

Asian and European Financial Crises Compared

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Abstract

The European and Asian financial crises are the two most recent major regional crises. This paper compares their origins and evolution. The origins of the two sets of crises were different in some respects, but broadly similar. The two sets of crises also shared similarities in their evolution, but here the differences were more significant. The European crisis countries received more external financial support, despite the fact that they involved more solvency issues while the Asian crises involved more liquidity issues. On balance, the reform programs in the European crises were less demanding and rigorous than in the Asian crises. Partly as a consequence, the negative impacts on the global economy have been larger. I draw three lessons from this analysis: First, history will repeat itself; there will be other external financial crises. Second, other countries have a stake in appropriate crisis management. Third, the IMF and other countries were mistaken in treating the European crises as individual country crises rather than as a crisis for the euro area as a whole that demanded policy conditionality on all members of the euro area.

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Financial crises are a regrettable but persistent feature of today's global economy and financial system. They have economic and financial consequences not only for the countries immediately involved but also for others. As a consequence of such spillovers, crisis management and crisis prevention are an appropriate focus of international cooperation, in particular through the auspices of global institutions such as the International Monetary Fund (IMF). As perceived at the moment, in particular by national authorities, each crisis is different, but all crises share many common characteristics. The objective of policymakers and their advisors and critics should be to learn from past crises and to establish frameworks and procedures. They should not try to prevent future crises—a commonly articulated but inherently unrealistic goal—but should try to limit the virulence of crises and the extent of cross-border spillovers. To this end, this paper compares and contrasts the ongoing European financial crises with the Asian financial crises of the late 1990s. These are the two principal recent financial crises that engulfed regions.

I focus on countries in Asia and Europe that had crises that involved the substantial engagement of the IMF. Generally, this involvement entailed an IMF program in support of economic and financial reforms by the country in crisis.

I review the experience of five Asian countries and 10 European countries. I focus on five Asian countries: Indonesia, the Republic of Korea (hereafter Korea), Malaysia, the Philippines, and Thailand. Each of these countries, with the exception of Malaysia, entered into reform programs supported by the IMF.¹ The outbreak of the Asian financial crises is conventionally dated from the flotation of the Thai baht on July 2, 1997 and spread to the Philippines, Malaysia, Indonesia, and Korea.

With respect to Europe, I focus on 10 European countries: Cyprus, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Portugal, Spain, and Romania. The chronology of the European financial crises is more complicated, with two distinct phases. The first phase coincided with the intensification of the global financial crisis in the fall of 2008 and the 2008–09 IMF programs with Iceland (which is not a member of the European Union) and Hungary, Latvia, and Romania (which are members of the European Union, but not in the euro area). The second, and still continuing, phase involves euro area countries, which are unique in that the euro area countries are bound together in a monetary union. The second phase was kicked off at the end of 2009 by the crisis in Greece, which resulted in an IMF-supported program in May 2010. The Greek program was followed by IMF programs with Ireland, Portugal, and most recently, Cyprus. In

1. The Malaysian authorities, in the end, did not request IMF financial support. However, they broadly embraced an IMF-style program up to the point at which Prime Minister Mahathir, on September 1, 1998, repegged the ringgit to the US dollar and imposed controls on capital outflows. The Philippines was a central participant in the global debt crisis of the 1980s, and had adopted economic and financial reforms at that time which were intensified in the 1990s. It was operating under an IMF Extended Fund Facility arrangement on July 2, 1997, when Thailand floated the baht. The Philippine authorities promptly requested an extension of their program until December 31, 1997 with an augmentation of its size, and in March 1998 established a follow-on standby arrangement with the IMF. See Marcus Noland (2000b) for a detailed account of why the Philippines was less affected in the Asian financial crisis. Its policies were better than those of its neighbors, and it was less exposed to contagion. The scope of the Asian financial crises could have been expanded to include the Tequila crises of 1995, the Russian and Brazilian crises in 1998, and additional later country crises early in the 21st century, but this examination already covers a great deal of material. My choice of these five Asian countries conforms to the choice made by Donghyun Park, Arief Ramayandi, and Kwanho Shin (2013).

addition, in 2011, Spain entered into a de facto program and in 2012 finally applied for and, subsequently, received support for its banking system from its euro area partners and the European Stability Mechanism (ESM). The IMF agreed to provide technical assistance in monitoring Spain's progress in implementing the European financial assistance and monitoring developments in the financial sector as a whole.² Italy also embarked on a de facto stabilization and reform program in the second half of 2011 that was to be monitored by the IMF as well, but the IMF role has been confined to its annual Article IV reviews. The Italian program is more closely monitored by the European Union.

My analysis of these 15 countries, and the two sets of financial crises involving them, is divided into three sections: origins, evolution, and lasting lessons.³

Were the origins of the two sets of crises similar or different? There were differences in the detail, but the broad similarities greatly outweigh those differences.

Did the evolution of the Asian and European financial crises follow similar patterns? Many aspects of the diagnoses of, and policy responses to, the two sets of crises were similar, but significant differences stand out. In particular, the European crises countries received more financial support, despite the fact that their crises involved solvency issues rather than just liquidity issues compared with the Asian crises. The programs adopted in the European crises generally have been less demanding and rigorous than those in the Asian crises. Partly as a consequence, the global impact of the European crises, in particular the euro area crises, has been larger.

The principal lessons of these two sets of crises are three: First, history will repeat itself; the only question is whether the extent of tragedy and farce can be limited. Second, the non-crisis countries in the rest of the world have a stake in crisis management, as well as crisis prevention and preparation. Third, the IMF and its members in the future need to focus their surveillance of monetary unions (such as the euro area) on the areas as a whole, both before and after the establishment of such arrangements, rather than on the individual countries.

CRISIS ORIGINS

Financial crises with significant international ramifications are generally preceded by credit booms. The booms turn into busts with severe negative consequences for the real economy. During the boom period, irrational exuberance takes hold. Policymakers and domestic and foreign investors, as a group, inevitably believe that this time is different. All countries are different in their precise circumstances, but certain regularities are evident. Various indicators give warnings of crisis (as well as false positives), but when a crisis occurs, most policymakers and many market participants are surprised and unprepared. For policy-

2. The ESM loan is to Spain, which in turn has used it to support and resolve some of its banks. In the future, the ESM may be used directly to recapitalize banks, breaking the link between a sovereign and its banks, but this procedure is not yet in place, in part because the associated single supervisory mechanism (SSM) has not been established and, in part because the extent and rules governing such a use of the ESM have not yet been agreed; see Véron 2013.

3. In what follows, I employ the framework I have developed elsewhere (for example Truman 2011a) for analyzing economic policy coordination: problem identification, diagnosis, policy prescription, policy adjustment, and consequences.

makers, the surprise tends to manifest itself in denial that there is a crisis until the evidence is irrefutable. For market participants—domestic as well as foreign—the response is a rush to exit from investments and markets in the country and, often, exit from countries perceived to be in similar circumstances.

In this section I, first review the relevance of various models or typologies of the origins of financial crises to the Asian and European crises and find them not very useful because both sets of crises fit several models. The subsequent subsection looks at seven sources of crisis vulnerability, without focusing on univariate causes, most of which were present in Asia and Europe. The final subsection examines some differences in the origins of the two sets of crises.

Application of Crisis Models to Asia and Europe

Since the late 1970s, academic economists have endeavored to model the origins of financial crises.⁴ The classification includes four types of crises: speculative exchange rate, or currency, crises; sudden stop (also known as capital account or balance sheet) crises; debt (external debt of the country or the public sector's external or total debt) crises; and systemic banking crises. As a recent review by Claessens and Kose (2013) amply demonstrates, the different types of crises are far from distinct; they often overlap with the causality running both ways from the respective nodes. That was true in Asia and in Europe.

In 1997, all five Asian countries experienced currency crises: The sequence of abandonment of pegs, or the equivalent, was Thailand, the Philippines, Malaysia, Indonesia, and Korea. Each of these countries had soft-peg exchange rate regimes, and the bulk of the effective depreciations were in the second half of the year, after the Thai devaluation, and in many cases in the final two or three months of the year. The decline in their real effective exchange rates (broad Bank for International Settlements (BIS) series) over the 12 months ending in December, ranged from 18 percent for the Philippines to 40 percent for Indonesia. As the pegs gave way, currency and maturity mismatches emerged; see Morris Goldstein (1998). The foreign exchange depreciations, in turn, further fueled the panic, weakened balance sheets, exacerbated recessions, at least in the short run, and constrained policy choices.

All five Asian countries also experienced sudden stops as they had become reliant on net foreign capital inflows to finance their current account deficits which had averaged 4.5 percent of GDP during the 1994–96 period. See table 1. And 3.2 percent in the crisis year of 1997.

The external deficits were largely associated with the large-scale foreign borrowing by the private sector, not the public sector, facilitated in part by easy global liquidity conditions; see Goldstein (1998). Each of the governments had small fiscal surpluses in 1996, measured by their general government net lending positions, but in 1997 Indonesia and Thailand had small deficits. In most cases, their general government gross debt positions were moderate to low, with the exception of the Philippines which had a ratio of 61 percent of GDP on average in 1994–96.⁵ See table 1.

4. Paul Krugman (1979) is an early example. The literature tends to focus on financial crises in emerging market economies, but the advanced countries have had their share of crises.

5. These data are from the IMF *World Economic Outlook* database; we lack consistent data for Indonesia.

Finally, each of the Asian countries experienced banking crises. High levels of financial leverage, excessive reliance on short-term debt, and weaknesses in supervisory and regulatory systems exacerbated the banking crises.⁶

Turning to the European countries, Iceland experienced a classic currency crisis associated with a 36 percent real effective depreciation and a modest 19 percent decline in its international reserves over the course of 2008. But the loss in international reserves was only blunted by its imposition of comprehensive controls on capital outflows, which no advanced country had done for decades. The use of capital controls was repeated by Cyprus in 2013. Latvia chose not to devalue the lats, but its international reserves declined by 40 percent from June 2008 to April 2009. Hungary's international reserves also declined by 40 percent from June 2008 to April 2009, and its real effective exchange rate declined by more than 25 percent over the same period, but the exchange rate subsequently recovered. Romania's experience was more subdued with a 16 percent decline in reserves from March 2008 to March 2009, and a peak depreciation of 12 percent between August 2008 and February 2009. The private and public sectors in these countries had borrowed considerable amounts in foreign currencies, creating mismatches that may have induced policymakers, having learned some lessons from Asia, to limit exchange rate depreciation.⁷

The individual euro area countries, of course, could not have classic currency crises because their currencies were not their own. Their crises were manifested in a surge in interest rates for public and private borrowers as maturity mismatches became exposed. As in Iceland, Cyprus's imposition of capital controls was broadly consistent with what one sees in currency crises.

Almost all of the 10 European countries fit the classic pattern of sudden stops of capital inflows that had financed oversized current account deficits. In the pre-crisis period from 2004 to 2006, the average current account deficit of the 10 countries was 8.5 percent of GDP (12.5 percent for the euro area countries and 5.8 percent for the others); see table 1. Before 2010, the question was whether a country in a monetary union, having a substantial portion of its cross-border financial and real flows with partner countries denominated in the common currency, could experience a sudden stop in the financing of its current account deficit. Many observers, including the IMF staff in their pre-crisis analyses, as detailed by Pisani-Ferry, Sapir, and Wolff (2011), thought the answer was no, in part, because the euro area as a whole was in current account surplus and, in part, because the internal deficits appeared to be smoothly financed. We now know the answer is a resounding yes. After the crisis, cross-border private sector flows unwound, and they were replaced by the build-up of target 2 balances within the euro system of central banks, which cushioned the crisis, and effectively contained runs on banks in the crisis countries, but did not address the underlying imbalances.

6. Atish Ghosh et al. (2002) report that in 1995–96 the ratio of total debt to the book value of equity of firms was 0.73 in Indonesia, 1.95 in Korea, and 1.05 in Thailand, but only 0.41 in the Philippines, compared with 0.52 for non-crisis OECD countries. The ratio of short-term to long-term debt for firms in Korea and Thailand was 1.43 and 1.46 respectively, compared with the OECD average of 1.02. Arguably, as I note below, changes in debt stocks or ratios matter more than absolute levels.

7. Morris Goldstein and Daniel Xi (2009) found that in Asia currency mismatches were greatly reduced compared to a dozen years before.

With respect to government debt and deficits, the picture for the 10 European countries is somewhat mixed; see table 1. On balance, we can conclude that the 10 countries experienced debt crises of varying intensity.

Turning to banking crises as causes, in Latvia, Hungary, and Romania, banking crises manifested themselves in large part via pressures on foreign banks in those countries. In the remaining countries, the banking crises varied in intensity from very severe (Cyprus, Iceland, and Ireland) to less severe (Italy). In Greece, the sovereign debt crisis and the associated write-downs contributed to banking crises rather than the reverse. In all 10 European countries banking supervision and regulation was inadequate before the crisis.

In summary, the financial crises in both Asia and Europe combined almost all of economists' four types of crises. It is difficult to argue that one type dominated.

Crisis Vulnerabilities in Asia and Europe

A more useful way of thinking about the crises in these 15 countries requires abandoning an effort to identify them uniquely with any of the economists' four types. It is more instructive to focus on sources of vulnerability to crises. Nouriel Roubini and Brad Setser (2004) identified seven elements contributing to crises in emerging market economies: large macroeconomic imbalances, risky financing of budget and current account deficits, doubts about policy credibility, fixed and semi-fixed exchange rates, microeconomic distortions, political shocks, and external shocks.⁸ These seven elements of vulnerability are equally applicable to the advanced-country crises in Europe. Roubini and Setser do not provide a ranking of their elements. The emphasis is on the confluence of conditions. I use that framework to examine the origins of the Asian and European crises.

With respect to macroeconomic economic imbalances, the five Asian-crisis countries did not manifest significant pre-crisis fiscal imbalances, but they did have substantial current account deficits.⁹ See table 1. Many, but not all, of the 10 European-crisis countries had substantial pre-crisis fiscal imbalances, and all had current account deficits—many of which were substantially larger than any of the Asian-crisis countries.¹⁰ Writing in the *New York Times* on April 17, 2013, leaders in five European institutions (Jeroen Dijsselbloem, Olli Rehn, Joerg Asmussen, Klaus Regling, and Werner Hoyer) introduced their defense of the European response to its crises with the admission: “The current crisis has exposed both fiscal and macroeconomic imbalances caused by a lack of reforms in several euro zone countries as well as structural problems in the institutional set-up of Europe’s economic and monetary union.”

8. Then-Treasury Secretary Lawrence Summers (2000), speaking in the wake of the Asian financial crises, presented a similar list. Morris Goldstein (1998) writing while the Asian crises were still in full force cited similar factors; he also rejected the popular view that the Asian countries were innocent bystanders as a hypothesis that simply doesn't wash.

9. Levels of general government gross debt were somewhat elevated for Malaysia and the Philippines.

10. Italy's current account deficit was less than 1.0 percent of GDP in 2006.

The European leaders left out the characteristic common to each of the 15 countries in Asia and Europe: a credit boom.¹¹ See table 2.¹² As a result, domestic credit as a share of GDP climbed from an average of 110 percent of GDP in 2003 to 153 percent in 2006.¹³ In Asia, the average growth of domestic credit in the three years before the crisis was 88 percent; the level of domestic credit relative to GDP rose from an average of 62 percent in 1993 to 86 percent in 1996.¹⁴

The pre-crisis credit booms in most of the 15 countries, and the expansionary fiscal postures in a number of the European countries, were associated, in almost all cases, with growth rates of real GDP that proved to be unsustainable.¹⁵ Average rates of growth of GDP in the three-year, pre-crisis period were higher than in the previous three-year period in each country; see table 3. The only exception is Thailand.¹⁶ Growth spurts in the euro area were more subdued.

The second element of vulnerability on the Roubini-Setser list is risky financing of budget and/or current account deficits. In the Asian cases, this vulnerability was largely manifested in excessive reliance on short-term funding, in particular in foreign currencies. In the European cases, risky financing largely involved domestic and foreign banks funding oversized fiscal and current account deficits. The combined reliance by banks and governments on short-term cross-border financing contributed to the vicious circle of dependence between European governments and their banks when the financing began to dry up—the well-known doom loop.

The third Roubini-Setser element of vulnerability is doubt in markets about the credibility of a government's policies. This vulnerability is related to the interaction of flows and stocks in the country's external accounts (bringing current account deficits down and reducing the overhang of external debt) and

11. Vitor Constâncio (2013), vice president of the ECB, recently challenged the “it’s mostly fiscal narrative” of the European crises, arguing that it was the debt boom associated in part with widening current account deficits that was key. See Vitor Constâncio, “The European Crisis and the Role of the Financial System,” speech at the Bank of Greece conference on the crisis in the euro area, May 23, 2013. Available at www.ecb.europa.eu/press/key/date/2013/html/sp130523_1.en.html (accessed on July 1, 2013).

12. In Europe, the average growth of domestic credit in the three years before the global financial crisis was 93 percent (48 percent in the euro area countries and 172 percent in the others); Ireland and Spain, with increases of 98 and 69 percent respectively, were relative outliers. These data abstract from foreign sources of credit growth, and in four of the six euro area countries net savings from abroad averaged at least 6 percent a year from 2004 to 2006; see table 1.

13. Romania and possibly Hungary might be considered to be outliers in terms of the ratios in 2006.

14. Park, Ramayandi, and Shin (2013) find in their empirical investigation that credit growth in the crisis countries of both Europe and Asia is the most significant explanatory variable.

15. Real interest rates were historically low in a number of euro area countries as a consequence of the convergence of interest rates associated with their joining the euro. In addition, prior to the global financial crisis, short-term real interest rates were also historically low. The real US dollar six-month LIBOR, adjusted by the rate of increase in the US consumer price index, averaged 0.3 percent from 2004 to 2006 after averaging 0.1 percent the previous three years. In contrast, the same real short-term interest rate averaged 2.7 percent from 1994 to 1996, up from 1.0 percent the previous three years.

16. Growth had already begun to slow in 1996, but the average growth rate in 1994–95 was 9.1 percent, about a full percentage point higher than the average for 1991–93.

governmental accounts (budget deficits and debt). Flow problems alone can be addressed as liquidity issues; stock problems raise issues of underlying solvency.

In the Asian crises, the governments of Indonesia and Korea faced credibility problems as they sought to contain runs on their banks and associated feedback effects on government balance sheets. In Indonesia, general government gross debt was recorded at 95 percent of GDP in 2000.¹⁷ In Korea, the principal issue was the interaction between the overleveraged *chaebol* and their banks, and the feedback implications for the government's balance sheet.

In the European crises, these stock-flow vulnerabilities, and associated doubts of the credibility of government policy in addressing them, were even more prominent. External deficits were larger, and for all except Iceland the capacity of countries to address those deficits via exchange rate depreciation had been circumscribed by membership in the European Union and, in particular, for six crisis countries in the euro area, by their common currency. Meanwhile, the credibility of countries' pegs to the euro or participation in the euro area came into question.

Roubini and Setser point to fixed or semi-fixed exchange rates as a fourth element of vulnerability. For the Asian crisis countries, the private sector had built up substantial short-term external financial obligations in foreign currencies on the implicit assumption that the exchange rate would remain pegged. In the crisis, each country's exchange rate peg gave way either because the country exhausted (Thailand and Korea), or substantially depleted, its foreign exchange reserves or because of the pressures coming from the depreciations in the currencies of its Asian neighbors.¹⁸ Outside the euro area, exchange rates were quite stable except for Iceland which had a floating rate. The common currency was seen as a source of strength for the euro area countries during the early phase of the global financial crisis, but subsequently became a constraint.

The fifth element of vulnerability identified by Roubini and Setser is microeconomic distortions. In the Asian crises such distortions took the form of implicit government guarantees of financial institutions, poor corporate governance and cronyism, and a preference for debt over equity—short-term debt in particular. The role of cronyism in the Asian crises is a topic of continuing controversy and the phenomenon was not unique to these crisis countries.¹⁹ But the Roubini-Setser (2004, 41) conclusion is difficult to refute: “Yet even if these structural weaknesses do not fully explain Asia's crisis, they clearly sapped the resilience of Asian economies when the tide turned.”²⁰

17. Consistent data are not available before that year.

18. Indonesia experienced a decline in international reserves of 22 percent from the end of the third quarter of 1997 to the end of the first quarter of 1998. Malaysia had a somewhat larger decline of 26 percent starting at the end of the second quarter until the first quarter of 1998. The decline of the Philippines' reserves was 30 percent from the end of the first quarter of 1997 to the end of the fourth quarter.

19. Noland (2000b) reminded readers that the term crony capitalism was coined to describe the banking system in the Philippines in the 1970s and 1980s. Shang-Jin Wei and Sara E. Sievers (2000) present a comprehensive picture of crony capitalism in Asia and its costs and contribution to the Asian crises.

20. Haggard (2000) provides a careful description of the political influence of private sector actors in the Asian crisis countries.

It is beyond the scope of this paper to explore weaknesses in corporate governance and more virulent forms of corruption and cronyism in Europe, but a casual reading of the press over the past six years suggests that in many countries standards of transparency and accountability were either nonexistent or laxly applied. Perceptions of corruption have increased in most of the European countries, according to Transparency International, between 2008 and 2012. Even highly ranked Iceland and Ireland fell four and 10 places respectively; Italy fell from 55th to 77th place and Greece from 57th to 94th. Greece now ranks below Korea, Malaysia, and Thailand and close to the Philippines and Indonesia in the perceptions of corruption in the country.

In the European crises, many of the other microeconomic distortions were also present in the form of implicit government guarantees of financial institutions that became explicit during the global financial crisis and excessive reliance on financing from banks that turned out to have weak balance sheets. The euro area financial system also suffered from the fragmentation of its legal structure, supervision and regulation, crisis management, and rescue and resolution mechanisms.

Economic policies interact with politics in every country, and Roubini and Setser identify political shocks as well as associated political uncertainty as a sixth element of crisis vulnerability. In the Asian cases, Thailand went through a series of different governments in the early months of its crisis. Korea had a presidential election during the first two months of its crisis that contributed to the difficulty of negotiating the initial program of IMF support and that program's subsequent lack of credibility. The Suharto regime in Indonesia came under suspicion concerning its capacity to deliver sustained economic and financial reform and, subsequently, collapsed. The one-party regime in Malaysia also came under pressure. Only in the Philippines did political change and uncertainty not intersect with the outbreak of crisis and interact with its subsequent management.²¹

Notwithstanding arguments by C. Fred Bergsten and Jacob Funk Kirkegaard that stress the political resilience of countries in the euro area and the sustainability of the European integration project (2012a and 2012b), political shocks and doubts about whether political leaders can agree and deliver on economic policy commitments have been a central feature of the European crises. Political shocks and uncertainties in Europe have been manifested at two levels: at the level of the European Union as it struggled to adapt ill-prepared institutions and establish new institutions, understandings, and procedures, and at the national level starting in Iceland, extending to Hungary and Romania, and centrally in each of the euro area crisis countries.

For example, an Indonesian type of political meltdown may well be playing out in Italy, as the old political order is under great pressure, contributing to the potential for multiple equilibria. In both Indonesia and Italy, the *ex ante* economic and financial problems at the start of the crisis periods were less acute than those of other countries in their regions. Indonesia had a smaller current account deficit, less rigid exchange rate regime, and lower ratio of debt to domestic credit to GDP. In 2006, Italy had a relatively small current account deficit of 1.5 percent of GDP, and its cyclically adjusted primary deficit was

21. See Stephan Haggard (2000) for a full exploration of the political economy of the Asian crises.

near balance at 0.2 percent of GDP.²² As with Indonesia, Italy's crisis may prove to be more political in its nature than economic and financial though, of course, one set of weaknesses exacerbates the other, which is one reason why Roubini and Setser include this vulnerability on their list.

The seventh and final element of vulnerability identified by Roubini and Setser is external shocks. In the case of Asia, in addition to domestic political shocks, Roubini and Setser point to common shocks in the terms of trade, commodity prices, and interest rate shocks, and other forms of contagion (2004, 43–44) arising from trade linkages and competitive devaluations, wake up calls about vulnerabilities (what Summers (2000) calls reputational externalities), common creditor links, the operation of risk management systems, uncertainty arising from the inability to price assets in a volatile environment, and secondary portfolio shifts affecting claims on similarly placed emerging market economies or emerging market economies in general.²³

In the case of Europe, the principal source of external shock was the global financial crisis. In the conventional view, the epicenter of the global financial crisis was the United States. Notwithstanding the convincing contrary view found in James Barth, Gerard Caprio, and Ross Levine (2012, chapter 5) that much of the financial excess in Europe was home grown, the outbreak of the global financial crisis was an external shock for the European crisis countries. However, in countries such as Iceland, Latvia, and Greece, crises may have been accidents waiting to happen, and the global financial crisis was merely the spark that lit the bonfire. Subsequently, as in Asia, the forces of contagion were unleashed.

This discussion of crisis typologies and broader sources of vulnerabilities has demonstrated that the financial crises in Asia and Europe and across those regions were substantially similar in terms of the initial conditions and origins of the crises. It was difficult to identify any unique circumstances or surprises as each of the crises unfolded. The economists' four types of crises are not much help because most crises are a blend of at least two, if not all four, types. The vulnerabilities framework of Roubini and Setser is somewhat more satisfying because it is appealing to think that crises hit countries that are most vulnerable or have the largest number or severity of vulnerabilities. That framework begs the question of the spark that set off the crisis other than external or political shocks, but given the tinder, the spark hardly matters.

Differences in Origins of the Asian and European Crises

The view that the crises of the individual countries in Asia and Europe were similar in their origins can be carried too far. History was not precisely replicated in all 15 countries. I now turn to the principal differences in the origins of the crises in the two regions. Five differences stand out: exchange rate regimes, breadth of crises, persistence of crises, role of the private and public sectors, and preparedness.

The first central difference between the two groups of countries was the nature of their exchange-rate arrangements. The Asian countries had fixed or semi-fixed exchange rates, which was a source of problems ex ante because the exchange rate regimes encouraged currency mismatches and the buildup of excessive

22. The source for the cyclically adjusted primary deficit is the IMF *Fiscal Monitor* of April 2013 (IMF 2013a).

23. Summers (2000) includes the element of investor irrationality or herd mentality, also known as rational panic (Stephen Radelet and Jeffrey Sachs 1998).

foreign debts by the private sector, including financial institutions. Exchange-rate regimes became an additional source of problems when the pegs broke or were broken, and the sequential collapse of pegs contributed to contagion in the region. The collapse of the pegs magnified recessions in the short run, via balance sheet effects. However, exchange rate flexibility became a source of strength, in the medium term, and fueled the recovery of economic activity—the necessary narrowing of current account deficits in particular, because the initial real effective exchange rate depreciations were largely sustained.

In contrast, the European crisis countries—with the exception of Iceland—and in principle Latvia, Hungary, and Romania, were locked together in an irrevocable monetary union. Latvia chose to behave as if it had no choice. That choice may well have been the best course for Latvia, but that choice had no significant implications for other countries in the European Union. Hungary and Romania chose not to exploit substantially their potential exchange rate flexibility. The leaders of the euro area countries concluded that they had no choice but to stick with the euro. As the global financial crisis unfolded starting in 2007, the authorities in and observers of the euro area countries saw their membership in the euro area as a source of strength and resilience. The members of the euro area were protected from the potentially wide gyrations in intra-area cross rates as happened in the 1992–93 crises in the exchange rate mechanism of the European monetary system and from the turmoil in bond and equity markets with which the exchange rate volatility likely would have been associated.

The downside was that after 2009, markets were no longer convinced that participation in the euro was permanent. The European Monetary Union had become dysfunctional. The euro itself faced an existential threat, and that threat was not universally acknowledged by European leaders. It was understandable that pundits and outside experts debated the merits of an exit by one or more euro area countries, and that finance ministries and central banks prepared background papers that explored the consequences of the unthinkable. It was something else for the press in early May 2011 to get wind of a meeting to discuss the matter. It was not until European Central Bank (ECB) president Mario Draghi declared, in July of 2012, that membership in the euro is irreversible—and added the pledge that the ECB would do whatever it takes, acting within its mandate, to preserve the euro—that the possibility of euro disintegration was largely put to rest.

But tremendous damage to the European integration project had already been done before July 2012; the monetary union itself was under extreme stress. The consequence was the disappearance of many of the benefits that were derived from a common monetary policy and a monetary area in which borrowers and lenders ignored the implications of cross-border transactions; *de facto* monetary and financial fragmentation reemerged.²⁴ At the same time, members of the monetary union were deprived of use of the exchange rate policy to correct their sizeable external imbalances and to stimulate economic growth in order to help bring down oversized government debt ratios.

24. The *Financial Times* on June 11, 2013 (“Eurozone Banks Retreat Behind National Borders”) reported euro area banks’ cross-border holdings of government and corporate debt, which surged after the introduction of the euro from about 20 percent of total portfolios to more than 40 percent in the process, fueling the global credit booms across the euro area, had returned to about their 1999 share by the early of 2012.

Of course, bygones are bygones, and no exchange rate regime is optimal for all countries in all circumstances. In retrospect, the euro was demonstrably suboptimal for some of its members. But once they had joined the monetary union, the economic and financial costs of withdrawal were judged to be prohibitive. Moreover, these monetary arrangements might not have extracted so high a price on many of the participants if there had been adequate supporting institutions. But there were no institutions other than the ECB and loose mechanisms for policy discussions within the European Union and the Eurogroup. Mechanisms for financial rescues had to be constructed from scratch in the midst of the crisis in parallel with institutional arrangements to limit the potential for future crises. The result has been a messy business filled with political controversy and policy uncertainty. This weakness has prevented the Europeans from addressing the challenges of the crisis with overwhelming financial and policy force as was required if the crisis was to be promptly tamed and contained.

Second, the European crises were broader, affecting, by the criteria applied in this paper, 10 countries (and several more had the potential to be affected). In contrast, only five countries were caught up in the Asian crises. Other economies in the Asian region were affected, but not to a level requiring international rescues; they included Hong Kong, China; Taipei, China; and Singapore, as well as the People's Republic of China (PRC).

Interestingly, the Asian crisis can be said to have had a larger global footprint. As shown in table 4, on a purchasing power parity (PPP) basis, the five Asian crisis countries had a 5.0 percent share of global GDP in 1996; excluding Italy and Spain, the European crisis countries had a share of only 1.9 percent of GDP in 2006 though the figure rises to 6.8 percent with Italy and Spain included. At current prices and exchange rates, the gap is smaller: 3.8 percent for the five Asian countries, 2.0 percent for the eight European countries, and 8.3 percent for the 10 European countries. Of course, the European crises affected other European countries, and in 2006 the collective share of global GDP of the euro area (PPP basis) was 16.2 percent; the share of global GDP of the European Union was 22.6 percent. In 1996 the collective share of the economies in developing Asia was only 14.1 percent. Moreover, the European countries are more economically and financially integrated with each other and with the global economy and financial system, with a commensurately greater potential to inflict damage on their immediate partner countries and, consequently, on the world as a whole.²⁵

It is often argued that a principal difference between the Asian and the European financial crises is that the former involved emerging market and developing countries, and the latter involved advanced countries. The implication of this argument is that advanced countries could not or should not have crises that require international rescues. Indeed, Neil Irwin (2013, 98) reports that the fifth and final ingredient of the pre-crisis Jackson Hole 2005 consensus was that financial crises for advanced countries are history because an advanced country “with skilled central bankers and modern financial markets, could never

25. Pisani-Ferry, Sapir, and Wolff (2013) note that the euro area's cross-border assets and liabilities in 2006 were in excess of 500 percent of GDP compared with only slightly more than 200 percent of GDP for the United States.

have the kind of catastrophic financial crisis that drags down an entire economy for a generation.” Central bankers just “know too much about how to prevent it.”

This belief was somewhere between hubris and hyperbole if, in fact, it was widespread. However, it follows from this view that IMF financing is, or should be, available primarily to developing countries, rarely to emerging market countries, and never to advanced countries. Aside from the fact that this view is contrary to the demonstrated history of the IMF, during which many advanced countries received financial support from that institution, it is also contrary to the fundamental construction of the IMF. The Fund is, among other features, designed to be a collective support institution acting in the common interest to assist members that may be strong and resilient at some points and weak and vulnerable at others.

Moreover, the data presented in the last column of table 4 also call into question any simple dichotomy between the Asian and European crisis countries. The table shows the GDP (PPP-basis) per capita of the 15 countries as of 2006, before the outbreak of the global financial crisis. We note that Korea is ranked number seven with a GDP per capita close to that of Cyprus and Greece, and ahead of Portugal, as well as ahead of Hungary, Latvia, and Romania. Malaysia’s GDP per capita is larger than Romania’s as well.

The third difference in the origins of the Asian and the European crises is that the former were rather transitory events measured by the number of years that passed before real GDP regained its pre-crisis level. In Asia, the gap was just two years for Korea and the Philippines, three years for Malaysia, four years for Thailand, and five years for Indonesia. In the European crisis countries, where the declines in real GDP started in 2008 or 2009 in connection with the global financial crisis, only one country’s real GDP (Iceland) is projected to have reached its previous level by 2013—five years later. The IMF (2013g) projects that three other countries (Ireland, Romania, and Latvia) will reach that point in 2015, after seven or eight years, and that Hungary will reach it in 2017, after nine years. The remaining countries, all in the euro area, do not make it until after 2018, 10 or 11 years after growth turned negative.

The fourth difference in the origins of the Asian and European crises is in the relative roles of the private and public sectors. The Asian crises generally involved excesses and imbalances associated with the private sector: current account deficits, external debts, over-reliance on financing via debt versus equity, and weak financial systems threatened by credit booms. Moreover, the Asian governments, in general, were in a position to absorb the private sector deleveraging, in particular by banks, on their balance sheets. The resolution of a substantial portion of the resulting international debt problems largely involved private-sector-to-private-sector negotiations without significant government intermediation. The origins of the European crises were also largely, but not exclusively, in the private sector in connection with credit booms. Their resolution, however, quickly involved the public sector. Moreover, in many but not all the European cases, governments were not positioned easily to absorb the debts of the private sector—again, those of banks—on their balance sheets. In Europe, private sector debt problems more virulently metastasized into public sector debt problems.

The final difference in the origins of the crises in Asia and Europe is that the Europeans were unprepared to deal with their crises, in particular, in the face of their substantially higher degree of economic and financial integration. The lack of European preparedness included an absence of institutions

experienced at managing crises for a group of countries bound together in a monetary union. This institutional weakness, which was not relevant in Asia, where countries were on their own, came on top of the fact that a substantial number of the European countries had stock and/or flow fiscal problems that meant that they were substantially less well positioned to deal with their own problems even if they could have ignored spillover and contagion effects, which they could not. Although the individual Asian countries were the source and recipients of substantial contagion from their neighbors, they were not closely locked together economically and financially, the Philippines in particular, and subsequently benefited from the fact that they did not need to coordinate closely their respective crisis responses.

EVOLUTION OF THE CRISES IN ASIA AND EUROPE

Serious financial crises go through seven distinct phases.²⁶ First is the pre-crisis phase. The crisis may be brewing, but the authorities are either ignorant or in denial. Second is the outbreak of the crisis, which in retrospect is linked to a particular event. The event itself is irrelevant, except for its use in dating the start of the crisis. Third is the crisis management phase, in which authorities and institutions grapple with a cascade of events with little time to chart their next move or to ponder the implications of their previous moves. The fourth phase is crisis containment.²⁷ This is a phase in the most serious crises; the rulebook is thrown away and the overriding objective is to stop the bleeding. Ultimately, the bleeding does stop and the fifth, (mopping-up) phase begins. In the sixth phase of a crisis, lessons are, or are not, learned. Seventh and finally, preparations are made to prevent or minimize the virulence of the next crisis. Generally, lessons are only partially learned and incompletely applied. The evolution of the crises in Asia and Europe followed this pattern.

The four similarities in crises evolution identified below, are outnumbered by the 11 differences, but the similarities are more consequential to understanding the evolution of the crises in the two regions. The differences relate primarily to how responses were tailored, or not, to the circumstances of the two groups of countries. The one important exception to this generalization is that Europe muffed the crisis containment phase. It did not address its crises with overwhelming policy force as result of a combination of inadequate preparation, excessive caution, and inappropriate international forbearance.

Similarities in the Evolution of the Asian and European Crises

I identify four similarities in the evolution of the financial crises in Asia and in Europe. Four phrases summarize the similarities: surprise, denial, and delay; differing diagnoses; nominally comprehensive programs; and frequent restarts and recalibrations.

26. See Truman (2009) on this sequence in the evolution of crises.

27. I owe this phrase to Anna Gelpern (2009).

All crises involve *surprise, denial, and delay* essentially by definition.²⁸ If markets and outside authorities were not surprised, they would have sounded an alarm and, one would hope, the country's policymakers would have taken some preventative action. Of course, some voices can always be identified *ex post* that issue warnings of crises, but in general they are soft voices and, again by definition, are largely ignored.

In the case of the Asian financial crisis, the potential problems in Thailand were well-documented. Its crisis was less of a surprise to some than normally is the case. IMF managing director Michel Camdessus and others at the IMF, starting in 1996, endeavored to convince the Thai authorities to act to adjust the exchange rate for the baht, to reduce the current account deficit, and to reign in the financial sector. Paul Blustein (2003, 63) reports that Camdessus sent a letter to the Thai authorities on January 31, 1997 again warning of an impending crisis and urging them to loosen the baht's peg. Those warnings were ignored.²⁹ As far as one can tell, the Thai authorities were surprised. However, few anticipated that a crisis in Thailand would be as severe as it proved to be or the extent to which other countries in Asia had their own vulnerabilities and were susceptible to a change in investor appetites.³⁰

Similarly, as has been amply documented by the Independent Evaluation Office of the IMF (IEO-IMF 2011), warnings about the impending global financial crisis were sparse. There were exceptions, of course, most prominently by Claudio Borio and Philip Lowe (2002) and Claudio Borio and William White (2003), and in the pronouncements by Nouriel Roubini.

On the other hand, Frederic Mishkin and Truggvi Thor Herbertsson (2006) wrote two years before the crisis broke in Iceland that none of the three traditional routes to financial crises had been manifested there: financial liberalization with weak prudential regulation and supervision, severe fiscal imbalances, and imprudent monetary policy. They were surely wrong about the first and third factors. Prudential regulation and supervision was demonstrably inadequate. The authors did note that housing prices were excluded

28. Summers (2000) describes policymakers of countries in crises going through the five stages of crisis grief: denial of the crisis; blame (often of outsiders); bargaining and a search for magic-bullet solutions; despair when the IMF is finally called in; and acceptance and agreement on a plan to address the crisis.

29. These warnings were well-known to me as an official at the Board of Governors of the Federal Reserve System. During a trip to Asia with Governor Larry Meyer and Tom Connors in the spring of 1997, we endeavored, first, at a meeting in Tokyo to promote a dialogue among Thailand's Asian partners about the unsustainable Thai external situation, but the country's partners would not discuss the topic because there were no Thai officials present. Later, when Thai officials were present at an Asia-Pacific Economic Cooperation (APEC) meeting of finance ministry and central bank deputies, the Thai officials declared that their country's situation was not something they were willing to discuss.

30. In early October 1997, the US Treasury asked the IMF staff for its reading on the probability that the Asian financial crisis would spread to Korea. The response, which then-Assistant Secretary Timothy Geithner shared with me, did not identify any red lights, or amber lights. (Blustein (2003, 118) describes a document prepared in connection with the Korean Article IV review, dated October 15, 1997, which probably was subsequent to the reading the US Treasury received.) I expressed skepticism because I knew that the Federal Reserve staff was concerned. We, too, were not always on top of potential crises, but we had noticed in late 1996 and early 1997 that Korean *chaebol* had begun to fail and knew that Korean banks, which had a large presence in the United States, lent heavily to the *chaebol*. We did not know there would be a crisis, but we were worried and were closely monitoring the condition of US offices of Korean banks. Also, before the crisis, Marcus Noland (1996) wrote wisely about problems in the Korean financial system and the need for structural reforms.

from the inflation measure used in Iceland. But the Icelandic economy was in an unsustainable boom. Inflation at 6.7 percent in 2006 and 5.1 percent in 2007 was above the central bank's target of 2.5 percent plus or minus 1.5 percent. The average growth rate in 2004-06 was 4.4 percentage points above the average in the previous three years. See table 3. Iceland's economy was experiencing an unsustainable boom and its monetary policy was inappropriate to the country's economic and financial conditions. Although Iceland was in fiscal surplus and had a low government debt (see table 1), the IMF staff in its 2006 and 2007 Article IV reviews of the Icelandic economy had raised concerns about the trajectory of fiscal policy.

Mishkin and Herbertsson were not alone, as Pisani-Ferry, Sapir, and Wolff concluded for the euro area (2011, 1–2): “the IMF issued a number of strong and relevant policy recommendations, whose follow-up was unfortunately not always ensured.” But overall, “the IMF fell victim to a ‘Europe is different’ mindset and failed to address issues such as divergence of unit labor costs, capital flows and the resulting large imbalances in country-level current-account. . . . IMF surveillance failed to take fully into account the implications of being in a currency union both for national policies and for the governance of the euro area, whose weaknesses were not fundamentally criticized. However, the Fund correctly identified some weaknesses of the European integration process, most notably of the EU financial supervision and regulation framework.”

Type I and type II errors occur in identifying emerging financial crises. That is the challenge early warning systems face, and why they can only be relied upon to indicate a “zone of vulnerability”—in the terminology of Goldstein, Kaminsky, and Reinhart (2000)—where the probability of a crisis is high but a crisis is not a certainty.³¹ On the other hand, even when a crisis is not a complete surprise, the crisis is generally much more severe when it occurs than anyone anticipated.

The severity of actual crises is a characteristic of crisis syndromes. Even after the crisis breaks, the authorities are in denial and paralyzed from acting decisively; in particular, they delay calling for external support such as from the IMF.

After the baht was finally detached from its peg on July 2, 1997, the Thai authorities did nothing to address the seriousness of the situation via complementary policy actions. They were too much in denial, or too proud, to call on the IMF for further help and advice. Blustein (2003, 51) reports that in frustration three weeks later, Stanley Fischer ordered IMF staff to fly to Bangkok and assured them that by the time they arrived they would be received, if reluctantly.

Similarly, as the Korean crisis was unfolding in mid-November 1997, the Korean won repeatedly declined by its daily limit even after than limit was relaxed. The finance minister recommended to outgoing Korean president Kim Young Sam that Korea should approach the IMF for financial support. He was promptly fired. The next day, after a meeting in Manila, Timothy Geithner and I arrived in Seoul to check out the situation. We met with Lee Kyung Shik, the governor of the Bank of Korea. He explained to us that most of Korea's announced reserves of more than \$20 billion were in illiquid deposits at Korean banks

31. By way of illustration, Park et al. (2013) report maximum pseudo r-squares of 0.20 on empirical predictions of the global financial crisis and maximum adjusted r-squares of 0.50 on the depth of crisis in terms of lost GDP.

that over the previous six months had lost their access to international interbank liquidity.³² We asked why the newly designated finance minister had accepted the job. Governor Lee's response was that he had not yet seen the books. Two days later, on November 22, President Kim announced that Korea would seek IMF support for a reform program.

The Philippines is an exception to this general pattern; soon after the Thai crisis broke, the authorities asked the IMF to extend their existing program and later sought a successor program. Indonesia was another type of exception. Its exchange rate came under pressure, and its peg was eased in August. In early October 1997, Indonesian authorities sought a precautionary program from the IMF, which they did not intend to draw upon. The impetus for the program came in large part from elements of the Indonesian bureaucracy, which were identified with economic and financial reform in Indonesia. They felt their efforts had become stymied. They thought they could use an IMF program to restart the reform process if the program received a strong commitment from President Suharto. By the time the letter of intent was signed on October 31, and the IMF executive board approved the program on November 5, Indonesia was deep into crisis, and the government could not meet its policy commitments. The Malaysian case was a combination of the Philippine and original Indonesian patterns. The government of President Mahathir knew it had to change policies; the authorities gave up its currency peg in July; they consulted with the IMF about the content of a reform program, which subsequently Malaysia largely adopted, but without the need for IMF financial support.

The pattern of surprise, denial, and delay was similar to the European crisis. Iceland denied that it faced a crisis until the crisis was fully upon the country. Next the authorities sought financial support from Russia and Scandinavian countries, wanting to avoid the need for an IMF program. Indeed, the IMF executive board completed an Article IV review of Iceland's economy on September 10, 2008. The Article IV report (IMF 2008) included a review of the sustainability of Iceland's external debt, which had risen from 140 percent of GDP at the end of 2003 to 558 percent at the end of 2007, while the country's international investment position declined from -63 percent of GDP to -124 percent. But the report itself did not express strong concerns except to note a very high vulnerability to depreciation of the currency. The executive board praised the steps the government had already taken to stanch Iceland's deteriorating situation, which they largely attributed to turmoil associated with the global financial crisis.³³ However, Iceland was highly vulnerable, as we have seen. By October 24, Iceland had reached agreement with the IMF staff on a program. The program, approved on November 19, included a nearly unprecedented blessing of comprehensive controls on capital outflows and limited exchange restrictions that required an explicit waiver in Iceland's IMF program. Five years later, the controls have not been entirely lifted, which

32. This was precisely what we at the Federal Reserve were concerned about from the start of 1997.

33. See "IMF Executive Board Concludes 2008 Article IV Consultation with Iceland," Public Information Notice (PIN) 08/120, September 19, 2008. Available at <http://www.imf.org/external/np/sec/pn/2008/pn08120.htm> (accessed July 15, 2013). The executive board was not entirely mistaken. Fannie Mae and Freddie Mac were put into US government conservatorship on September 7, and the Lehman Brothers filed for bankruptcy on September 15.

the IMF staff (2013e) sees as weighing on confidence and investment, and hence inhibits full recovery in Iceland.

In Latvia, Hungary, and Romania, denial and delay occurred in adopting reform programs and in asking for support from outside of the European Union. The authorities in these countries as well as in Brussels had to be convinced of the need for non-EU assistance. Part of the problem was that until the fall of 2008, Europeans tended to think of the global financial crisis as a US crisis, with only ripple effects on other developed and emerging market and developing countries.³⁴ In fact, the European countries had their homegrown crises that almost certainly would have erupted eventually unless forceful action had been taken to head them off.

Another part of the problem of quickly coming to grips with the emerging crises in Europe was the lack of ex ante clarity as to whether the European Union would cooperate, much less defer, to the IMF in handling the crises. This uncertainty, no doubt, deepened the crises.

There was a history behind this reluctance. Dating back to the late 1970s, no member of the European Union had required IMF financial assistance because the European Union had its own mechanisms, in particular the EU Balance of Payments Facility, earlier the medium-term financial assistance mechanism created in 1988, and various ad hoc arrangements before that date. As a procedural matter, under the regulations establishing the medium-term financial assistance mechanism a member was obligated to consult with the European Commission and other member states through the Economic and Financial Committee before seeking assistance from any outside source; see C. Randall Henning (2011). Before 2008, if one asked European officials whether a member of the European Union in crisis would be “taken care of” by Brussels or the IMF would have a role, one got answers ranging from “we will take care of our own” to “we are open to an IMF role.”³⁵ It was quite obvious to observers why over the previous three decades EU countries had turned to Brussels rather than to the IMF: European financing was more abundant and the European policy conditionality was more relaxed than the norm in IMF programs. IMF stigma is not a phenomenon confined to Asia.³⁶

In the case of the East European EU members, however, European and EU officials quite rapidly came to the conclusion that a role for the IMF was warranted. Given the size of the IMF programs for these countries, and the fact that in two of the three programs more than half of the external financing of the programs was by the IMF, and the total financial support was on a nearly unprecedented scale (see table 5B), one is justified in reaching the conclusion that the Europeans were motivated by the limited size of their own resources as well as by the recognition that the IMF’s involvement would bring credibility to the countries’ reform efforts. Åslund (2010, 7) concludes “The cooperation between the IMF and the European

34. Åslund (2010, 26) notes that IMF managing director Dominique Strauss-Kahn spoke to this effect in Ukraine in July 2008.

35. I raised this issue in Edwin M. Truman (2005).

36. Arguably, the East European crises were similar to the Asian crisis, and the IMF could have taken the lead, if the Europeans had allowed that. Shinji Takagi (2010) argues that the involvement of the European Union helped to produce more flexible programs for these countries.

Commission has worked surprisingly well.”³⁷ He also observes that Poland was granted a flexible credit line by the IMF, as a precautionary move “since the ECB was not ready to offer Poland a swap credit.”

By the end of 2009, the European debt crisis engulfed the euro area itself, starting with Greece. Denial and delay, again, were the dominant characteristics of the process.³⁸ First, Greece and its euro area partners were in denial that Greece was in crisis. That denial was aided by “errors” in the country’s fiscal accounts. The new government in Greece took some time to understand the depth of its fiscal hole. Second, Greece’s euro area partners had no financial or decision-making mechanisms to address its problems. Consequently, the December 2009 Greek program involved fiscal adjustment with no external financing. Indeed, as a euro area country, Greece was not eligible for the EU Balance of Payments Facility. Led initially by the ECB, the Europeans also resisted allowing Greece to go to the IMF. That was the conclusion of euro area authorities including the ECB in January 2010.³⁹ Greece at least needed the de facto approval of its euro area partners formally to approach the IMF for assistance.⁴⁰ What was Greece to do?

Aided by European dithering, the Greek authorities lost two months before Europe’s leaders in February agreed to help financially. It was another two months to April when they agreed that the IMF should be involved, and the troika involving the European Commission, the ECB, and the IMF was established. The IMF executive board approved Greece’s first program on May 9, 2010 six months after the start of the Greek crisis. Compare the six weeks between the devaluation of the baht on July 2, 1997 and Thailand’s first letter of intent on August 14, which was followed by IMF executive board approval of the program on August 20.

Part of the delay in the Greek case was that the Europeans had to cobble together a Greek Loan Facility mechanism to provide their more-than-two-thirds share of the first Greek program. The European Financial Stability Facility (EFSF) was devised subsequently as a temporary mechanism to provide a financial firewall against the spread of the Greek crisis to other countries. It was employed in Irish, Portuguese, and second Greek programs along with the ad hoc European Financial Stability Mechanism

37. Changyong Rhee, Lea Sumulong, and Shahin Vallée (2013) reach a somewhat more negative conclusion.

38. Pisani-Ferry, Sapir, and Wolff (2013, 81) note the difference in philosophy and style with respect to Europe and the IMF: “the ESM, like its predecessor the EFSF, can only grant financial assistance as *ultima ratio*, i.e., as a last resort. By contrast, the IMF tends to favor early intervention. It is fair to say that in all three euro area programme countries, Greece, Ireland, and Portugal, the late EU-IMF intervention was caused by the EU, while the IMF sought early intervention in every instance. However, it would be unfair to view the EU institutions as solely responsible for delayed intervention. The authorities in the crisis countries also bear an important responsibility as they were not keen to request early assistance for fear of the stigma linked to receiving IMF assistance.”

39. An alternate interpretation of Jean-Claude Trichet’s position on behalf of the ECB, as reported by Neil Irwin (2013, 206), is that he felt that European governments should shoulder responsibility both for their own actions and for the actions of their partners.

40. The presumption that EU members would need permission from their partners to go to the IMF has been slightly adjusted under the terms of the ESM. The country is encouraged but not required to seek the active participation of the IMF, but the unwritten text provides that countries first seek permission from their euro area partners.

(EFSM).⁴¹ In October 2010, an agreement was reached on the permanent European Stability Mechanism (ESM), but it did not enter into force for two years, until October 8, 2012. The ESM is being used in Spain and Cyprus.

By any objective standard, the ESFS/EFSM/ESM failed to prevent the spread of the European debt crisis to other euro area countries, which should be the objective of a firewall. Available financing was too small and too uncertain to be convincing to markets. Ireland, Portugal, Italy, Spain, and Cyprus were too deep into their own unfolding crises to take the necessary actions to stave off the economic and financial contagion that swept Europe. Each of these countries, of course, offers its own object lessons in denial and delay.

Turning to *diagnosis*: Notwithstanding, or perhaps because of, the fact that financial crises arise from multiple vulnerabilities, diagnosing particular crises, or even determining sources of risk, is contentious. Diagnoses often are not widely shared by the authorities of the country, the international organizations called upon to assist, and the other actors (governments, central banks, critics, markets).⁴²

In Asia, it was agreed that Thailand had exhausted its reserves, had an oversized current account, and a financial system under stress. But there was limited agreement on the priority attached to each of these three elements or on the importance of other issues such as the appropriate exchange rate regime, the role of monetary and fiscal policy, the extent of the government's guarantee to financial institutions, and the appropriate size of any international rescue package.⁴³

Crises that spread across regions tend to be path dependent in terms of their diagnoses, subsequent disagreements, and revised diagnoses. But there are some constants. In Asia, disagreements about the appropriate stance of fiscal and, in particular, monetary policy were a constant—see below.

Indonesia's circumstances were broadly similar to Thailand's but with an overlay of suspicion about crony capitalism and the condition of its banking system. Under pressure from European governments, the IMF required Indonesia to limit the size of its government guarantee of deposits in banks and to close a number of banks. Without sufficient clarity about strategy for the banking system as a whole, this decision triggered runs on many Indonesian banks and massive defaults on foreign and domestic credits.

At the same time, some in the official sector, led by the Japanese authorities, argued that it was essential to stabilize the rupiah. A small stabilization effort was attempted at the start of the Indonesian program with the IMF, but it failed. Partly as a consequence of the continuing depreciation of the

41. The EFSF, established by the euro area countries, was initially authorized to borrow €440 billion. The EFSM, involving all EU members, was authorized to raise an additional €60 billion, and the initial announcement of these decisions in May 2010 included the presumption that IMF cofinancing would be one-third of all euro area programs supported by these mechanisms or by an additional €250 billion. However, the latter figure never received formal endorsement from the IMF executive board.

42. Neil Irwin (2013, 59 and 123) implicitly draws a parallel between the lack of common understanding of the Great Depression and the lack of agreement among central bankers at the start of the global financial crisis.

43. Those disagreements continue, despite the fact that the IMF staff concluded at the time that the Thai program was more than adequately financed. The Thai authorities disagreed and Takagi (2010) repeats the argument that the program was underfinanced.

rupiah, private sector debt repayment problems multiplied in the form of more unilateral domestic and international defaults. Meanwhile, some argued that the answer in Indonesia was a currency board arrangement while others worried that an excessively loose monetary policy and rigid exchange rate policy were facilitating capital flight by Suharto cronies and wealthy ethnic minorities.

In Indonesia, in partial response to European criticism of the size of the Thai program, the composition but not the size of the package of support was altered. In contrast with the parallel bilateral lending that augmented the IMF financing for Thailand, a large portion consisted of a second-line-of-defense that was agreed in the wake of the Thai crisis. The second line of defense could only be drawn upon once the initial financing was largely exhausted and, therefore, it was less credible in establishing confidence in the overall reform and financing package. Both are included in the bilateral commitments listed in table 5a.⁴⁴

The Korean case raised a number of contentious issues. Because of Korea's status as a member of the Organization for Economic Cooperation and Development (OECD), which classified it as an advanced country, this meant for some that Korea should be ineligible for IMF financial assistance. This question was resolved in favor of assisting Korea, but the surrounding political considerations contributed to the inclusion in the Korean program of a number of policy conditions favored by other countries of a quid-pro-quo type, unrelated, in the view of many, to resolving the crisis itself. We have not seen this in the European crises.

The solution chosen for Korean banks was a mixture of rescues and resolutions, this time on an institution-by-institution basis. But the government made explicit its guarantee of the foreign borrowings of Korean banks. This action did not stem the exit, in part, because it was not regarded as fiscally credible; many foreign banks continued not to renew their credit lines to Korean banks, including Japanese banks that were already reeling from domestic banking problems and now faced a third round of losses on claims in Asia. In November, the option of a standstill and renegotiation of such claims was rejected by the IMF and US authorities, but that approach was embraced a month later as part of a renegotiation and financial reprogramming of the Korean program.

A similar pattern of disagreement about diagnoses has played out in Europe. Setting aside the non-euro area crises, where there was plenty of disagreement on diagnosis and cure—for example, with respect to Latvia's exchange rate policy—Greece was seen as a classic macroeconomic crisis in its fiscal and external accounts combined with banking system issues, cronyism, and a lack of competitiveness. The overwhelming focus of the first Greek IMF program was on the quick reversal of Greece's fiscal position by 10 percent of GDP over three years, a target that Greece has met (IMF 2013c). The financial system developed problems later, but the program sought only to stabilize it. Structural problems were rampant, but principal attention was given to those associated with the country's fiscal position.

Ireland and Portugal's problems were diagnosed as similar to those of Greece with an emphasis on their fiscal positions and buildup of government debt. To many informed observers, this was a misplaced

44. Table 5a does not include bilateral assistance from Japan under the New Miyazawa Initiative. For example, Malaysia received \$2 billion under this initiative; see Fumitaka Furuoka, May Chiun Lo, and Iwao Kato (2007).

emphasis.⁴⁵ Ireland's crisis was more closely associated with a housing and credit boom (as in Spain). By the time the crisis hit, Ireland largely had made its choices about how to deal with its bloated banking system: protect all the creditors at great expense to the taxpayers, in the name of financial stability. Ireland did not put in place a "new" program for its banks in 2010, when it was forced to embrace an IMF program; in retrospect, maybe it should have done so. On the other hand, ownership of the program by the Irish government is regarded as high.

Portugal's crisis is more closely associated with low growth in the pre-crisis period (as is Italy's) rather than an unsustainable boom associated with a dramatic acceleration in credit growth. In all cases, a major element of diagnosis was a lack of external competitiveness, but with the exception of Portugal, where its program involved an effort at internal devaluation using tax and compensation policies, and Greece where reductions in minimum wages were imposed, the euro area rescue programs generally did not contain prominent elements designed to address issues of competitiveness.

One consequence of multiple competing diagnoses of crises is that *comprehensive programs* are designed in response to the crises. They contain many features in order to address the multiple perceived elements of vulnerability and the programs are uneven in their attempts to prioritize. Some of the program features qualify as necessary elements for the successful management of the immediate crisis, but others fall in the category of the prevention of future crises or are motivated by other, sometimes political, concerns. In the process, some elements can exacerbate the ongoing crisis, in part, by weakening ownership by the government and the general public or by undermining market confidence. For example, in August 1997, the press release (IMF 1997) announcing executive board approval of the Thai program states: "Fiscal policy is key to the credibility of the overall program." This was later proven to be mistaken, but it was consistent with the correct view that the Thai economy had overheated. On the political front, the French-German Deauville agreement in October 2010, advocating prior private sector involvement (write-downs) before intra-European post-crisis rescue funds currently under development could be deployed. Even though the agreement applied to the future, the immediate effect was to drive government bond spreads relative to German rates higher across much of the euro area, for Greece, Ireland, and Portugal in particular.

With respect to crisis management, narrowly defined, comprehensive programs are necessary to include something to address every plausible diagnosis, in particular, diagnoses of influential skeptics in markets and governments around the world. In the words of Summers (2000, 11): "Providing confidence to markets and investors that a credible path out of the crisis exists and will be followed is essential." It is necessary to follow the Zedillo dictum: when markets overreact, policy needs to overact as well.⁴⁶

45. See Vitor Constâncio, "The European Crisis and the Role of the Financial System," speech at the Bank of Greece conference on the crisis in the euro area, May 23, 2013. Available at www.ecb.europa.eu/press/key/date/2013/html/sp130523_1.en.html (accessed on July 1, 2013).

46. In addition to transparency with respect to a "consistent and credible commitment to a coherent policy-adjustment package," Summers listed as additional important lessons from financial crises: "If lax fiscal policy is a contributor to the crisis, then tightening will be a key part of restoring confidence; . . . the right monetary policy to restore confidence; . . . prompt action . . . to maintain financial stability; . . . [and] strong and effective social safeguards."

Thus, programs include many elements. In the process, observers at the time, and in particular *ex post*, complain about program overreach. In the case of Korea, Takagi (2010) singles out trade liberalization, capital account liberalization to allow foreign ownership of Korean banks, corporate governance reforms, and labor market reforms. Noland (2000b) agrees, but in Noland (1996) he advocated allowing foreign banks into Korea to strengthen its banking system. Noland (2000b) also argues that central bank independence with a price stability mandate, as required in the second Korean program, also had nothing to do with addressing the Korean crisis and setting the country on a course toward limiting future crises. Diagnoses and interpretations differ. I profoundly disagree. A substantial degree of central bank independence or at least insulation from political forces is essential to break *de facto* patterns of directed lending and associated credit booms, which was one of the core issues in Korea.

Ten years later, when the European crises began to unfold, IMF procedures had changed somewhat. The emphasis was on program ownership and narrower, less intrusive conditionality, rather than on many detailed policy commitments that might have to be updated every quarter. The IMF's policies on structural conditionality have changed since the Asian financial crises largely because of dissatisfaction with its intrusive, incoherent, and disruptive nature.⁴⁷ As agreed at the 2000 IMF annual meeting in Prague, the IMF subsequently adopted an approach that emphasized parsimonious conditionality. That approach was further relaxed and codified during the global financial crisis with the adoption of flexible credit lines, expanded access limits, and dropping structural performance criteria (IMF 2009a and 2009b).⁴⁸

A final crisis similarity is that *restarts and recalibrations* are frequent, in particular because of the limited agreement on the diagnoses of a crisis and what will work best to limit its depth and spread. When programs are renegotiated because they fail to turn the tide in the crisis, the number of requirements increases. Programs have to include something new for everyone who criticized the failure of the previous program. One proxy indicator of this common feature of many crises is the number of letters of intent describing the proposed policies and objectives that the authorities of the countries submit to the IMF in connection with approval of continued disbursements under programs, in particular during the first year.

For Thailand, the total number of letters of intent was eight, but there were four in the first year of the program and three within the first six months. For Indonesia, there were 24 letters of intent, a whopping seven in the first year, and three in the first six months. In Korea, there were nine letters of intent

47. Morris Goldstein (2003, 430) with his characteristic directness concluded his paper on IMF structural programs, "my reading of the record is that on structural policies the Fund has bitten off more—in both scope and detail—than either it or its member countries can chew." On the other hand, Goldstein (1998) defended the IMF against being too intrusive in Asia "by making detailed recommendations about financial sector reform and corporate governance . . . wholesale reform of banks, finance companies, conglomerates, and government monopolies is absolutely crucial if the crisis countries are to regain confidence and market access to private financing. After all, the crisis occurred in good measure because these needed reforms had been too long delayed."

48. The structural performance criteria were replaced by a review-based approach of monitoring progress that is intended to promote ownership and limit performance criteria to measures that can be quantified. See Takagi (2010) for an account of this gradual transition.

in total, with six in the first year, but two in the first month (December) in part because the presidential election had occurred; and there were three in the first three months.⁴⁹

The Asian and European crises are not fully comparable because of changes in IMF policies and procedures in the meantime. It is noteworthy, however, that Iceland had a total of seven letters of intent, but only one during the first year.⁵⁰ There were three in the second year, and another three in the third year. Hungary, whose program has been off and on, has had four letters of intent, with two in the first year and another two in the first six months of the second year. Romania has had 13 letters of intent to date: three in the first year, four in the second and third years, and two in the fourth year.

In contrast, Greece fits the Asian pattern more closely, with eight letters through December 2012, with four in the first year. Delays in reaching agreement on new letters of intent have been common throughout as the troika of the European Commission, ECB, and IMF along with the Greek authorities wrestled with how best to address the Greek tragedy and two elections also intervened. Ireland also has had seven letters of intent in a short period; two were in the first year. Portugal also had seven letters of intent in an even shorter period, with four in the first year.

Differences in the Evolution of the Asian and European Crises

The evidence advanced so far in this section illustrates that the evolutions of financial crises in Asia and Europe have much in common with each other and, in my experience, with most other major financial crises over the past four decades. However, financial crises are not identical in every respect. Among other respects are different circumstances of the affected countries and different economic, financial, and policy environments. In what follows I trace out 11 dimensions in which the evolution of the two sets of crises differed. My focus in this subsection is less on the individual countries than on the broad sweep of the crises in the two regions.

The first pair of dimensions concerns the overview of the crises: the broad characterization of the two sets of crises and the response of the official community to them. In retrospect, the Asian crises were more about liquidity and the European crises were more about solvency. Nevertheless, the scale of external financial support in the European crises dwarfed that in the Asian crises.

The next six dimensions look at the policy prescriptions or conditionality with respect to fiscal policy, monetary policy, financial sector restructuring, other structural reforms, private sector involvement, and foreign exchange policy. Fiscal policy prescriptions in the Asia crises remain controversial, but on the whole have been more draconian than in the European crises, with good reason. Monetary policy prescriptions also remain controversial in the Asian crises because of the initial sharp increases in interest rates. That pattern was generally repeated in the non-euro area cases, and monetary policy was treated as not relevant in the euro area cases, but it should have been. Financial sector restructuring generally has been less

49. As noted, the Philippine program was an extension of previous programs, and it was associated with only two new letters of intent.

50. One reason there was only one Icelandic letter of intent in the first year was that the review of Iceland's program was held up by the United Kingdom and Netherlands in a dispute over the government of Iceland's responsibility for deposits in foreign branches of the failed Landsbanki.

extensive in Europe than it was in Asia. Other structural reforms have been less pervasive or emphasized in the European cases. And private sector involvement has been limited but, more extensive than in Asia. Foreign exchange policy was not in play in the euro area during the crisis.

The last three dimensions concern the institutional and economic environment. There was no institutional context at the time of the Asian crises, and there was a decidedly deficient but highly constraining institutional environment in Europe, in particular in the European Union. The global and regional economic environment was more conducive to recovery for Asia than for Europe. But the negative impacts of the European crises on the global economy have been substantially larger than those of the Asian crises even though the global economic footprint of the core group of European crisis countries, excluding Italy and Spain, is smaller than the footprint of the immediately affected countries in Asia.

CRISIS OVERVIEW

The distinction between liquidity and solvency crises is difficult to establish and not particularly operational in the case of countries and their governments, in particular, taking into account the fact that insolvent banks often have the implicit or explicit guaranty of their governments, which can lead to liquidity problems for governments that may turn into solvency problems. The challenge is that it is difficult to make this judgment *ex ante* or in the smog of crisis. In addition, a liquidity crisis, if mishandled, can become a solvency crisis, which is the central message of the literature on multiple equilibria.⁵¹

Absent sufficient temporary liquidity support, the risk is that when a country struggles through raising taxes, cutting spending, and raising interest rates to meet its immediate external and fiscal commitments, it will weaken the growth rate of its economy and the denominator of its sovereign debt ratio. Nevertheless, for governments, the issue is primarily one of a political willingness to pay, not an ability to pay. But the willingness of the body politic to support policies to continue to pay its debts and the government's debts evaporates. The deteriorating domestic support has adverse consequences not only for the country and its citizens, but also for its neighbors and the global economy. Striking this difficult balance is one of the rationales for low-cost external financial support from institutions such as the IMF. The IMF provides a blend of financing and adjustment. The former meets short-term liquidity needs and helps to stave off insolvency, or more precisely, default, in return for changes in policies that increase the capacity of the country to repay not only the IMF and other sources of financial support but also other creditors. In other words, conditionality is essential, but all whip and little wampum invites failure.

Viewed through this lens, the Asian financial crises were primarily liquidity crises and the European financial crises involve solvency to a greater degree.⁵² It was not entirely clear in 1997, but in retrospect, two aspects of the Asian countries' crises support this judgment.

First, the stock and flow fiscal positions of the governments were sufficiently strong that they could absorb the fiscal effects of recession. The governments could take onto their balance sheets some of the

51. See the application of this analysis to the European crises by Paul De Grauwe and Yuemei Ji (2012).

52. I am indebted to Jeffrey Shafer for a conversation in which he shared this perspective.

losses of financial and, indirectly at least, nonfinancial institutions without calling into question the governments' willingness to repay the resulting increase in debt as a percent of GDP.

Second, these countries were growing rapidly before the crises and were likely to be able to resume healthy rates of growth after the crises, which would assist in reducing debt burdens, scaled by GDP, after the crises had passed. To illustrate, for the five Asian crisis countries, the average growth rate of real GDP in the three years before their crises in 1997–98 was 7.8 percent. In the six years from 2000 to 2005, their growth rate averaged 5.0 percent, which was significantly slower than during the pre-crisis boom years but still enough to support a trend toward lower debt stocks as a share of GDP. Consequently the average ratio of their gross government debt to GDP went from 69 percent in 1999 to 45 percent in 2005.⁵³

Contrast the situation in Europe. The average growth rate for the crisis countries was a not-too-shabby 4.8 percent before the crisis—7.8 percent in the East European countries and 3.3 percent in the euro area countries.⁵⁴ The projected average growth rate for 2013 to 2018 is only 1.5 percent—2.7 percent for the East European countries and 0.9 percent for the euro area countries.⁵⁵ The projected post-crisis European growth rates, on average, fall short of their pre-crisis growth rates by about the same amounts in percentage points as in the Asian cases but by much larger amounts as a percent of the pre-crisis rates. Moreover, these meager growth rates will not contribute much to boosting the denominators of debt ratios going forward. Consequently, the IMF staff in its April 2013 *Fiscal Monitor* (IMF 2013a) projects that the average general government gross debt of the European countries as a percent of GDP will decline from 96 percent of GDP in 2012 only to 90 percent of GDP in 2018; the projected declines are from 51 percent to 48 percent in the three East European countries and 118 to 112 percent for the euro area countries and Iceland.⁵⁶

The inclusion of Iceland with the euro area countries improves the euro area figures because its debt ratio is projected to decline by 27 percentage points of GDP from 99 percent to 72 percent. However, Iceland's crisis reinforces the basic point that the European crises are more like solvency crises, requiring debt write-downs. Iceland chose to force its banks to default on their external debts and thereby avoided taking those debts onto the government's balance sheet. Cyprus is doing the same, and five write-downs of Greek debt have already been arranged so far.⁵⁷ More write-downs and stretch-outs that objectively reduce

53. I use the IMF (2013g) WEO data in these calculations and use data for 2000 for Indonesia.

54. In these calculations, I omit Cyprus and include Iceland with the euro area countries.

55. One might argue that these projected growth rates by the IMF staff in the April 2013 *World Economic Outlook* (IMF 2013g) are excessively pessimistic in order to correct perceptions of past mistakes, but over the past three years the IMF staff appears to have been too optimistic, which is the natural bias with respect to countries in crisis.

56. See footnote 54.

57. The IMF staff rejected the first private sector involvement (write-down) for Greece because it provided insufficient debt reduction with the result that the entire operation took more than eight months, while the Greek program was on hold, and was only completed in February 2012. By the end of that year, another partial write-down was required in the form of a debt buyback as part of a further revision in the Greek program. Meanwhile, there have been three instances of official sector involvement in Greece, reducing interest rates, stretching out maturities, and as a result reducing the net present value of Greek debt. See IMF (2013f).

the net present value of debt claims are likely before the European crises are over. Aside from the standstill and refinancing of the debts of Korean banks to foreign banks, a loose pledge of bank support in Thailand, and the private sector workouts in Indonesia, there was nothing comparable in the Asian financial crises.

On the other hand, a much larger amount of external financing has been provided to help overcome the European crises than was provided for the Asian crises; see tables 5a and 5b. Total commitments to the four Asian countries, excluding Malaysia for these calculations, averaged 9 percent of GDP in the pre-crisis year, 4 percent of GDP came from the IMF, or 810 percent of their quotas on average. In contrast, to date and counting, total commitments to the nine European countries, excluding Italy, have averaged 37 percent of GDP, 11 percent of GDP from the IMF, or 1680 percent of their quotas on average, excluding both Italy and Spain.⁵⁸ The generally wealthier euro area countries, in most cases, have already received more external financial support than the Asian countries, but the associated firewalls have been insufficient to stem the spread of the euro area crises.⁵⁹

The IMF did not provide a substantially larger share of total commitments of financial support in Asia than in Europe.⁶⁰ Excluding Spain, where there has been no IMF financing to date, the IMF share in Europe has been 28 percent, compared with 35 percent in Asia. Even if Spain is included, the IMF share falls only to 24 percent.⁶¹ (See tables 5a and 5b.) The IMF supplied more than half the external financing commitments for Hungary and Romania, and aside from the Philippines, it supplied in Asia the maximum amount of 35 percent in Korea.⁶²

From this perspective, concerns about the IMF's minor role in Europe and loss of leverage as a major player (see Goldstein 2011) may already have been overtaken by prior events. However, during the Asian crises, the IMF was short of financial resources, and that has been less true in the European context.⁶³

58. Table 5b excludes the short-term bilateral financing provided to European central banks during the European crises by the Federal Reserve, which was unlimited with respect to the ECB. That support for European central banks peaked at \$413.9 billion at the end of 2008; of those funds \$306.2 billion went to the ECB. In the second phase, Federal Reserve support for the ECB peaked at \$89.3 billion in February 2012.

59. Korea's support from the IMF, as a percent of its quota at the time, was commensurate with some of the European programs, but not as a percent of its GDP. Indonesia's support from the IMF was commensurate with support to date to Cyprus on both measures, and the total commitments to Indonesia were commensurate to those to Hungary and Romania as a percent of GDP.

60. See Rhee, Sumulong, and Vallée (2013) in this volume.

61. For the euro area the respective shares, with and without Spain, are 20 and 25 percent. The IEO report comparing the IMF's role in Indonesia, Korea, and Brazil includes slightly different figures for IMF and non-IMF support for Indonesia and Korea (IEO-IMF 2003b, table 6), but they do not alter the basic comparison. The IEO report also questions the availability of the second-line-of-defense support for those countries, but a commitment was made even if the authorities chose not to pursue its availability.

62. The remainder of the financing in Korea came from the World Bank, the Asian Development Bank, and the second line of defense, which was not implemented by Korea.

63. Pisani-Ferry, Sapir, and Wolff (2013, 78 and 86) report that some observers believe that it was fundamentally inappropriate for the IMF to be involved in the euro area at all and recommend that in the future the IMF's financial role be merely token or catalytic along the lines of its 10 percent share in Cyprus. In contrast, Takaji (2010) argues that at least in the first phase of the European crises, the fact that the IMF was less dominant and was required to cooperate with other

Moreover, in Asia the IMF was more dominant than it has been in Europe because in Asia much of the non-IMF financing was hardwired to IMF programs.

In particular in light of European complaints about overly generous external financial support for the Asian countries in crisis, this pattern looks like the application of a double standard. Moreover, providing more financing to Europe is inconsistent with the view that in Asia the crises were tilted toward liquidity interpretations, justifying more generous financing, and in Europe they have been tilted toward solvency interpretations, justifying more bail-in and less bailout.

On the other hand, it can be argued with some merit that circumstances are different in the European crises. Takagi (2010) argues that the IMF and its backers learned the lesson from the Asian crisis that more financing is better. Bergljot Barkbu, Barry Eichengreen, and Ashoka Mody (2011) also note the trend toward larger bailouts and away from bail-ins as a pattern extending from the 1980s debt crises, to the Tequila crises, the Asian crises (and their aftermath in Russia, Turkey and Argentina), and now the European crises. Even as they decry this trend from the standpoint of efficiency and fairness, these authors note that this trend reflects at least in part the increasing integration of the world economy and in particular the globalization of capital flows. From this perspective, Europe qualifies on both economic and financial grounds.

It should also be noted that, notwithstanding the scale of financial support in the European crises, efforts by the European authorities and the rest of the international community decisively to turn the tide have so far failed; Europe is in recession. Crisis management in Europe has failed to end the crises quickly. In the Asian crises, on average the countries required two and a half years to restore economic activity to the pre-crisis level. In Europe, the average for the non-euro area countries is projected to be seven years; and the time period will be more than 10 years for most of the euro area countries.⁶⁴

POLICY PRESCRIPTIONS

In this subsection, I compare and contrast policy prescriptions for the Asian and European crisis programs with respect to fiscal policies, monetary policies, financial sector restructuring, other structural reforms, private sector involvement, and foreign exchange policies. The objective is to reach a judgment about whether the adjustment programs have been tougher or easier in Europe than in Asia.

Fiscal Policies

One of the enduring myths is that the IMF, with the support of the advanced countries, imposes on countries in crisis a one-size-fits-all approach to fiscal policy in program countries and that the IMF policy approach in the Asian crises is exhibit A. The Independent Evaluation Office of the IMF (IEO-IMF 2003a)

stakeholders was a positive development. A related issue has been the use of IMF financing for fiscal support, in domestic currency, and to recapitalize banks, rather than exclusively for balance of payments financing. However, this expanded use of IMF financing has been an element in programs dating back at least to the Mexican crisis in 1995, only the scale of lending for these other purposes has been larger in the European crises.

64. Ireland is projected to reach that point in 2015 after six years.

conducted an exhaustive analysis of fiscal policy prescriptions in a broad cross-section of country cases, including the four Asian crisis countries, from 1993–2001 and found essentially no support for the fiscal myth: Fiscal targets are not set on the basis of one size fitting all and they are revised in a flexible manner. On the other hand, programs often failed to achieve their targets because they were based on overoptimistic growth projections.

Based on *World Economic Outlook* (WEO) data for general government net lending or borrowing in the five Asian countries, fiscal policy was less restrained (larger deficits or smaller surpluses) in 1998 than 1997. The same was true in 1999, except in Indonesia, where fiscal policy tightened in 1999, but the trend toward relaxation resumed in 2000 and 2001. Unfortunately, we do not have consistent data on structural deficits for the Asian countries. For Korea and Thailand, where we do have data from the WEO (IMF 2013g), there was a small fiscal tightening of 0.4 percent of potential GDP in 1998 in Korea, but in Thailand there was a loosening by 2 percentage points. Moreover, government expenditures rose as a percent of actual GDP in all the Asian countries in 1998, with the exception of Indonesia where they fell by 0.2 percent; the enlarged Indonesian fiscal deficit was due to a decline in revenues.

The initial program in Thailand, which is often cited as the poster child for the IMF's austerity bias in Asia, envisaged a slight fiscal tightening to compensate in part for the costs of government rescues of large parts of the Thai financial system.⁶⁵ However, this critique fails to take into account the fact that programs and letters of intent are negotiated documents and are published. Fiscal policy is based on projections for the economy. In the Thai case, the authorities refused to accept publicly a projection of an economic contraction for 1998 in either of their first two letters of intent, in August and November 1997, fearing the impact on confidence.⁶⁶ It is difficult to advocate fiscal expansion for an economy when it is in crisis but not in recession. It later emerged that the Thai economy was already contracting in 1997, on a year-over-year basis, and declined by an additional 10 percent in 1998.⁶⁷

In Korea, the story is roughly the same. In its first and second IMF programs both in December 1997, GDP growth was projected at 3 percent in 1998. By February, with a weaker outlook, the program was revised to permit automatic stabilizers to work. By May 1998 growth had been lowered to –1 to –2 percent and fiscal policy, rather than anticipating budget balance, was revised to a deficit of 1.7 percent of

65. General government gross debt rose by 15 percentage points of GDP between 1997 and 1999.

66. In the August program, 1997 growth was estimated at 2.5 percent and projected to be 3.5 percent in 1998. The public sector balance was projected to be a deficit of 1.6 percent of GDP in 1997 after a surplus of 2.2 percent in 1996 and then tighten to surplus 1 percent in 1998 (IMF 1997).

67. To his credit, then-Treasury Secretary Lawrence Summers expressed strong skepticism about the initial projection of positive growth in Thailand and the tightening of fiscal policy in the program. Two years later, he and others had recognized, or remembered, that devaluations can be deflationary through expenditure reduction in the short run, weakening the case for promoting domestic expenditure reduction via fiscal restraint to facilitate expenditure switching to external demand (Summers 2000). The earlier myopia was not confined to the IMF at the time. At the Federal Reserve (1997) in November 1997, average growth in developing economies in 1998 was marked down by only 1.5 percentage points below estimated growth in 1997, and growth was projected to more than recover in 1999. As far as one can discern from the public record, outright recession was not anticipated in any of the Asian crisis countries. A big boost to Asian growth was expected from their real depreciations and consequent improved current account positions.

GDP. In the event, real GDP contracted by 5.7 percent. Thus, the fiscal restraint in Asia was suboptimal in retrospect, but very short-lived, and it is an open question of the extent to which financial institutions and domestic bond markets at the time could have absorbed large increases in government debt. Nevertheless, the myth of deep fiscal contractions in the Asian crisis countries persists to this day.⁶⁸

Comparisons with the European crises are difficult because the ex ante fiscal circumstances were different in part, but only in part, because the European crises occurred in the aftermath of the global financial crisis and recession. On the same basis as used in the discussion of the Asian cases (general government net lending or borrowing), deficits were larger in six of the nine countries (excluding Cyprus) in the first program year than in the year before, but only in two countries in the second program year.⁶⁹

For the European countries we have a consistent series of general government structural deficits for each country, and on this basis only one country had a larger deficit in the first (and second) year of its program: Iceland. On an objective standard of the risk from dangerously high levels of debt, even without accepting the hypothesis of a tipping point at some level, but relying on interest rates on government debt as an indicator, many of the European crisis countries had no choice but to tighten their fiscal policies. It is also true that, by the late spring of 2010, the international policy mood had shifted to a focus on exiting from the extraordinary stimulus measures adopted in 2008 and 2009 as the global economy appeared to be bouncing back. At the G-20 Summit in Toronto on June 27, 2010, the leaders declared:

To sustain recovery, we need to follow through on delivering existing stimulus plans, while working to create the conditions for robust private demand. At the same time, recent events highlight the importance of sustainable public finances and the need for our countries to put in place credible, properly phased and growth-friendly plans to deliver fiscal sustainability, differentiated for and tailored to national circumstances. Those countries with serious fiscal challenges need to accelerate the pace of consolidation.

As part of their framework for strong, sustainable, and balanced growth, they also agreed:

Sound fiscal finances are essential to sustain recovery, provide flexibility to respond to new shocks, ensure the capacity to meet the challenges of aging populations, and avoid leaving future generations with a legacy of deficits and debt. The path of adjustment must be carefully calibrated to sustain the recovery in private demand. There is a risk that synchronized fiscal adjustment across several major economies could adversely impact the recovery. There is also a risk that the failure to implement consolidation where necessary would undermine confidence and hamper growth. Reflecting this balance, advanced economies have committed to fiscal plans that will at least halve deficits by 2013 and stabilize or reduce government debt-to-GDP ratios by 2016.

68. See Park, Ramayandi, and Shin (2013), Rhee, Sumulong, and Vallée (2013), and Takagi (2010).

69. For Italy and Spain, the de facto first program year is 2012. Italy's deficit narrowed that year, Spain's widened.

This mood contributed to the new UK government's decision to address that country's fiscal deficit aggressively. It is somewhat ironic that in current projections (IMF 2013a), the only two advanced countries that will fail to fulfill their deficit commitments are Canada, which had a deficit of only 5.2 percent of GDP at its peak in 2010, and the United Kingdom.⁷⁰

Thus, I conclude that the fiscal policy requirements of adjustment programs in Europe were harsher than those in Asia, but with generally good reason. The fiscal situations of most of the European crisis countries were more precarious. Moreover, in Europe, countries faced dual fiscal conditionality from the IMF and from the European Union's "excessive deficit procedure." The latter could be relaxed and has been in some cases, but the longer-term targets remained intact.

Monetary Policies

The monetary policies that the Asian crisis countries were required to adopt also continue to be controversial but less so. All countries initially sharply increased their interest rates to help stabilize their economies and arrest the free fall of their currencies.⁷¹ Although many agree with the analysis of Jason Furman and Joseph Stiglitz (1998) that the increases in interest rates further weakened banks and the real economy, the truth is that large parts of the financial systems in these economies were already insolvent by the time that interest rates rose and not positioned to support the resumption of growth. Moreover, the peaks in interest rates were in either the first or second quarter of 1998, and rates began to decline once conditions stabilized somewhat.⁷² The more frequent assessment of this period is that increases in interest rates were associated with some collateral damage to financial institutions and economies, but the alternative of easier policy and continued currency declines would have had worse effects; see Noland (2000a) and Takagi (2010).

In the European crises, interest rates were increased in each of the non-euro area countries. In the context of the global financial crisis and its aftermath, the ECB lowered interest rates, but arguably not enough, and the interest rate increases in 2011 were a mistake. In addition, it has been argued that the ECB could have, and should have, controlled increases in interest rates on government debt with its open market operations. It tried with its Securities Market Program (SMP) in 2010, but backed off because of intense internal criticism and criticism within the euro area. I accept the criticism that European institutions and political economy were not conducive to the ECB playing this role. It did not have a unified governmental partner. But even the ECB, the one strong, established euro area institution, was not up to the task before it.

70. Japan was given a pass at the time.

71. Park et al. note that in each of the Asian crisis countries, except the Philippines, there was a negative foreign exchange premium, suggesting that, in part, the interest rate increases were catching up with the market.

72. Even in Malaysia without an IMF program interest rates rose 250 to 300 basis points before declining, and in the Philippines with its milder crisis, by 300 to 400 basis points. These data are from the IMF (2001).

On balance, monetary policy prescriptions were not that different in Europe than they were in Asia, but a case can be made that the IMF was softer on Europe in not insisting that the ECB run an easier policy.

Financial Sector Restructuring

Turning to financial sector restructuring, in the Asian financial crises, countries chose or were required to undergo a substantial restructuring of their financial systems and promote domestic equity and debt markets.⁷³ Financial institutions were closed, including more than 25 private banks in Indonesia and more than 50 finance houses in Thailand. Others had their operations suspended or merged, including 21 of 30 merchant banks in Korea. Some financial institutions were taken over by governments, including two major banks in Korea, which the IMF wanted to be closed, and six commercial banks and five finance companies in Thailand. Capital standards were raised. Asset management companies were established in most countries including Malaysia, which also employed a vehicle under the central bank to recapitalize viable banks and consolidate the banking system. The Basel Core Principles of Effective Banking Supervision were embraced as part of efforts to beef up supervision and regulation.⁷⁴ These issues were of central concern at the time, including with respect to Japan, which was wrestling with its own banking sector issues.

I dwelt almost exclusively with financial system reform and sequencing in remarks at a conference at the Federal Reserve Bank of Chicago (Truman 1999) on lessons from the crisis. Then-Secretary of the Treasury Summers (2000, 12 and 13) reviewed the lessons of the Asian crisis from a broader perspective a few months later. In his address, he advocated prompt action “to maintain financial stability, by moving quickly to support healthy institutions and by intervening in unhealthy institutions. The loss of confidence in the financial system and episodes of bank panics [in Asia] were not caused by necessary interventions in insolvent institutions.” They were caused by delays in addressing nonperforming loans, by implicit bailout guarantees and associated gambles for redemption, by deposit guarantees that were not fiscally credible, and by political distortions. He recognized, but expressed a certain degree of skepticism about, moral hazard concerns with respect to bank bailouts, noting those concerns can be exacerbated by incentive-incompatible policies and schemes before he concluded “Thus, it is certain that a healthy financial system cannot be built on the expectation of bailouts.”

In contrast, although banking sector stabilization has been prominent in some European crisis programs, in particular those for Iceland, Ireland, Spain, and Cyprus, comprehensive financial sector restructuring has not figured prominently beyond unavoidable stabilization and rescue operations. In the Irish case, the cleanup started in 2008 with the outbreak of the global financial crisis, but Ireland’s IMF and euro area programs, for example, have not settled the issue of unsecured, unguaranteed creditors.

73. See Simon Johnson (2013) for more details on policy advice and actions with respect to financial sectors during the Asian financial crises. Marcus Noland (2000a, 222–226) summarizes Korean actions.

74. The Basel Committee on Banking Supervision and Regulation promulgated the Core Principles for all countries, but in particular for those that were not members of the Basel Committee in September 1997. They were developed as a response to problems revealed by the Tequila crisis in 1994–95.

(See Pisani-Ferry, Sapir, and Wolff (2013, 57) and Alan Ahearne (2012).) European central bankers and regulators also have participated in the efforts centered at the BIS and the Financial Stability Board to reform the global financial system. They instituted EU-wide institutional changes along lines advocated by the group that Jacques de Larosière et al. (2009) chaired on supervisory reforms in the European Union. But until 2012, five years after the outbreak of the global financial crises, with failures in financial systems and in supervision and regulation at its core, the Europeans had not directly confronted issues of banking system supervision and regulation, as they are now doing under the rubric of creating a European banking union. However, even those belated efforts have been focused on the prevention and management of future crises rather than on cleaning up after the current crisis. In the fall of 2011, the IMF sounded the alarm about euro area wide weaknesses of banking systems to the consternation of the European authorities. In 2013, in its *Global Financial Stability Report* (IMF 2013b), the IMF staff raised concerns about the overhang of corporate debt in the euro area and the implications for financial stability.

It is understandable that, at the start of the global financial crisis, the focus of European authorities was on the stabilization of the banking system, initially to prevent a Lehman-style event in Europe, and European governments were moved to rescue many banks often with substantial consequences for their fiscal positions. Subsequently, because of the central role of banks in financial intermediation in Europe, the focus has been on facilitating the resumption of growth and limiting immediate fiscal costs of financial rescues rather than on reform or the transformation of the financial system. Compared with the Asian crises, European actions in this dimension have been part of some IMF programs, but not aggressively pursued as advised and analyzed by outside observers such as Goldstein and Véron (2011), Posen and Véron (2009), Véron (2007), and Véron and Wolff (2013).⁷⁵

On balance, although there are some exceptions, I conclude that financial sector reform has been less rigorous and comprehensive in Europe than it was in Asia, even though in Asia it was far from complete.

Other Structural Reforms

With respect to the promotion of structural reform, other than in the financial system, programs in the European crisis countries appear to have been less rigorous than in Asia, where structural conditions were rampant. This type of comparison is difficult to make, however. First, one is comparing feta cheese in Greece with cloves in Indonesia. Second, as noted in Barkbu, Eichengreen, and Mody (2011, 19–21), counting the number of structural conditions is a crude indicator, at best loosely correlated with completed reform, even before trying to weigh their importance. On the other hand, the euro area crisis countries were subject to a second letter of intent and memorandum of understanding (MoU) with the European Commission. According to Pisani-Ferry, Sapir, and Wolff (2013, 16), “The European MoU is significantly more detailed and includes conditions, for example of a structural character, that are not part of the [IMF]

75. Véron (2013) is somewhat more optimistic about prospects for taking the first steps toward establishing a European banking union and breaking the doom loop between banks and the sovereign governments that implicitly or explicitly stand behind them, but it is late in the game.

MEFP [memorandum of economic and financial policies]. IMF conditionality therefore covers a narrower scope than European conditionality.”

The most prominent structural reforms in the programs associated with the European crises have been linked to reform of fiscal systems and reduction of gross government debt via privatization. The apparent overall lack of attention to non-fiscal structural reforms is surprising because one of the principal, putative causes of the European crises was the deteriorating relative competitiveness of the affected economies. One might have thought that IMF-supported and EU structural reform programs would have addressed some of these issues, but aside from a few references to labor market reforms, and cuts in minimum wages in Greece and Portugal, the emphasis has been on pension and other reforms that have fiscal implications. Most summaries of the programs of the European crisis countries do not highlight reforms that are intended to improve relative competitiveness.⁷⁶

According to the IMF (2013c) ex post assessment on the first Greek program, the successive letters of intent contained 21 prior actions and structural benchmarks relating to the fiscal sector, nine relating to competitiveness, and nine relating to the financial sector. Curiously, the ex post evaluation is critical of the lack of parsimony with respect to such benchmarks while at the same time criticizing the lack of results other than in meeting the overall fiscal target.

With respect to competitiveness, in the wake of the crises, many critics have argued that there was a dramatic loss in competitiveness in all the euro area crisis countries. Germany experienced a real effective depreciation of 5 percent from the end of 1998 to 2006 using the broad BIS CPI-adjusted series. In contrast, the euro area crisis countries had real effective appreciations that ranged from 7 percent in Italy and 10 percent in Cyprus and Greece, to 17 percent in Spain and 24 percent in Ireland.⁷⁷ Only the last two countries experienced a serious decline in global competitiveness. Relative to Germany, which is the relevant comparator with respect to correcting internal imbalances, the real depreciation ranged from 13 percent for Italy to 30 percent for Ireland. Over the next six years, the euro area's current account position and economic recovery were boosted by real effective depreciations almost across the board, from marginal depreciations in Greece to 8.5 percent in Germany and 9.5 percent in Ireland. Except for Ireland, all countries lost further ground relative to Germany, but the losses were small.

76. See the website of European Commission, Economic and Financial Affairs (http://ec.europa.eu/economy_finance/assistance_eu_ms/index_en.htm), and Henning (2011).

77. In Europe, this debate is normally conducted in terms of exchange rates adjusted by relative unit labor costs (ULC). I prefer measures based on consumer price indexes (CPI) because they are more transparent and straightforward and, ultimately aside from the effects of value added taxes, it is the latter comparison that affects trade flows. Consistent measurement of unit labor costs involves a large number of intervening steps. Generally, the two approaches yield broadly the same results. However, for the euro area crisis countries from the end of 1998 to the end of 2006, the ECB's CPI-based indexes show less or the same real appreciation as its ULC-based indexes, and less real depreciation for Germany. From the end of 2008 to 2012, the improvement in competitiveness is the same or larger on the ULC-based indexes, except for Germany which again goes the other way. The IMF (2013c) ex post evaluation of the first Greek program also notes a divergence between the 9 percent decline in Greece's ULC-based real effective exchange rate through March 2012 and the 3 percent decline based on CPI.

A reasonable conclusion is not just to point to serious competitiveness issues within the euro area, but also to ask whether the German surplus contributes to global imbalances. Post-unification, Germany was very successful in strengthening its price competitiveness. But, in addition, Germany's membership in the euro area has benefitted Germany immensely by boosting its international competitiveness relative to pre-euro arrangements. Many of its euro area partners have paid a high price ex post for their memberships.

Private Sector Involvement

As already discussed above, in the context of the liquidity-solvency dimension of these crises, private sector involvement (PSI)—seeking or imposing financial contributions from private sector investors to help finance or reduce the present or future financial requirements of governments of crisis countries, including with respect to their banks—was limited in the Asian financial crises and already has been more prominent in Europe, though not universal in all cases, with a good chance of more to come.

In Asia, the official sector encouraged foreign banks to maintain their exposures in Thailand, without much success. The official sector also encouraged the settlement of foreign bank claims on Indonesian banks and corporations, but as Roubini and Setser (2004, 153) observe, the effort with the banks “was less about avoiding a bad outcome and more about cleaning up the financial mess that results when an economy and a financial system implode.” The one significant element of private sector involvement in Asia was the decision to seek a foreign bank standstill on claims on Korean banks, and the foreign banks' subsequent funding of those claims into longer-term instruments. The official sector made the banks' agreement to this approach a condition of increasing the pace of official sector disbursements in the second Korean program. At the time, a few days before Christmas 1997 when the official sector decided to try this “hail Mary” rather than to give up and watch a further implosion of the Korean economy and financial system, this new strategy was regarded as highly problematic. By dint of hard work and considerable coaxing and cajoling before and after the New Year, it looked like a piece of cake and many observers felt, and still feel (Simon Johnson 2013), that the foreign banks made out like bandits because the final agreement involved a step-up in interest rates along with a commitment to longer maturities.

In Europe, the question has not been whether, but when and how, to impose losses on private sector creditors, via informal understandings, formal negotiations, or unilateral government action. Iceland chose the third route: capital controls and de facto repudiation of the foreign debts of its major banks as those failed institutions were resolved. The IMF press release on November 19, 2008 on the IMF executive board's approval of Iceland's program states that the program would include such controls as part of the comprehensive and collaborative strategy for restructuring the banking system, which was already well underway, “ensuring the fair and equitable treatment of depositors and creditors of the intervened banks.” Domestic creditors took their losses, and foreign creditors with merit, but with little result, claim that they did not receive fair and equitable treatment. In the fall of 2008, the issue in the rest of Europe, of course, was preventing a run on the banks that were major holders of sovereign debt. As in Korea in November 1997, forcing standstills or stretchouts on banks as creditors was regarded as a sure way to encourage such a run.

Next were the East European crises, in which the informal understandings under the Vienna Initiative aimed at recapitalizing the East European banking systems and maintaining the investments and exposures of West European banks. The beneficiaries were not just the countries with IMF programs. Åslund (2010) gives the initiative high marks, but he also notes many unresolved problems remain in terms of restructuring the banks and banking systems. In other words, losses may remain to be taken by the private sector rather than socialized on the balance sheet of the public sector.

The ECB was the principal proponent of caution with respect to aggressive private sector involvement either via negotiation or unilateral government action. Neil Irwin (2013, 290) reports that Jean-Claude Trichet lobbied long and hard against bailing in government or bank creditors, and that no one was angrier than he at the French-German agreement at Deauville in October 2010, which, as far as markets were concerned, opened the door to this possibility sooner rather than later. One can suspect that the ECB position also was motivated by a desire to protect its own balance sheet. The result has been little in the way of systematic private sector involvement in bank resolution and larger burdens placed on government balance sheets. On the other hand, public anger at bailing out governments and banks runs high, which was one of the motivations behind the ill-timed Deauville agreement.

Greece had been regarded as special, regardless of whether it or the rest of Europe deserved that treatment or not. The debate over the treatment of its debts still rages; see Pisani-Ferry, Sapir, and Wolff (2013) for a recent argument that the official sector should have entertained debt reduction during the first five months of 2010. See also the IMF (2013c) ex post evaluation of exceptional access under the 2010 standby arrangement, on the one hand, and Barry Eichengreen (2013)—a long-time advocate of debt reduction—on the other.

On May 20, 2010, I addressed this issue in congressional testimony (Truman 2010b):

Some observers advocate an immediate adoption of an alternative approach that would involve a restructuring in which the stock of Greek government debt would be written down. A restructuring may ultimately be necessary, but it is not a cheap or easy way out. The broader negative ramifications for the world economy and financial system could be severe right now while the recovery is still fragile. Moreover, if there is to be a restructuring of Greek debt, it should be a one-time event, and its appropriate dimensions are obscure right now.

Of course, opinions can differ—these are not easy issues—but I am disinclined to revise the judgment I had at that time.⁷⁸ The contagion argument is the most compelling. If the IMF or non-Europeans had insisted on a deep reduction in the face value of Greece's debt in May 2010, it would have exacerbated the already rampant spread of the euro debt crises under conditions where the Europeans had not yet established even the flimsiest of firewalls. In addition, there is the fact that one could not know in May 2010 how much debt reduction was required to put Greece back on the road to economic and financial recovery. There have already been five such exercises, involving private and official creditors, and many observers think that there are more to come. We still do not know how much debt reduction it will

78. I was comforted at the time that Michael Mussa (2010) and I agreed.

take. Moreover, official creditors were generally reluctant to dial back the heat on the Greek authorities to follow through on their needed reforms. It was not a pretty picture.

Weaker arguments favoring debt reduction for Greece in May 2010 are: (1) Greece's debt was a burden holding back recovery of the Greek economy; the added uncertainty was small. (2) The IMF was forced to take on a large part of the total exposure to Greece; that is its job. (3) The Europeans would not have agreed; if it was the right thing to do, the other members of the IMF should have insisted upon doing it. (4) Generally, as argued in IMF (2013f), debt reduction is too little and too late; without a dramatic change in approach to PSI issues, early debt reductions will almost always be too small and need to be repeated. Without defaulting, Greece in 2010 could not have achieved the two-thirds reduction in the face value of its debt that Eichengreen argues was appropriate.

On the other hand, after earlier amending its debt sustainability policies to introduce a systemic exception in the Greek case, the IMF has been proactive in forcing this issue.⁷⁹ The IMF (2013c) *ex post* review is less than crystal clear on this important issue, but my reading is that, first, it was right not to have debt reduction as part of the May 2010 Greek program, but it was a mistake to wait until March 2012 to implement debt reduction.

Finally, in Europe, we have had the mismanaged PSI in the restructuring of Cypriot banks. True, the solution on its surface is structured to be private-sector-to-private-sector, but no one is fooled, in particular because one of the banks is already in government hands and another one or more banks, as of this writing, may soon follow.

No one is satisfied with where things are now on the PSI issue. *Inter alia*, private sector involvement in the European cases appears to have been dictated by a desire to limit the amount of official financing rather than by the economic and financial needs of the country or the desire to limit the financial and monetary fragmentation of the euro area.

Thus, we have already observed more extensive private sector involvement (OSI) in the European crises than was the case in Asia where OSI was limited to a Paris Club agreement to reschedule Indonesia's government debt to official creditors that did not involve a large amount and was not implemented until late 1998 well after the start of the crisis. More OSI is likely to come, and it may happen sooner rather than later. Some interpret the ECB's potential use of its outright monetary transactions instrument (and the fact that it will give up its seniority if it does so) as a signal that there will be no more bailing in of euro area sovereign debt holders in the near future. Likewise, on June 10, an unnamed German official reportedly denied that there is a prospect of any further official sector involvement (net present value reduction through one means or another) in Greece; beware of official denials, particularly in an election year.

79. Pisani-Ferry, Sapir, and Wolff (2013) highlight this modification. In my view, as a procedural matter, the IMF debt sustainability "rules" were designed as, and should be viewed as, guidelines subject to adjustment as long as the adjustment is transparent and the IMF executive board can be held accountable for any exceptions and adjustments, which it was in the Greek case; witness the IMF's release of its *ex post* assessment and the associated brouhaha.

Exchange Rate Policies

The final dimension of difference between policy prescriptions in the Asian and European crises concerns exchange rate policies. First, it should be acknowledged that these policies, for better or worse, are the jealously guarded prerogative of governments—even of countries in crisis—notwithstanding the fact that the same governments have IMF obligations with respect to their exchange rate policies. Second, of course, markets do force events, at least with respect to devaluations. The IMF has some capacity to do so as well, once a country has taken the decision to turn to the IMF for assistance, which often happens after a decisive change in exchange rate policies has already occurred—not before.

Thus, in Asia, Thailand, Malaysia, the Philippines, Indonesia, and Korea had already abandoned their pegs before turning to the IMF for advice, financial assistance, or renewed assistance in the case of the Philippines. Malaysia did not consult with the IMF when it loosened its peg in 1997 or in September 1998, when it repegged and slapped controls on capital outflows. Once a country has a program with the IMF, the institution can encourage or discourage a particular policy approach. The normal IMF bias is in the direction encouraging exchange rate flexibility, in particular downward so as not to dissipate international reserves. The facts are that real effective exchange rates (broad BIS measure) for four of the five Asian countries did not experience much appreciation in the 1994 to 1996 period, with the exception of the Philippine peso, which appreciated 15 percent. Over the course of 1997, the average real effective depreciation was 27 percent, and to the credit of the authorities, by the end of 2000, the average real effective depreciation was sustained at a remarkable 23 percent. Normally substantial nominal depreciations get eaten up by acceleration in inflation, but inflation was generally under good control in these countries except for Indonesia, where authorities permitted further nominal depreciation of the rupiah to compensate for higher inflation.

In the policy community at the time there were extensive debates about exchange rate regimes. The debate featured a number of people who advocated corner solutions, sometimes with no preference between one and the other: an absolutely fixed exchange rate, such as with a currency board, or a regime of an essentially freely floating rate.⁸⁰ However, the Asian economies, except for Malaysia, which reverted to a fixed rate in September 1998, chose ad hoc regimes of managed floating, but with less heavy management than before their crises. That management has permitted somewhat greater exchange rate flexibility, but it also has been directed at sustaining competitive (some would say hypercompetitive) exchange rates to support current account surpluses and the substantial accumulation of international reserves as insurance against future crises.

80. John Williamson (2000) wrote a persuasive counterattack stressing the advantages of an intermediate option of exchange rates bands, baskets, and crawls. Summers is sometimes associated with favoring corner solutions at that time, but in Summers (2000) he only advocated moving away from “the middle ground of pegged but adjustable fixed rates,” which was consistent with the Williamson view.

In Europe, the principal shortfall on exchange rate policies was before the crises. The IMF and outside countries did not engage on the issue of euro membership and surveillance of the euro area was essentially nonexistent until 2008.

Again with the exception of Iceland among the crisis countries, many countries were rushing toward the hard-peg corner. The hard peg was not the universal favorite, the United Kingdom and Sweden, in particular, continued to favor the opposite corner.

Once the European crisis hit, most currencies did not budge in real effective terms. Iceland's krona had appreciated 10 percent from the end of 1998 to the end of 2006 (the BIS broad real measure). The krona then depreciated by 36 percent in 2008, and the net depreciation from the end of 2006 to the end of 2012 was 38 percent. But Iceland was an exception. Hungary and Romania experienced real appreciations of their currencies of more than 40 percent from the end of 1998 to the end of 2006, but their currencies adjusted only marginally over the next six years. The Latvian lats had appreciated only 2 percent from 1998 to 2006. After Latvia entered its crisis in 2008, many—including staff within the IMF—argued that the lats should depreciate. The authorities stuck with the peg to the euro even though subsequent inflation associated with tax increases meant that the lats appreciated by 18 percent in real effective terms by the end of 2012.

The remaining European crisis countries were locked together in the euro area. The question is whether the IMF and non-European countries should have forced exchange-rate adjustments within the euro area; in other words, should they have advocated the departure from the euro of one or more euro area countries in crisis? This is not an easy question to answer. For better or worse, though documentary evidence is not available, I find it difficult to imagine that the management of the IMF or US officials, as proxies for other countries, would have seriously advocated such a course of action. They should have discussed it, and probably did, but the history of Article IV of the IMF Articles of Agreement and IMF practice over the past four decades has militated in favor of leaving these choices to the countries in question except in extreme cases, such as Thailand in 1996–97. I doubt that either the IMF or its principal non-European shareholders seriously considered advising exit from the euro for any of the crisis countries. One piece of evidence is that the topic of possible exit is not discussed in the ex post review of the Greek program (IMF 2013c). The IMF staff (IMF 2013d, 46), in its review of the second Greek program in March 2012, analyzed this issue and concluded it would have severe consequences both for Greece and European Monetary Union.

It is clear that several of the countries that joined the euro were not fully prepared for the consequences of giving up their monetary and exchange rate independence even though both were already highly constrained at the time; see Hungary and Romania during their crises. However, Mulligans are not available to policymakers. The choice of leaving the euro would have been consequential for these economies. We do not yet have all the evidence that would be necessary for a robust counterfactual. My current judgment is that the costs of exit for these countries far exceeded the benefits. From the standpoint of the euro area itself and the non-crisis countries, the answer is much clearer. They had a strong interest in maintaining the status quo for reasons eloquently argued by Anders Åslund (2012) reviewing exits

and subsequent disintegration of other monetary unions. Once one country exits or is forced to exit, the pressures and contagion are likely to be overwhelming on the remaining candidates to leave. The arguments that there could be an amicable disengagement or temporary exit are naïve; markets and/or domestic politics will force an exit, and neither governments nor the market will have the leisure for any negotiation that lasts longer than a weekend.

In summary, the programs adopted in the European crises generally have been less demanding and rigorous than those in the Asian crises. In addition to the fact that Europe has received more financing, which may be a program improvement, and to the fact that fiscal policies have been more stringent in Europe, which may be a mistake, the euro crisis programs have fallen short relative to the Asian standard. The ECB could have been required to have been easier on monetary policy. On financial sector restructuring, despite some program content, the core issues have not been fully addressed—in particular on a euro-wide basis—to the extent that they were in Asia. On other structural policies, although again there are exceptions, the content has been less than in Asia, which operationally was a different environment with respect to these policies. PSI has been more prominent in Europe than it was in Asia, but it probably should have been. On exchange rate policies, the failures in Europe were before the euro was introduced and in surveillance of the euro area after the introduction of the common currency.

Thus, my judgment is that policy prescriptions generally have been weaker and less demanding in the European crises than they were in the Asian crises. For some observers, the fact that programs in Europe have received more financial support and have been less rigorous and more flexible is good (Takagi 2010). In this view, the IMF has learned the lessons of Asia and has developed a better understanding of capital account crises and the potential balance-sheet amplification of the real effects of those crises. But the debate is far from over.

Institutional and Economic Environment

Institutions and the general economic and financial environment are consequential to successful management of financial crises. In this regard, the crises in Asia and Europe differed in several respects.

With respect to institutions, the Asian crisis countries had only loose consultative associations, for example, in the form of the Association of Southeast Asian Nations (ASEAN) group, APEC, and the Executives' Meeting of East Asia Pacific (EMEAP) central banks. During the crisis, the Japanese authorities proposed the creation of an Asian Monetary Fund (AMF), which was rejected on policy grounds because it would have created a large freestanding source of external financing unconnected to the IMF and global policy standards, and on practical grounds because it would have been of no use in the provision of financing in the immediate crisis.⁸¹ During the crisis, the Manila Framework Group was established for

81. Rhee, Sumulong, and Vallée (2013) point also to concerns that the AMF would enhance the role of the yen. I do not recall such concerns, but there was no doubt that the AMF proposal was designed to project Japanese influence in the region. When it failed to gain traction, it was replaced by the New Miyazawa Initiative through which Japan provided additional bilateral development assistance to countries in the region in the aftermath of the financial crisis.

consultations on policies and on the use of second lines of defense as were agreed for Indonesia and Korea, but unfortunately the Manila Framework Group was discontinued during the Bush administration.

After the Asian crises had largely passed, the Chiang Mai Initiative (CMI) was established in 2000. The CMI has since evolved into the Chiang Mai Initiative Multilateralized (CMIM) but it has never been tested in a crisis; Korea, for example, chose to turn to the Federal Reserve rather than the CMI during the global financial crisis.⁸² Thus, although the Asian countries were linked in crisis, frequently consulted together, and their crises were treated sequentially (learning by doing), their responses were not coordinated. In some respects, the individual economies were not bound to follow one formula even though external supporters tended to treat their cases that way. The world was able to respond forcefully to the Asian crises with substantial financial support even as the countries themselves, after a few false starts, responded promptly with policy reforms, despite the view of some of their leaders that the international financial support was inadequate and the IMF was heavy-handed.

In Europe, with the exception of Iceland, the preferred approach was lock-step cooperation but with a separate negotiation before taking each step and with little in the way of robust supporting institutions. The EU Balance of Payments Facility was not sufficient to handle the crises in Hungary, Latvia, and Romania, though it played a major role along with the IMF. The euro area had no structures, aside from the ECB and the Eurogroup of finance ministers, to address the euro area crises. The ECB lacked an executive branch or government counterpart, and the Eurogroup was only a partial substitute. As many warned before 1999 when the ECB began its operations and the euro was first introduced, the institutional architecture of European Monetary Union (EMU) was incomplete.

Starting in 2007, but with increasing virulence as of late 2009, the need for coordination and for effective euro area institutions became painfully apparent. The magic of the euro was not all-encompassing—all gain all the time for all countries with no losses. The euro itself was not sufficient to protect countries as each plunged into crisis or to protect their partners from being pulled down as well. As a result, the Europeans have been playing catch-up, working on the prevention (properly the limitation) of future crises while being challenged to manage the current crises. Moreover, one activity has tended to get in the way of the other. Most serious, the lack of institutions and procedures for crisis management prevented the Europeans from following the Powell Doctrine through the application of overwhelming financial support and policy action. The financing scraped together in the flimsy EFSF, the mechanism employed before the ESM was in place, was insufficient to provide the promised firewall between Greece and other euro area countries. Several countries quickly succumbed to their own crises. Policy actions were tentative and less than comprehensive. Much was accomplished in a short period of time, but it was insufficient. The analogy to the Asian financial crises would have been if Thailand, Indonesia, Malaysia, and Korea were so tightly linked that they had been required to wait for the establishment of the AMF before addressing their crises.

82. This experience sparked an ongoing international discussion of proposals for global financial safety nets; see Rhee, Sumulong, and Vallée (2013) and Truman (2010a and 2011b).

The good news was that the euro area countries finally agreed, more or less, on one objective: keeping the euro together. The bad news was that the mechanisms that were created and their operation have pushed members of the euro area further apart economically, financially, and politically. A comprehensive euro area crisis management strategy was never formulated and adopted. I blame the management and staff of the IMF, the euro area countries, and other major countries for this failing.

The members of the euro area wanted to preserve the euro, but they were not prepared to accept conditionality applied to the euro area as a single entity. The rest of the world, to its regret, allowed the Europeans to have it both ways—to save the euro but by imposing all the policy conditions on the countries in crisis—another example of a European double standard.

The IMF should have insisted, as part of the first program for Greece, that the other members of the euro area adopt a complementary strategy as a condition for its approval of the Greek program.

The IMF (2013c) ex post evaluation of the first Greek program notes the lack of IMF experience in operations with individual countries that are members of monetary unions. The initial focus, as criticized in Pisani-Ferry, Sapir, and Wolff 2011, was on Greece alone rather than on the monetary union itself—on preserving the euro. Only relatively late did the IMF start to push for European banking union. Curiously, the IMF ex post evaluation does not directly address this central question: Other than with respect to financing assurances, why was no conditionality placed on other members of the euro area? The report implicitly absolves the ECB by praising its liquidity provision programs and the SMP, but does not mention conventional ECB monetary policy.

At the outset of the Greek crisis the IMF should have required the ECB immediately to cut its policy interest rate close to zero. The ECB also should have agreed, as an exceptional measure, to exclude the contribution to euro area inflation of value added tax rate increases by countries in crisis. Doing so might have convinced the Bank not to raise its refinancing rate by 50 basis points in two steps in April and July 2011 only to have those rate increases quickly reversed and more as the euro area slipped deeper into recession.⁸³ It was also a mistake not to require the ECB to absorb losses on its holdings of Greek debt when it was restructured in early 2012.

With respect to fiscal policy, given the level of its sovereign debts, Greece had little choice but to tighten its fiscal belts, though with more financing the timetable could, and should, have been stretched out.⁸⁴ The scope for gradual adjustment was more defensible in other euro area crisis countries. In any case, the better-placed countries in the euro area should have compensated for the effects of fiscal restraint in the crisis countries on the area as a whole. The cyclically adjusted general government primary deficit of the euro area did not have to move by 3.8 percentage points of GDP into surplus in just three years from 2010 to 2013, as the euro area moved into recession; the cyclically adjusted total balance and not-cyclically

83. For a sharp critique of current ECB policy in an environment with the potential for what he calls “downward price instability,” see Angel Ubide (2013).

84. However, as noted by the IMF (2013c), in the Greek case a more gradual adjustment would have required either more financing on much easier terms or ultimately greater and earlier debt reduction.

adjusted primary and total balances remain in deficit, but the swings are commensurate.⁸⁵ A timetable should have been set, in the form of policy conditions, for the comprehensive euro-area-wide restructuring of financial institutions. Similarly, establishment of a European banking union—which is now, three years later, being discussed in preparation for the next crises—should have been a condition. The banking union should have been developed as an immediate crisis-management tool with all three crucial elements quickly put in place: supervision, resolution, and deposit protection at least covering systemically important institutions.

Finally, IMF support should have been conditional on the creation of a structure of area-wide financial assistance in which fiscal commitments from governments provided the equity backstop for the ECB to leverage into overwhelming liquidity support. In other words, what was needed, but was not to be, was an instant ad hoc fiscal union with at least de facto eurobonds.

The European authorities lacked the leadership and cohesion to act decisively once they had rejected a pure euro area rescue and a pure IMF rescue of crisis countries without European involvement. The IMF was too timid, paralyzed, or conflicted to require such steps as a condition for its participation in the Greek or subsequent programs. The United States and other non-euro area countries were sympathetic to the concept of applying IMF policy conditionality to the euro area as a whole, but they did not get very far. Such a framework would have been difficult to negotiate, but there are precedents in the form of non-crisis countries providing financial and other types of support for neighboring countries in crisis.⁸⁶ Of course, the leaders of the euro area might have balked and gone their own way, with even more adverse global economic and financial consequences, but that is a risk that may well have been worth taking.

The Europeans did face at least one environmental factor that was largely not of their own making. Their crises were a component part, or an extension, of the global financial crisis and recession, the worst global downturn since the Great Depression. The global economy was not performing in a manner to help pull them out of recession, in contrast with the global environment during and immediately after the Asian financial crises. The recovery was likely to be tepid because of the combination of recession with banking crises in most countries, as we know from Stijn Claessens, M. Ayhan Kose, and Marco Terrones (2011), and other analyses, is the norm for the interaction of business and financial cycles. However, that interaction was present in Asia as well.

Economic growth slowed in developing Asia from an average rate of 8.9 percent in 1994–96 to 5.0 percent in 1997–98 with a pickup only to 6.9 percent in 1999–2003.⁸⁷ However, average growth in all emerging market and developing countries increased from 4.2 percent in 1994–96 to 4.8 percent in 1999–2003. Growth in the advanced countries slowed from 3.1 percent on average in 1994–96 (and the same as

85. These data and projections are from the April 2013 *Fiscal Monitor* (IMF 2013a).

86. PRC was encouraged not to devalue its currency when it was under pressure to do so during the Asian crises. The Japanese authorities ultimately instructed their banks to stop pulling lines from Korean banks. In the Greek case, the IMF sought and received financial assurances from its euro area partners, including recognition of the seniority of IMF claims on Greece (IMF 2013f, 35), but stopped at that point.

87. The data and forecasts in this and the following paragraph come from the IMF's *World Economic Outlook* database of April 2013.

in 1997–98 on average) to 2.6 percent for 1999–2003. Consequently, for the world as a whole, growth was 3.5 percent in both the pre-crisis and post-crisis periods and, in fact, rose to 3.8 percent in the crisis years of 1997–98.

Europe was not so fortunate. Global growth slowed from 4.9 percent on average in 2004–06 (5.1 percent in 2004–07). Of course, during 2008 and 2009, global growth averaged an anemic 1.1 percent, growth in the emerging market and developing countries averaged 4.4 percent, and the advanced-country and European-country groups were in recession. Global growth recovered to average only 3.9 percent in 2010–14.⁸⁸ The collapse of growth in Europe was associated with a shortfall of domestic demand, in particular investment; this was the same pattern as in Asia, but the Asian decline did not last as long. From 2010 to 2014, average growth in the emerging market and developing countries is projected to have slowed to 6.0 percent from 7.8 percent, while growth in the advanced countries as a group is projected to have slowed to 1.9 percent from 2.9 percent. The slowdowns in the euro area and the larger European Union are to 0.7 percent from 2.4 percent and to 0.9 percent from 2.8 percent, respectively.

The euro area has failed to implement a growth agenda; see Zsolt Darvas, Jean Pisani-Ferry, and Guntram Wolff (2013). Growth agendas are slow acting, but five years is plenty of time if the programs had been well-designed and designed with attention to the needs of supporting the European Monetary Union.

With respect to current account positions, which are affected by foreign-exchange rate and other competitiveness changes as well as by growth, the Asian adjustment was immense. Asian crisis countries moved from an average deficit of 4.5 percent of GDP in 1994–96 to an average surplus of 8.8 percent of GDP in 1998, a swing of 13.3 percent in just two years. For Europe, the average deficit in 2004–06 was 8.5 percent of GDP (12.5 percent on average in the non-euro area countries and 5.8 percent in the euro area) and the adjustment by 2012 (six years later) was only 7.0 percent of GDP on average (10.0 percent in the non-euro area and 4.8 percent in the euro area), half the size of the Asian swing.

The question is which way does the growth causality run, from the rest of the world to Asia and Europe or vice versa, and was the nature of the causality the same in both periods? Table 6 provides estimates of the impacts, or correlations if one prefers, of the management of the two crises and contemporaneous global growth. The comparison is complicated by the fact, as already noted, that the crises in the euro area occurred in the aftermath of the global financial crisis. But the collective management of the global financial crisis, with its epicenter in the United States, was on the whole quite successful; for example, global growth in 2010, the first full post-recession year, was better than the IMF expected.

In table 6, the focus of the impact of the European crises is on cumulative projected and estimated growth from a 2010 base to 2013, after the first 2007–09 phase of the crisis was over. I compare the April

88. The higher global growth in the second crisis period is due to the higher contemporaneous weight on faster-growing emerging market and developing countries.

2011 and April 2013 *World Economic Outlook* projections.⁸⁹ The focus of the impact of the Asian crises is on cumulative and estimated growth from a 1997 base to 2000, including the crisis year of 1998, but using as a starting point IMF estimates from May 1997 before the crises broke out. However, in retrieving the projections for the Asian crises, I was forced to use successive IMF *World Economic Outlooks* because the WEO database, with its longer projections, was not operative in those years. This biases the estimated impacts of the Asian crisis toward zero.

With those qualifications, the data presented in table 6 indicate a relatively small link between the Asian crises and contemporaneous global growth. Cumulative growth of real GDP from 1997 to 2001 produced a level of global GDP in 2001 that was only 0.6 percent less than originally projected; real GDP was 2.7 percent higher for the advanced countries as a group. It was lower not only for developing countries in Asia but also for the larger group of emerging market and developing countries. They were affected, of course, by the Russian, Brazilian, Turkish, and Argentine crises of 1998–2000, which are often treated as extensions of the Asian crises.

In contrast, the negative link between the European crises and global growth appears to have been larger and more widespread. Cumulative global growth of real GDP from 2010 to 2013 is now estimated to produce a level of global GDP in 2013 that is 3.3 percent lower and the shortfall is spread rather evenly in terms of the absolute differences for advanced, emerging market and developing, euro area, and European Union countries.⁹⁰ The 3.3 percent shortfall in the level of economic activity for the world translates into a loss of \$2.9 trillion of global GDP (on a PPP basis) or about \$400 for each of the 7 billion residents of the world today.⁹¹ Even at half this size these effects are consequential.

Some may argue that other factors have been involved, which is true, but they are both negative and positive. I am inclined to credit the mishandling of the European crises with most of the global loss. US growth has been lower than was expected in April 2011, largely reflecting the recognition in the middle of 2011 that the US recession was deeper in the United States and the recovery to that point weaker than had been previously understood. US economic policy could have provided more stimulus in compensation for the shortfall. In fact the cumulative US fiscal restraint from 2010 to 2013 is now projected (IMF 2013a) to be somewhat less, at 3.7 percentage points of potential GDP for the cyclically adjusted structural deficit, than the 5.6 percentage points projected in April 2011.⁹² Moreover, the Federal Reserve responded to the protracted weak US recovery in ways that the ECB did not. Although our current understanding of the

89. Use of the WEO forecasts in October 2009 or October 2010 would produce different results, but the reason is that the forecasts for 2010 were too low, and in fact those results were already largely achieved if not recognized at the time of the forecasts.

90. Using the April 2010 WEO projections, but abstracting from the fact that year-over-year growth in 2010 turned out to be higher than projected, but was largely determined by that date, produces similar results: a cumulative shortfall in global GDP of 3.1 percent, 2.9 percent for the advanced countries, and 3.3 percent for the emerging market and developing countries.

91. The loss for the euro area is \$550 billion and \$780 billion for the European Union, implying a loss of \$2.1 trillion outside the European Union.

92. Methodological and data changes in the intervening three years may undermine the usefulness of such comparisons.

size of fiscal and trade multipliers in economies with low interest rates and considerable slack suggests that the real direct and indirect effects of the European economic weakness were magnified, the European crises have affected the rest of the world through financial and commodity price channels as well as through trade channels. The analysis in the 2012 spillover report prepared by the IMF (2012) is not comparable in terms of how the counterfactual is constructed and is much more sophisticated than the back-of-the-envelope approach in table 6. However, the IMF broadly supports the conclusion of substantial spillovers from the European crises deepening to the rest of the world.

How should one assess blame for this estimated damage? Should we blame the Europeans or their partners in the rest of the world? My answer is both. The rest of the world exercised forbearance on the Europeans by providing more financing than in earlier crises (though not enough to ring-fence other euro area countries) and, more importantly, by not requiring more forceful policy actions. At the same time, the Europeans proved institutionally unprepared and insufficiently imaginative to supply the financial and policy actions on the needed scale.

LASTING LESSONS?

This review of the Asian crises in comparison with the ongoing European crises has argued that the two sets of crises are more similar than different. The crises differ somewhat in how they evolved, but the differences are more a function of institutions (the incomplete European Monetary Union for example) than of the broad contours of the crises. It follows that there will be more crises. The principal lesson from this review is that policies should emphasize not only crisis prevention, but also crisis preparation and crisis management. Even advocates of fundamentally and radically rethinking financial and macroeconomic policies, such as Claudio Borio (2012a), do not argue that doing so will prevent crises, only that the natural procyclicality of economic and financial systems and their interactions will be reduced and, therefore the virulence of crises will also be reduced.

As the world becomes more integrated economically and financially, crises are becoming more frequent and have broader effects. The epicenter of the 2008 global financial crisis was not the emerging market and developing countries, but they were affected. They also have been affected by the European crises even if the causality does not all run one way. The global economy and financial system are parts of a general equilibrium system with many moving parts in terms of institutions and public and private actors. We can limit the virulence of future crises by learning some of the lessons of crisis preparedness as well as crisis prevention to facilitate better crisis management.

The global financial crisis was not fundamentally different from other crises in my experience over the past 40 years. Any student of crises would conclude that there were no real surprises, just amplified variations on the basic theme of excesses that get out of hand, investors who think they can pull out before the crash but end up being victims of the crash, and policymakers in denial. Policymakers consequently delay taking corrective actions, disagree on diagnoses and, therefore, on short-term and longer-term policy prescriptions with respect to crisis management, crisis prevention, and crisis preparation.

The fact that crises are inevitable does not mean that countries cannot be better prepared and should not be concerned about their vulnerabilities. Christine Lagarde (2013) was right in April 2013 to warn that

corporations in emerging market and developing countries may be relying excessively on foreign currency borrowing thinking it is cheap and can easily be repaid. Vigilance and reform will be rewarded even if this is not the source of the next crisis; see also Borio (2012b) for a broader warning. One reason why Asia was less adversely affected by the global financial crisis is that countries in that region had learned some lessons and, consequently, were less vulnerable, i.e., less ill-prepared; see Park, Ramayandi, and Shin (2013). The same holds for Latin America. Policies are important, growth models matter, and adequate amounts of external financial assistance on appropriate terms are crucial.

Countries can make the wrong choices for themselves and for the system. In hindsight, some countries in the euro area should not have joined the euro; many countries inside and outside of the euro area have paid for the hubris of European leaders and their decision to launch the euro with a broad membership. The jury is still out as to whether, and in what economic and financial shape, EMU will survive. My judgment is that the European integration project and the euro will survive. But the Europeans will pay a high price in terms of economic stagnation for many years to come, and the rest of the world already has paid a high price in terms of lost growth. Thus, I conclude that the European crises are more severe than were the Asian crises. It follows that outsiders should care more about what groups of countries do. Leaders and institutions outside of Europe did not care enough about what was going on in Europe before the outbreak of the crisis or during the global financial crisis. In the future, IMF surveillance and programs must focus primarily on the euro area as a whole and only tangentially on its individual members. The IMF should let the euro area institutions focus on the individual countries.

REFERENCES

- Ahearne, Alan. 2012. Political-Economic Context in Ireland. In *Resolving the European Debt Crisis*, eds. William R. Cline and Guntram Wolff. Special Report 21. Washington: Peterson Institute for International Economics.
- Åslund, Anders. 2010. *The Last Shall Be the First: The East European Financial Crisis*. Washington: Peterson Institute for International Economics.
- Åslund, Anders. 2012. *Why a Breakup of the Euro Area Must Be Avoided: Lessons from Previous Breakups*. Policy Brief 12-20. Washington: Peterson Institute for International Economics.
- Barkbu, Bergljot, Barry Eichengreen, and Ashoka Mody. 2011. *International Financial Crises and the Multilateral Response: What the Historical Record Shows*. Working Paper 17361. Cambridge, MA: National Bureau of Economic Research. Reprinted in 2012. *Journal of International Economics*, 88, no. 2: 422–435.
- Barth, James R., Gerard Caprio Jr., and Ross Levine. 2012. *Guardians of Finance: Making Regulators Work for Us*. Cambridge, MA: Massachusetts Institute of Technology.
- Bergsten, C. Fred, and Jacob Funk Kirkegaard. 2012a. *The Coming Resolution of the European Crisis*. Policy Brief 12-1. Washington: Peterson Institute for International Economics.
- Bergsten, C. Fred, and Jacob Funk Kirkegaard. 2012b. *The Coming Resolution of the European Crisis: An Update*. Policy Brief 12-18. Washington: Peterson Institute for International Economics.
- Blustein, Paul. 2003. *The Chastening: Inside the Crisis That Rocked the Global Financial System and Humbled the IMF*. New York: Public Affairs.
- Borio, Claudio. 2012a. *The Financial Cycle and Macroeconomics: What Have We Learnt?* Working Paper 395. Basel, Switzerland: Bank for International Settlements.

- Borio, Claudio. 2012b. *On Time, Stocks and Flows: Understanding the Global Macroeconomic Challenges*. Lecture delivered in Munich (October 15). Available at www.bis.org (accessed June 10, 2013).
- Borio, Claudio, and Philip Lowe. 2002. *Asset Prices, Financial and Monetary Stability: Exploring the Nexus*. Working Paper 114. Basel, Switzerland: Bank for International Settlements.
- Borio, Claudio and William White. 2003. *Whither Monetary and Financial Stability? The Implications of Evolving Policy Regimes*. Paper presented at the Federal Reserve Bank of Kansas City Symposium (Jackson Hole, Wyoming). August 28–30.
- Claessens, Stijn, M. Ayhan Kose, and Marco Terrones. 2011. *How Do Business and Financial Cycles Interact?* Working Paper 11/88. Washington: International Monetary Fund.
- Claessens, Stijn, and M. Ayhan Kose. 2013. *Financial Crises: Explanations, Types, and Implications*. Working Paper 13/28. Reprint forthcoming in *Financial Crises: Causes, Consequences, and Policy Responses* Stijn Claessens, M. Ayhan Kose, Luc Laeven, and Fabián Valencia eds. Washington: International Monetary Fund.
- Cline, William R. 2012. *Sovereign Debt Sustainability in Italy and Spain: A Probabilistic Approach*. Working Paper 12-12. Washington: Peterson Institute for International Economics.
- Constâncio, Vitor. 2013. *The European Crisis and the Role of the Financial System*. Speech at the Bank of Greece conference on the crisis in the euro area (May 23). Available at www.ecb.int/press (accessed May 29, 2013).
- Darvas, Zsolt, Jean Pisani-Ferry, and Guntram Wolff. 2013. *Europe's Growth Problem (And What to do About It)*. Policy Brief 2013/03. Brussels, Belgium: Bruegel.
- De Grauwe, Paul and Yuemei Ji. 2012. Economic and Monetary Union Europe. In *Global Economics in Extraordinary Times: Essays in Honor of John Williamson*, eds. C. Fred Bergsten and C. Randall Henning. Washington: Peterson Institute for International Economics.
- de Larosière, Jacques, Leszek Balcerowicz, Otmar Issing, Rainer Masera, Callum McCarthy, Lars Nyberg, José Pérez, and Onno Ruding. 2009. *Report of the High-Level Group on Financial Supervision in the EU*. Brussels: European Commission.
- Eichengreen, Barry. 2013. *Lessons of a Greek Tragedy*. Project Syndicate (June 13). Available at <http://www.project-syndicate.org> (accessed June 14, 2013).
- Federal Reserve Board. 1997. *Greenbook Part I* (November 12). Available at www.federalreserve.gov/monetarypolicy/fomchistorial1997 (accessed June 16, 2013).
- Furman, Jason, and Joseph E. Stiglitz. 1998. Economic Crises: Evidence and Insights from East Asia. *Brookings Papers on Economic Activity* 2: 1–135.
- Furuoka, Fumitaka, May Chiun Lo, and Iwao Kato. 2007. Japan's Foreign Aid Policy Towards Malaysia: Case Studies in the New Miyazawa Initiative and the Kelau Dam Construction. *Electronic Journal of Contemporary Japanese Studies* (March 1).
- Gelpern, Anna. 2009. Financial Crisis Containment, *Connecticut Law Review* 41, no. 4 (May):493–549.
- Ghosh, Atish, Timothy Lane, Marianne Schultze-Ghattas, Ales Bulir, Javier Hamann, and Alex Mourmuras. 2002. *IMF-Supported Programs in Capital Account Crises*. Occasional Paper 210. Washington: International Monetary Fund.
- Goldstein, Morris. 1998. *The Asian Financial Crisis*. Policy Brief PB 98-1. Washington: Peterson Institute for International Economics.
- Goldstein, Morris. 2003. IMF Structural Programs. In *Economic and Financial Crises in Emerging Market Economies*, ed. Martin Feldstein. Chicago: University of Chicago Press.

- Goldstein, Morris. 2011. *The Role of the IMF in a Reformed International Monetary System*. Paper presented to the Bank of Korea's Research Conference (May 26–27). Photocopy.
- Goldstein, Morris, Graciela Kaminsky, and Carment Reinhart. 2000. *Assessing Financial Vulnerability: An Early Warning System for Emerging Markets*. Washington: Peterson Institute for International Economics.
- Goldstein, Morris and Daniel Xi. 2009. *The Impact of the Financial Crisis on Emerging Asia*. Working Paper WP 09-11. Washington: Peterson Institute for International Economics.
- Goldstein, Morris, and Nicolas Véron. 2011. *Too Big To Fail: The Transatlantic Debate*. Working Paper WP 11-2. Washington: Peterson Institute for International Economics.
- Haggard, Stephan. 2000. *The Political Economy of the Asian Financial Crisis*. Washington: Peterson Institute for International Economics.
- Henning, C. Randall. 2011. *Coordinating Regional and Multilateral Financial Institutions*. Working Paper 11-9. Washington: Peterson Institute for International Economics.
- IEO-IMF (Independent Evaluation Office of the International Monetary Fund). 2003a. *Fiscal Adjustment in IMF-Support Programs*. Washington: International Monetary Fund.
- IEO-IMF (Independent Evaluation Office of the International Monetary Fund). 2003b. *IMF and Recent Capital Account Crises: Indonesia, Korea, and Brazil*. Washington: International Monetary Fund.
- IEO-IMF (Independent Evaluation Office of the International Monetary Fund). 2011. *IMF Performance in the Run-Up to the Financial and Economic Crisis: IMF Surveillance in 2004-07*. Washington: International Monetary Fund.
- IMF (International Monetary Fund). 1997. *IMF Approve Stand-by Credit for Thailand*. Press Release 97/37 (August 20). Washington: International Monetary Fund.
- IMF (International Monetary Fund). 2001. *International Financial Statistics* (January). Washington: International Monetary Fund.
- IMF (International Monetary Fund). 2008. *Iceland: 2008 Article IV Consultation* (December) Washington: International Monetary Fund.
- IMF (International Monetary Fund). 2009a. *GRA Lending Toolkit and Conditionality: Reform Proposals* (March 13). Washington: International Monetary Fund.
- IMF (International Monetary Fund). 2009b. *IMF Overhauls Nonconcessional Lending Facilities and Conditionality*. Public Information Notice 09/40 (April 3). Washington: International Monetary Fund.
- IMF (International Monetary Fund). 2012. *2012 Spillover Report* (July). Washington: International Monetary Fund.
- IMF (International Monetary Fund). 2013a. *Fiscal Monitor* (April). Washington: International Monetary Fund.
- IMF (International Monetary Fund). 2013b. *Global Financial Stability Report* (April). Washington: International Monetary Fund.
- IMF (International Monetary Fund). 2013c. *Greece: Ex Post Evaluation of Exceptional Access Under the 2010 Stand-By Arrangement* (May). Washington: International Monetary Fund.
- IMF (International Monetary Fund). 2013d. *Greece: Request for Extended Arrangement under the Extended Fund Facility* (March). Washington: International Monetary Fund.
- IMF (International Monetary Fund). 2013e. *Iceland—Concluding Statement of an IMF mission for the 2013 Article IV Consultation and the Third Post-Program Monitoring Discussion* (June). Washington: International Monetary Fund.

- IMF (International Monetary Fund). 2013f. *Sovereign Debt Restructuring: Recent Developments and Implications for the Fund's Legal and Policy Framework* (April). Washington: International Monetary Fund.
- IMF (International Monetary Fund). 2013g. *World Economic Outlook* (April). Washington: International Monetary Fund.
- Irwin, Neil. 2013. *The Alchemists: Three Central Bankers and a World on Fire*. New York: The Penguin Press.
- Johnson, Simon. 2013. Policy Advice and Actions during the Asian and Global Financial Crises. In *Responding to Financial Crisis: Lessons from Asia Then, the United States and Europe Now*, eds. Changyong Rhee and Adam S. Posen. Washington and Manila: Peterson Institute for International Economics and the Asian Development Bank.
- Krugman, Paul. 1979. A Model of Balance of Payments Crises. *Journal of Money, Credit, and Banking* 11: 311–25.
- Lagarde, Christine. 2013. The Global Policy Agenda Actions Needed to Stay Ahead of the Crisis. Speech at the Economic Club of New York (April 10). Available at www.imf.org (accessed September 4, 2013).
- Mishkin, Frederic S. and Tryggvi Thor Herbertsson. 2006. *Financial Stability in Iceland*. Reykjavik, Iceland: Iceland Chamber of Commerce.
- Mussa, Michael. 2010. *Beware of Greeks Bearing Debts*. Available at www.piie.com (accessed June 10, 2013).
- Noland, Marcus. 1996. *Restructuring Korea's Financial System for Greater Competitiveness*. Working Paper WP 96-14. Washington: Peterson Institute for International Economics.
- Noland, Marcus. 2000a. *Avoiding the Apocalypse: The Future of the Two Koreas*. Washington: Peterson Institute for International Economics.
- Noland, Marcus. 2000b. The Philippines in the Asian Financial Crisis: How the Sick Man Avoided Pneumonia. *Asian Survey* 40, no. 3: 401–12.
- Park, Donghyun, Arief Ramayandi, and Kwanho Shin. 2013. Why Did Asian Countries Fare Better during the Global Financial Crisis than during the Asian Financial Crisis? In *Responding to Financial Crisis: Lessons from Asia Then, the United States and Europe Now*, eds. Changyong Rhee and Adam S. Posen. Washington and Manila: Peterson Institute for International Economics and the Asian Development Bank.
- Posen, Adam, and Nicolas Véron. 2009. *A Solution for Europe's Banking Problem*. Policy Brief PB 09-13. Washington: Peterson Institute for International Economics.
- Pisani-Ferry, Jean, André Sapir, and Guntram B. Wolff. 2011. *An Evaluation of IMF Surveillance of the Euro Area: Final Report*. Bruegel Blueprint 14. Brussels, Belgium: Bruegel.
- Pisani-Ferry, Jean, André Sapir, and Guntram B. Wolff. 2013. *Financial Assistance in the Euro Area: An Early Evaluation*. Bruegel Blueprint (April). Brussels, Belgium: Bruegel.
- Radelet, Stephen and Jeffrey D. Sachs. 1998. *The Onset of the East Asian Financial Crisis*. Working Paper 6680. Cambridge, Massachusetts: National Bureau of Economic Research.
- Rhee, Changyong, Lea Sumulong, and Shahin Vallée. 2013. Global and Regional Financial Safety Nets: Lessons from Europe and Asia. In *Responding to Financial Crisis: Lessons from Asia Then, the United States and Europe Now*, eds. Changyong Rhee and Adam S. Posen. Washington and Manila: Peterson Institute for International Economics and the Asian Development Bank.
- Roubini, Nouriel and Brad Setser. 2004. *Bailouts or Bail-Ins? Responding to Financial Crises in Emerging Economies*. Washington: Peterson Institute for International Economics and Council on Foreign Relations.

- Summers, Lawrence H. 2000. International Financial Crises: Causes, Prevention, Cures. *The American Economic Review* 90, no. 2: 1–16.
- Takagi, Shinji. 2010. *Applying the Lessons of Asia: The IMF's Crisis Management Strategy in 2008*. ADBI Working Paper Series 206 (March). Tokyo, Japan: Asian Development Bank Institute.
- Transparency International. 2008. *Corruption Perceptions Index 2008*. Available at www.transparencyinternational.org (accessed May 29, 2013).
- Transparency International. 2012. *Corruption Perceptions Index 2012*. Available at www.transparencyinternational.org (accessed May 29, 2013).
- Truman, Edwin M. 1999. Lessons from the Asian Crisis. In *The Asian Financial Crisis: Origins, Implications, and Solutions* eds. William C. Hunter, George G. Kaufman, and Thomas H. Krueger. Boston: Kluwer Academic Publishers.
- Truman, Edwin M. 2005. The Euro and Prospects for Policy Coordination. In *The Euro at Five: Ready for a Global Role?* ed. Adam S. Posen. Washington: Peterson Institute for International Economics.
- Truman, Edwin M. 2009. Policy Responses to the Global Financial Crisis. Remarks presented at the Ninth Annual International Seminar, on Policy Challenges for the Financial Sector Emerging from the Crisis: Building a Stronger International Financial System, Board of Governors of the Federal Reserve System, World Bank, and International Monetary Fund (June 3). Available at www.piie.com (accessed June 15, 2013).
- Truman, Edwin M. 2010a. *The G-20 and International Financial Institution Reform*. Working Paper WP 10-13. Washington: Peterson Institute for International Economics.
- Truman, Edwin M. 2010b. The Role of the International Monetary Fund and Federal Reserve in the Stabilization of Europe. Testimony before the Subcommittee on International Monetary Policy and Subcommittee on Domestic Monetary Policy and Technology US House Financial Services Committee (May 20). Available at www.piie.com (accessed September 4, 2013).
- Truman, Edwin M. 2011a. *Asian Regional Policy Coordination*. Working Paper WP 11-21. Washington: Peterson Institute for International Economics. Reprinted in *Asia's Role in the Post-Crisis Global Economy*, eds. Reuven Glick and Mark Spiegel. 2012. San Francisco: Federal Reserve Bank of San Francisco.
- Truman, Edwin M. 2011b. *Three Evolutionary Proposals for Reform of the International Monetary System*. Extension of remarks at the Bank of Italy's Conference in Memory of Tommaso Padoa-Schioppa (December). Available at www.piie.com (accessed September 4, 2013).
- Uhide, Angel. 2013. The ECB Should Act to Avert the Risk of Deflation in the Euro Area. Peterson Institute for International Economics *RealTime Economic Issues Watch* (May 23). Available at www.piie.com (accessed May 23, 2013).
- Véron, Nicolas. 2007. *Is Europe Ready for a Major Banking Crisis?* Policy Brief 2007/03. Brussels: Bruegel.
- Véron, Nicolas. 2013. *A Realistic Bridge toward European Banking Union*. P Policy Brief PB13-17. Washington: Peterson Institute for International Economics.
- Véron, Nicolas, and Guntram Wolff. 2013. *From Supervision to Resolution: Next Steps on the Road to European Banking Union*. Policy Brief PB13-5. Washington: Peterson Institute for International Economics.
- Wei, Shang-Jin and Sara E. Sievers. 2000. The Cost of Crony Capitalism. In *The Asian Financial Crisis: Lessons for a Resilient Asia*, eds. Wing Thye Woo, Jeffrey D. Sachs, and Klaus Schwab. Cambridge, Massachusetts: MIT Press.
- Williamson, John. 2000. *Exchange Rates Regimes for Emerging Markets: Reviving the Intermediate Option*. Policy Analysis 60. Washington: Peterson Institute for International Economics.

Table 1 Pre-crisis macroeconomic indicators in Asia and Europe (percent of GDP)

Country	Current account	General government	
		Gross debt	Net lending (+) / borrowing (-)
Indonesia	-2.8	n.a.	0.6
Korea	-2.1	10	2.5 ^a
Malaysia	-7.2	42	1.7
Philippines	-3.5	61	0.0
Thailand	-7.1	15 ^b	2.9 ^c
Asia average	-4.5	32	1.6
Hungary	-7.8	62	-7.9
Iceland	-17.2	30	3.7
Latvia	-16.0	12	
Romania	-9.1	17	-1.8
Non-euro area average	-12.5	30	-1.7
Cyprus	-6.0	69	-2.6
Greece	-8.3	103	-6.4
Ireland	-2.5	27	2.0
Italy	-0.9	105	-3.8
Portugal	-9.8	61	-4.8
Spain	-7.2	43	1.1
Euro area average	-5.8	68	-2.4
Europe average	-8.5	53	-2.2

n.a. = not available

a. Data are only available for 1995 and 1996.

b. Data are only available for 1996.

c. Data are only available for 1995 and 1996.

Note: The averages shown are from 1994–96 for Asian countries and from 2004–06 for European countries.

Source: IMF *World Economic Outlook* Database, April 2013.

Table 2 Pre-crisis credit booms in Asia and Europe

Country	Increase in domestic credit (percent) ^a	Domestic credit as a percent of GDP	
		1993/2003	1996/2006
Indonesia	83	48	54
Korea	61	54	57
Malaysia	95	81	108
Philippines	119	45	67
Thailand	81	81	146
Asia average	88	62	86
Hungary	50	57	68
Iceland	225	130	305
Latvia	249	45	90
Romania	165	16	24
Non-euro area average	172	62	122
Cyprus	31	191	204
Greece	42	94	106
Ireland	98	116	180
Italy	22	103	113
Portugal	26	143	161
Spain	69	132	177
Euro area average	48	130	157
Europe average	93	110	153

a. 1993 to 1996 for Asian countries and 2003 to 2006 for European countries.

Source: IMF *International Financial Statistics* Database, March 2013.

Table 3 Real GDP growth in Asia and Europe (percent)

Country	Pre-crisis^a	Change from previous three years
Indonesia	7.9	0.7
Korea	8.3	1.0
Malaysia	9.7	0.2
Philippines	5.0	4.3
Thailand	8.0	-0.1
Asia average	7.8	1.2
Hungary	4.2	0.2
Iceland	6.6	4.4
Latvia	10.0	2.7
Romania	6.8	1.5
Non-euro area average	6.9	2.2
Cyprus	4.1	1.4
Greece	4.1	-0.5
Ireland	5.2	0.3
Italy	1.6	0.9
Portugal	1.3	0.7
Spain	3.6	0.5
Euro area average	3.3	0.5
Europe average	4.8	1.2

a. Average 1994 to 1996 for Asian countries and 2004 to 2006 for European countries.

Source: IMF World Economic Outlook Database, April 2013.

Table 4 Comparison of Asian and European crisis countries

Country	Pre-crisis share of world GDP ^a		GDP per capita 2006, current international dollars (PPP)
	Current international dollars (PPP)	US dollars	
Indonesia	1.40	0.70	3,400
Korea	1.80	1.90	24,600
Malaysia	0.50	0.30	12,700
Philippines	0.50	0.30	3,300
Thailand	0.90	0.60	7,700
Asia total/average ^b	5.00	3.80	10,300
Hungary	0.30	0.20	18,000
Iceland	0.02	0.03	37,100
Latvia	0.06	0.04	15,600
Romania	0.40	0.20	10,500
Non-euro area total/average ^b	0.70	0.60	20,400
Cyprus	0.03	0.04	26,300
Greece	0.50	0.50	27,000
Ireland	0.30	0.40	41,000
Italy	2.80	3.80	29,500
Portugal	0.40	0.40	21,600
Spain	2.10	2.50	28,900
Euro area total/average ^b	6.00	7.70	29,000
excluding Italy and Spain	1.10	1.40	29,000
Europe total/average ^b	6.80	8.30	25,600
excluding Italy and Spain	1.90	2.00	24,700

a. 1996 for Asian countries and 2006 for European countries.

b. Total for columns 2 and 3 and average for column 4.

Source: IMF World Economic Outlook Database, April 2013.

Table 5a Summary of official financial commitments in the Asian financial crises

Country	Other commitments						
	International Monetary Fund			Multilateral development banks		Bilateral	
	US dollars, billions	Percent of quota	Percent of GDP ^a	US dollars, billions	US dollars, billions	US dollars, billions	Percent of GDP ^a
Indonesia	11.3	557	5.0	8.0	15	34.3	15.1
Korea	21.0	1,938	3.7	14.0	20	55.0	9.6
Malaysia	0.0	n.a.	n.a.	0.0	0	0.0	n.a.
Philippines	2.0	240	2.2	n.a.	n.a.	2.0	2.2
Thailand	3.9	505	2.1	2.7	10	16.6	9.1
Total/average ^b	38.2	810	4.0	24.7	45	107.9	9.0

n.a. = not applicable.

a. GDP in 1996 US dollars at current prices and exchange rates.

b. Total for dollar figures and average, excluding Malaysia, for percentages.

Sources: IMF website (www.imf.org), Henning (2011), and Roubini and Setser (2004).

Table 5b Summary of official financial commitments in the European financial crises

Country	Other commitments						
	International Monetary Fund			European institutions ^a		Other ^b	
	US dollars, billions	Percent of quota ^c	Percent of GDP ^d	US dollars, billions	US dollars, billions	US dollars, billions	Percent of GDP ^d
Iceland	2.1	1,190	10.3	0.0	2.7	4.8	23.5
Hungary	15.6	1,015	10.1	8.5	1.3	25.4	16.5
Latvia	2.3	1,200	7.0	4.3	3.8	10.4	31.1
Romania	17.3	1,111	8.4	6.7	2.7	26.7	13.1
Subtotal/average ^e	37.3	1,129	9.0	19.5	10.5	67.3	21.0
Cyprus	1.3	545	5.9	11.7	0.0	13.0	59.0
Greece	63.1	3,750	19.6	255.4	0.0	318.5	98.7
Ireland ^f	30.1	2,322	13.4	53.6	6.4	90.1	40.1
Italy	0.0	n.a.	n.a.	0.0	0.0	0.0	n.a.
Portugal	37.6	2,306	15.8	73.3	0.0	110.9	46.6
Spain	0.0	n.a.	n.a.	121.8	0.0	121.8	8.2
Subtotal/average ^e	132.1	2,231	13.7	515.8	6.4	654.3	50.5
Grand total/average ^e	169.4	1,680	11.3	535.3	16.9	721.6	37.4

n.a. = not applicable.

a. European Financial Stability Facility, European Financial Stabilization Mechanism, European Stabilization Mechanism, European Investment Bank, and European Balance-of-Payments Assistance Facility.

b. Bilateral loans and the European Bank for Reconstruction and Development.

c. IMF quota at the time the program was approved, except from Greece in which case its larger program at the time of its second program is used.

d. GDP in US dollars at market prices and exchange rates for the pre-program year in the cases of Iceland (2007), Greece (2009), Ireland (2009), and Spain (2011).

e. Total for dollar figures and average, excluding Italy and Spain, for percentages, except for total commitments where Spain is included.

f. The tabulation does not include the €17.5 billion in support included in the Irish program to support Irish banks that was drawn from Ireland's own resources including its sovereign wealth fund.

Sources: IMF website (www.imf.org), website of European Commission, Economic and Financial Affairs (http://ec.europa.eu/economy_finance/assistance_eu_ms/index_en.htm), and Henning (2011).

Table 6 Estimated impacts of Asian and European crises on global growth (percent)

	Cumulative growth, pre-crisis estimates	Cumulative growth, post-crisis estimates	Difference: post minus pre
Asian crisis			
Country group:			
World	11.9	11.3	−0.6
Advanced	7.9	10.6	2.7
Emerging market and developing	17.5	12.5	−5
Developing Asia	20.6	17.0	−3.6
European crisis			
Country group:			
World	14.1	10.8	−3.3
Advanced	7.6	4.2	−3.5
Emerging market and developing	20.9	17.7	−3.2
Euro area	5.3	0.5	−4.8
European Union	6.1	1.4	−4.8

Note: The timeframe for Asia is 1997 to 2000. The timeframe for Europe is 2010 to 2013.

Sources: Pre-crisis Asia: IMF *World Economic Outlook*, May 1997, May 1998, and May 1999. Pre-crisis Europe: IMF *World Economic Outlook*, April 2011. Post crisis: IMF *World Economic Outlook*, April 2013.