, and evidences longer run thinking as well. The Asian financial crisis of 1997-98 highlighted a potential challenge to the continuation and spread of the East Asian miracle of sustained high rates of economic growth. East Asia's economies responded by preserving trade openness, with exchange rates that supported their export-oriented growth path, while taking a more cautious approach to financial openness. The accumulation of international reserves provided self-insurance, as well as an additional policy dimension for managing the trilemma of monetary policy autonomy, exchange rate stability and capital account openness.

The larger, more severe crisis of 2007-09 found East Asian economies better prepared than in the previous decade, and they weathered the new storm effectively, though not without short-term liquidity support in some cases. The latest crisis has accelerated efforts to provide more efficient regional insurance arrangements, and has enhanced the region's voice in global forums. A regional approach to "high quality" financial deepening and financial integration has yet to emerge, however. In this paper, we have highlighted some of the challenges, and illustrated through the data how there are somewhat different patterns of financial development in the three largest economies of the region (China, Japan and Korea). A next step would be to trace these differences to variations in regulatory policies and institutions, as well as in industrial organization and trade patterns.

The future of East Asian financial integration will depend considerably on the economic and political trajectory of China. That country is the region's only major military power, with the US as a long-distance counterweight. Its size also means that its aggregate economic clout is much greater than its per capita income alone would warrant. If China is able to alter its growth path to increase domestic consumption and become more of a market for its Asian Pacific neighbors, the basis for regional cooperation in developing instruments of risk management may become more assured. It is also possible that China's increased economic role will play out more at a global level, leaving the smaller East Asian economies to devise regional coordination mechanisms

among themselves. An option for groupings such as ASEAN could be to look toward India as a more important economic partner, but that could create tensions with respect to China's strategic interests beyond the purely economic sphere. Economic groupings such as APEC also bring in the US and other non-Asian nations, but may be too regionally diverse to have a significant impact. Unlike the European project, then, there is not an obvious core from which to build economic cooperation, deepen it, and extend it outward.[15] This would imply that the future of financial integration and policy cooperation in East Asia will remain uncertain.

[15] Okamoto (2011), on the other hand, argues that there is virtue in the flexibility afforded by many groupings with diverse memberships and agendas, because this reflects the diversity of the region itself: "East Asian integration is more likely to involve the continuing agglomeration of many frameworks and agreements, rather than the creation of a common 'grand design' for the future or any purposeful moving towards the realisation of that grand design, because that is what suits East Asia's character and interests best." Yet another view is provided by Jang (2011), who argues that Japan, China and Korea should take the lead in facilitating the integration process, thus implicitly treating these three countries as an East Asian "core." Our analysis provides a cautionary response to Jang's perspective. Kuroda (2011) also argues for a more "centralized" approach to regional integration.

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