

**FINANCIAL CRISES:  
NINE LESSONS FROM EAST ASIA**

Masahiro Kawai  
*Ministry of Finance  
Government of Japan*

Richard Newfarmer  
*World Bank*

and

Sergio L. Schmukler  
*World Bank*

**Abstract**

The 1990s have witnessed a surge in private capital flows to developing countries—and a surge in financial crises. The most severe and regionally extensive has (to date) been East Asia's. The last six years has produced a wealth of research that now allows us to abstract policy lessons from the East Asian crisis and the difficulties in implementing them. These lessons span crisis prevention, management and resolution, and building a new international financial architecture with a regional focus. Progress in these areas would have helped prevent, or at least minimize, both the East Asian crisis and more recent crises.

**Keywords:** Asian crisis, contagion, crisis prevention, crisis management, and crisis resolution

**JEL Classification Codes:** E44, E50, F30, F36, F41, and G15

### INTRODUCTION

As private capital flows to developing countries surged in the 1990s, financial crises in emerging market economies have occurred with disturbing and increasing regularity. The sudden cessation and then reversal of capital flows to Mexico in 1994 caused the first tremors in the global economy, leading to the devaluation of the peso and deep recession, with direct spillovers into Argentina (the Tequila crisis). The major financial earthquake in East Asia soon followed. The currency crisis in Thailand was rapidly transmitted to Indonesia, Malaysia, the Philippines, and Korea, and its impact ramified throughout the global economy. Since then the emerging markets have experienced a steady series of after-shocks: in 1998 and 1999 capital flow reversals induced currency devaluations in Russia (August 1998) and Brazil (January 1999), and most recently recession, devaluation, and default in Argentina (2002), and recessions and payments problems in Uruguay and Ecuador (2002). Brazil and Turkey (as of this writing) still hover perilously close to the precipice of crisis. Though the region has since recovered, East Asia's crisis remains the most severe in its depth and regional breadth.

Now six years distant, the East Asia crisis has provided a treasure trove of studies that illuminate various causes of crises, and, though they differ in emphasis, an emerging consensus points to four mounting vulnerabilities in Thailand, Indonesia, Korea and Malaysia.<sup>1</sup> First, the global economy spawned an unprecedentedly large surge in private capital flows in the 1990s, especially short-term flows, as deregulated banks in the rich countries scanned the globe for higher return opportunities, and East Asia looked particularly attractive with its low debt ratios, rapid growth, and stable exchange rates (e.g., see World Bank, [2000b and 2001]). Second, macroeconomic policies in East Asia took advantage of this boom to facilitate large inflows of short-term, unhedged, foreign currency-denominated capital, fueling a domestic credit boom and

even more rapid growth (see e.g., World Bank, [2000a]). Third, many countries had liberalized their domestic financial sectors, but without sufficient regulation, and domestic banks supplied cheap capital to already highly leveraged corporations that took on easily available credit (see Claessens, et al, [1998]). Finally, politics, at first stable, introduced new risks that culminated in important changes at precisely the time when internal financial vulnerabilities were becoming worrisome (see Haggard, [2000]). A combination of the first three factors led to over-investment in domestic non-tradable sectors—manifested as property price bubbles especially in Thailand and Malaysia—and in selected inefficient manufacturing sectors—as was done by Indonesian group firms and Korean *chaebol* firms. Availability of cheap capital that was poorly intermediated through weakly supervised and governed financial institutions allowed corporations to add debt to their already highly leveraged balance sheets. As one country entered crisis, investors examined other countries for similarities and shifted portfolios, or were compelled to do so as the first country's demise raised risk on the whole class of investment, producing contagion (see Calvo [1998] and Dornbusch, et al [2000]).<sup>2</sup> The fourth factor aggravated this process. The devaluation of the Thai baht in July 1997 thus triggered a gathering panic among investors that led to the most massive outflow of capital from any developing region in human history. More than \$100 billion were withdrawn from the ASEAN countries and Korea in the space of the 18 months after the Thai baht devaluation.

The East Asian experience has left in its wake an abundance of new research that allows not only a better understanding of the nature of financial crises, but begin to draw out generalized lessons for policy, associated trade-offs, and constraints to ready implementation. In this paper, we summarize the literature on what we believe are nine interrelated and general policy lessons from the East Asian crisis and we analyze the difficulties encountered in

establishing those policies. Abstracting general lessons is not easy because each crisis differs in its specific economic and political circumstances, its timing and the state of the global economy, and its associated policy causes and responses; this compels us to raise the discussion to a higher level of generality than would satisfy policymakers confronting a crisis, but it will tease out the important variables, literature and policy directions that they would have to consider. We consider the lessons into four sections preventing crises, managing crises, resolving the systemic consequences of crises, and constructing a new international financial architecture, including a regional focus. Table 1 presents a schematic overview.

### **PREVENTING CRISES**

In a world of free capital mobility, attacks on currencies can occur whenever confidence is lost. Moreover, a currency crisis in a foreign country can rapidly trigger a crisis at home. Crisis prevention measures attempt to lower the probability of having a crisis and to reduce ex-ante the risk factors.

In retrospect, three elements combined to build up East Asian vulnerability: the rise in external private indebtedness, mainly short-term and unhedged, the asset-liability mismatch in the financial system together with its low return intermediation, and the highly leveraged financial position of corporations. The first factor is related to macroeconomic policy, the second one to financial sector policy, and the third one to corporate governance. Each area provides a lesson for the future.

***Lesson 1: Avoid large current account deficits financed through short-term, unhedged private capital inflows.***

Several policy domains affect the net external liability position of a country and its propensity toward crises. In East Asia, it is instructive to review several interrelated

macroeconomic policies: foreign exchange reserves, fiscal and monetary policy, exchange rate policy, and policy toward the capital account.

*Foreign exchange reserve policy.* As capital movements have become larger, foreign exchange reserves have become an increasingly important line of defense. The adequacy of foreign exchange reserves can no longer be measured by their coverage of imports but by the magnitude of potential capital outflows. Guidotti [1999] concludes that reserves should equal the amount of capital contractually due in the coming year. But reserves should arguably be larger if current account deficits are large (e.g., more than 2 percent of GDP), if the exchange rate is fixed and hence more vulnerable to shocks, or if the economy has historical tendency toward instability, e.g., because of commodity dependence and chronic terms of trade shocks [World Bank, 2000b]. Needless to say, the optimal amount of reserves must also be judged against the opportunity cost of carrying them.

*Fiscal and monetary policy.* In the case of the affected East Asian economies, fiscal policy was disciplined and monetary policy was non-inflationary until the mid-1990s. But in Thailand, fiscal policy became pro-cyclical in an attempt to stave off a slowdown in the quarters immediately preceding the crisis. The country continued to face mounting current account deficits in 1996, investor perceptions began to shift against local assets, and capital inflows began to attenuate. Authorities tried to extend the growth cycle, but fiscal stimulus, instead of increasing output, was transmitted mainly to the balance of payments through rising imports and more outflows in the capital account, worsening the external balance and pressuring the peg (World Bank [2000a]).

With benefit of hindsight, we can now conclude that to reduce vulnerabilities and the probability of crisis in Thailand, macroeconomic policy in 1996 should have reigned in

aggregated demand, avoided excessive credit expansion in the domestic economy, and curtailed the excessive external reliance on foreign savings. This would have slowed the expansion, but reduced the extent of real effective overvaluation and the current account deficit, and slowed the build up of short-term external debt relative to foreign exchange reserves.<sup>3</sup>

Monetary policy should have maintained consistency with the *de facto* pegged exchange rate arrangement in the pre-crisis period. This would have implied lower credit growth and higher interest rates when capital inflows began to taper off. Restrictive monetary policy in the period immediately preceding the crisis, especially if coupled with a neutral or even contractionary fiscal stance, might have preempted the currency run that eventually came.

*Exchange rate policy.* Countries with large current account deficits are dependent on capital inflows to maintain their external balance. If investors lose confidence in a currency value, however, capital inflows can stop abruptly and capital outflows can take place in massive amounts. In the face of sudden shocks to capital flows and currency markets, the country may be forced to adopt a contractionary monetary policy and to curtail the economic activity sustained by capital inflows. It is therefore important to maintain a viable exchange rate regime, with a consistent monetary and fiscal policy framework in order to deter speculative attacks and thus avoid “sudden stops” (Calvo [1998] and Kawai [1999]). A viable exchange rate regime entail having sufficient flexibility to adjust to external shocks, which is typically obtained with some degree of exchange rate flexibility or with flexibility in domestic prices, including wages.<sup>4</sup>

In the case of East Asia, several economies had maintained stable exchange rates vis-à-vis the U.S. dollar until the crisis. For example, Thailand had its baht pegged to a basket of currencies, with the U.S. dollar having a dominant weight. Other countries also had their currencies *de facto* pegged to the dollar. This was widely perceived as an official guarantee to

minimize currency risk and to encourage trade, foreign direct investment (FDI), and other capital inflows. U.S. dollar appreciation since 1995, against currencies of other major industrialized countries, particularly against the Japanese yen, may have contributed to a perception of unsustainable exchange rates in East Asia.<sup>5</sup>

*Capital account liberalization.* The East Asian crisis has shown that capital account liberalization that provides financial institutions with access to cheap foreign savings can set the stage for asset-liability mismatches. Unfettered capital mobility may be dangerous if the regulatory and supervisory policy framework is weak and if domestic financial and corporate sectors cannot manage risks prudently.

Some countries have adopted explicit capital controls as ways to isolate the domestic economy from the volatility of global financial cycles (Calvo and Reinhart [2000]; Kawai [1998]; World Bank [2000b]). Restrictions on capital inflows usually have the objective of curtailing excessive short-term inflows through taxation of foreign loans with a short maturity (usually less than 12 months),<sup>6</sup> higher reserve or liquidity requirements (Dooley [1996]; Reinhart and Reinhart [1999]), or imposition of outright controls. The case of the Chilean controls was the one that received most attention. The regulation required that to bring short-term capital to the country, a certain proportion of the funds had to be put aside in the form of non-remunerative reserves, thereby raising the cost of borrowing short-term foreign capital. As discussed below, a similar type of inflow control can be exercised as part of prudential regulation over banks and corporations, these regulations can have the same effect as the capital controls.

*Pitfalls.* It has not been easy to implement these policies. Regarding foreign exchange reserves, it is difficult to calculate the right amount of reserves needed. It is fair to say that policymakers, including international financial institutions, have tended to underestimate the

amount needed to cope with external vulnerability. Also, whenever the volume of reserves is perceived to be high, there are large pressures to use them for many urgent needs, rather than accumulating to withstand eventual speculative attacks.

With respect to monetary and fiscal policy, though it would be ideal to follow counter-cyclical policies, there are several obstacles to do so. First, it is not straightforward to determine in which part of the cycle the economy is. Second, there are few political economy incentives to adjust during boom years. One way to achieve these policies is to have a pre-determined set of rules that bind policymakers (though these rules can always be changed).

Regarding capital controls, their effectiveness seemed to progressively diminish as investors learn of ways to circumvent the legislation, requiring successive efforts at expanding the comprehensiveness of the control regime. The ways in which controls are circumvented and become ineffective over time have been documented in a series of studies (see Edison and Reinhart [2001], Edwards [1999], Gallego et al. [1999], and Kaminsky and Schmukler [2001]).

***Lesson 2: Aggressively regulate and supervise financial systems to ensure that banks manage risks prudently.***

In East Asia, in the run up to the crisis, banks developed large asset-liability mismatches—unhedged foreign exchange borrowings invested in non-tradable sectors and short-term funds lent long into property—all of which left banks vulnerable to exchange depreciations and to interest rate surges. This reflected the fact that domestic financial systems were not well-regulated or governed when capital account liberalization was accelerated in the first half of the 1990s. Regulatory and supervisory frameworks over financial institutions were weak in risk-management and the capital base—together with loan classification and loan loss provisions. Moral hazard was created because of the explicit or implicit government guarantees to individual



financial institutions (see Demirguc-Kunt and Detragiache [1998]; Eichengreen and Rose [2000]; and Goldstein and Turner [1996]).

Having a resilient and robust financial sector is key to avoid crises. First, as a preventive measure, countries with resilient and robust financial sectors will probably suffer less from contagion. Second, these countries will have more flexibility to cope with external shocks and to take corrective measures during a crisis. Countries with a solvent banking sector and low corporate leverage ratios will be able to raise interest rates to contain speculative currency attacks.<sup>7</sup> Countries with large foreign exchange reserves and access to contingent liquidity facilities will be able to inject liquidity in the system, avoiding credit squeeze and bank runs.

Policies that can achieve this financial structure include: prudential regulation of asset-liability mismatches and portfolio and loan standards that apply internationally accepted norms, capital adequacy regulations of at least those required under Basle standards, clear governance rules to prevent insider and group lending not subject to loan evaluation and creditworthiness and standards, transparency for investors and depositors through mandatory public disclosure of audited financial statements, and deposit insurance limited to a minimal share of private liabilities to bound government contingent liabilities in event of crisis, and share risk with investors and depositors (see, for example, Stiglitz and Bhattacharya [2000]).<sup>8</sup>

At least two clarifications are warranted with respect to these policies. First, a prudential regulation can be used as a complement to capital controls, with the government requiring commercial banks to put aside a certain proportion of the short-term funds borrowed abroad in the form of reserves. The idea behind this type of controls is to lengthen the maturity structure of capital inflows by making short-term borrowing from abroad more expensive than long-term borrowing, in light of the view that short-term capital inflows can be risky. Second, the limited

nature of the deposit insurance is intended to reduce moral hazard. If a commercial bank makes risky investments then depositors may shift their deposits away from such banks to less risky banks, thereby disciplining the behavior of both commercial banks and depositors. Deposit insurance can limit the disciplinary effect of deposit shifts, as depositors do not need to respond fully to bank risk taking. A limited, as opposed to a broad, deposit insurance would circumscribe the potential reduction of market discipline.

*Pitfalls.* As a measure to manage capital flows, prudential regulation can be less distortionary and less subject to evasion than other tools like capital controls, but it also tends to be less comprehensive. As discussed below, prudential regulation over financial institutions does not prevent direct corporate borrowing of the type prevalent in Indonesia, but it does wall off the financial sector from the largest contingent risk to the treasury. Another potential difficulty of supervising the financial system is that developing countries do not usually have the expertise or enough resources to hire good supervisors (Barth, Caprio, and Levine [2002].) To complement the oversight of the financial system by regulators and supervisors, countries can use markets by encouraging market discipline and other market participants like rating agencies (World Bank [2001]). However, market discipline requires access and transparency of information, such that the problems of asymmetric information are minimized. Perhaps, more effective surveillance through the IMF's Article IV consultation might help in achieving more transparency. The issue of transparency is also crucial for the corporate sector as discussed in the next lesson.

Regarding prudential regulation over financial institutions, there are costs to this type of policies. Important ones include: less comprehensiveness without covering direct corporate borrowing, higher domestic short-term interest rates, and possible evasion of the controls if imposed for a long period of time. Regarding deposit insurance, though government can set up

limited deposit insurance schemes ex-ante, they are seldom credible in developing countries due to the systemic nature of crises and due to the limited funds available to back the deposit insurance schemes (Martinez Peria and Schmukler [2001]).

***Lesson 3: Put in place incentives for sound corporate finance so as to avoid high leverage ratios and excessive reliance on foreign borrowing.***

The experience in East Asia shows that highly leveraged and vulnerable corporate sectors were a key determinant of the depth of the crisis. As economic growth remained high, it concealed the negative effects of inefficient resource allocation while insider financial flows without due diligence did not create problems. But as the economies went into crisis, the problems associated with bad corporate governance were exposed. Currency devaluation suddenly inflated the size of external debt (measured in terms of the domestic currency) and debt service obligations, and high interest rates also sharply increased domestic debt service obligations of the corporations, thereby both driving the domestic corporations into financial distress. These vulnerabilities affected the banks with exposures to the corporations. This created a liquidity crunch and deepened the recessionary pressures, which in turn hurt the corporate sector even more. The presence of a disciplined corporate sector with sustainable debt-to-equity ratios is thus important to weather exchange rate and interest rate shocks. Several building blocks are essential to an incentive framework for sound corporate finance: clear rules of corporate governance, improved competition policies, deep corporate capital markets, and information transparency.

*Corporate governance.* New rules of corporate governance must be established to reduce conglomerate structures, that is, concentrated holdings in a few families, corporate groups (a la *chaebols*) and amalgamated banks, which create a complex web of insider financial flows with

minimal due diligence in lending and inadequate corporate oversight. Rules that require good accounting, auditing and information disclosure, protect minority shareholders and strengthen creditor rights can prevent the build up of huge debt positions on narrow capital positions.

*Competition policy.* Improvement of competition policies both in capital markets and in product/factor markets can also strengthen corporate discipline. In addition, creating and enforcing domestic bankruptcy legislations would strengthen corporate governance. Though greater competition does not completely eliminate corporate misbehavior, as evidenced by the recent Enron-like events in the US, it calls for greater efficiency and better resource allocation due to market pressure for firm survival, thus limiting the extent of misbehavior.

*Corporate equity and bond markets.* One of the gaps in the financing and governance regimes in crisis-affected East Asia was the stunted development of corporate equity and bond markets. Equity markets are an important source of capital, but the reluctance of family owners and insiders to dilute their ownership share often fed their decision to seek easy bank financing, often from banks they controlled. At the same time, the absence of adequate disclosure and other protections for minority shareholders has led many investors to eschew investment in their domestic markets. Similarly, bond markets provide constant and instant market evaluation of debt value and, hence, provide an essential signaling function to financial investors. In the absence of bond markets, however, banks had no reason to market their loans to corporations, and corporations had one less reason to alter their performance to become more efficient. Corporations could thus develop unsustainable, high debt-equity ratios. The policies that might help develop corporate equity and bond markets include: regulatory capacity to implement full disclosure and contract enforcement, protection of minority shareholder rights and bondholder

rights, and neutral tax policies to eliminate any bias in favor of bank finance over capital market finance.

*Information disclosure.* Much of the over-lending prior to the East Asian crisis might not have occurred had international lenders correctly appraised the actual balance sheets of borrowing corporations. Many investors tried to undertake due diligence, but without accurate information. Because information was costly to gather, many investors did not spend resources to obtain valuable, but costly, information, relied on superficial reviews by others, and simply followed the herd. Better information disclosure can help mitigate this problem, particularly among relatively uninformed international investors, and can guide investors to efficient investment decisions, if sufficient incentives are created to use such information.

*Pitfalls.* Establishing policies for obtaining adequate corporate governance, fostering competition, developing capital markets, and encouraging information disclosure might be more difficult than it sounds. As Rajan and Zingales [forthcoming] argue, well-established firms may oppose the development of the financial system, as it breeds competition and reduces their advantage. Moreover, in the post-Enron period, it is now clear that putting a reporting legislation in place, adopting accounting and auditing standards with international “best practices,” and having competitive accounting/auditing industries would not be enough. Rather, policymakers have to ensure adequate oversight and enforcement, and pay due attention to the incentives governing both the auditors and the firms—and even these may not be sufficient to guarantee full information disclosure. Finally, capital market-based finance in developing countries can lead to a short-term financial structure, which might reduce productive investment. Still, many emerging market economies are heavily bank-based and short-termism can also occur in bank-based system.

## MANAGING CRISES

Once a country is affected by a crisis, the policy objective must focus on preventing the crisis from developing into a more serious economic and social crisis with systemic proportions. Policy options, however, are highly constrained by its initial conditions, including the initial level of public sector debt, fiscal policy headroom, the composition of domestic- and foreign-currency debt owed by private financial institutions and corporations, bargaining powers of, and relationships between, domestic debtors and domestic and foreign creditors, and the government's relations with foreign creditors. In general, policies that restore the country's credibility should be pursued. Strategies for crisis management include both international and national responses. International responses include: provision of international liquidity from outside (such as through the IMF) and internationally coordinated private sector involvement. National responses include: appropriate monetary and fiscal policy, and possible involuntary private sector involvement—or unilateral standstills or capital outflow controls.

***Lesson 4: Mobilize timely external liquidity of sufficient magnitude in a context of sound policies to restore market confidence.***

In the face of a crisis, whether induced by fundamentals or non-fundamental herd behavior, governments have no choice but to swiftly seek liquidity to staunch the run on its domestic assets. Availability of large amounts of liquidity to rapidly head off currency crises is an obvious benefit if they most likely result from irrational herd behavior. This liquidity usually comes from the IMF. Given the recent magnitude of capital outflows, governments of crisis-affected countries could be faulted for not recognizing the seriousness of the crisis or not moving rapidly to bring in the IMF.

International interventions, however, have received criticisms from two different camps. One camp of critics who argue that the IMF should play an international lender of last resort function insists that the amount of international liquidity provided so far has been too small and often too late to contain a crisis or contagion. According to this view, to prevent a liquidity crisis from evolving into a serious solvency crisis, international liquidity must be provided quickly and abundantly. Another camp of critics who argue that IMF interventions create moral hazard problems insists that the rescue packages may create perverse incentives that heighten risk of crisis: for governments to run excessively risky policies and for international investors to underestimate the true risk of investing in emerging markets [Krugman, 1998]. To minimize potential moral hazard, IMF interventions should be contingent upon considerable adjustment efforts on the part of the crisis country as well as appropriate burden sharing on the part of international investors.<sup>9</sup> The latter, called “private sector involvement,” forces international investors to share the costs as penalty for imprudent risk taking.

*Pitfalls.* Though intellectual support to transforming the IMF into a genuine international lender of last resort is strong (provided that the potential for moral hazard is minimized), the G-7 countries have found it impractical and unrealistic due to the need to dramatically increase the amount of resources available in times of crises and contagion. The international community instead has taken an incrementalist approach to liquidity enhancement through the creation of the Supplemental Reserve Facility (SRF) and the Contingent Credit Line (CCL). Nonetheless, no country has decided to use the IMF CCL as there is clearly an incentive compatibility problem. As long as the CCL is a voluntary arrangement, no country would be interested in agreeing to the CCL because of the fear of being perceived as “problematic.” If the CCL is made a mandatory arrangement for all emerging market economies (just like deposit insurance is for all commercial

banks), however, then many economies would wish to be certified by the IMF as “good” and, hence, eligible for CCL arrangements. However, some economies would inevitably fail to be certified as “good.” Economies that are initially certified as “good” may also slip to a “bad” status at a later stage, which would send the signal that the country in question has serious problems. Since it is impossible for the IMF to require those “bad” economies to exit or to refrain from borrowing abroad—which is possible in the case of “bad” commercial banks because the regulator can take away the bank licenses—, these potentially “bad” economies would certainly object to the introduction of the CCL.

***Lesson 5: There is no one-size-fits-all prescription for monetary and fiscal policy in response to crises.***

The effects of monetary and fiscal policy had been at the center of the policy debate during the early phase of the East Asian crisis. The debate focused on the issue whether contractionary monetary and fiscal policy could stabilize financial markets or send the economy into a profound collapse in output and financial markets.

*Monetary policy: “Your money or your banks.”* Contractionary monetary policy raises interest rates on domestic-currency denominated assets and increases the cost of speculation, thereby discouraging capital outflows or encouraging inflows. Moreover, a contractionary monetary policy is a signal to markets of the government’s willingness to defend the exchange rate. However, this creates a dilemma. High interest rates debilitate a weak banking sector and increase the cost of borrowing and debt servicing for indebted corporations.<sup>10</sup>

The evidence provides mixed results in the policy debate. See, for example, Baig and Goldfajn [2002], Kaminsky and Schmukler [1999], and Kraay [forthcoming]. In economies with heavily leveraged corporations and weak banks, tightening monetary policies entails severe



tradeoff between maintaining the value of currencies and maintaining the solvency of the real and financial sectors. If corporations are highly indebted in domestic currency, as was the case with Korea, a high interest rate is detrimental to the corporate sector. If corporations are highly indebted in foreign currency, as was the case with Indonesia, currency depreciation is detrimental to corporate health. Therefore, a high interest rate policy that attempts to support the exchange rate makes sense if the country's external debt is high and domestic debt is low, and vice versa. Governments in East Asia under these circumstances vacillated between tightening monetary conditions to protect the exchange rate at the cost of impending systemic bankruptcies and providing liquidity to banks that are stressed at the cost of plummeting exchange rates and inflationary surges.<sup>11</sup>

*Fiscal policy: "Can you finance it?"* Supporters of a tight government budget argue that this generates credibility by signaling to investors a willingness to control inflation, facilitate current account adjustment (through contractionary impacts), and mobilize public resources for financial sector restructuring—to cover any new debt burden that may result from deposit guarantees, bank recapitalization and assumption of other financial sector liabilities. Others argue that tight fiscal policy aggravates the crisis by further reducing aggregate demand in addition to the effects of the devaluation that usually accompany crises. Reducing net public spending thus intensifies the vulnerabilities of the banking and corporate sectors, worsening the emerging crisis.<sup>12</sup>

The appropriate policy stance depends on three factors: the cause of the crisis, the fiscal headroom available pre-crisis, and the willingness of the private sector to finance government deficits. When the crisis country has a favorable fiscal position pre-crisis, low public sector debt and hence credible headroom for fiscal policy, as well as large domestic savings that can be

tapped to finance a budget deficit, the government has the luxury of a more expansive fiscal policy to support aggregate demand and to provide leeway to vulnerable banks. Contractionary fiscal policy makes sense if the cause of the crisis is government overspending and if the economy's activity level is not severely damaged. When the government has little domestic fiscal headroom or faces constraints to external financing on market terms, the country can still have some access to resources from the multilateral development banks (MDBs)—such as the World Bank, the Asian Development Bank and the Inter-American Development Bank.<sup>13</sup>

*Pitfalls.* Perhaps, the major drawback of this lesson is that the disagreement about which policies to pursue increases in the midst of crises, making it difficult to implement the right policies promptly and leading to trials and errors that can be costly. Moreover, pursuing economic adjustments at times of crises can be politically and socially costly. Finally, the arguments above collectively suggest that the best mix of monetary, exchange rate, fiscal, and debt policies depends on the structure of public and private debt, the degree of external support, and, importantly, domestic politics [Haggard 2000]. Therefore, there is no single painless policy that will quickly restore investor confidence.

***Lesson 6: Bailing-in private international creditors at times of crisis is essential; in those cases when official resources are limited relative to the magnitude of the crisis and private creditors are not amenable to coordination, some involuntary private sector involvement may be necessary.***

When IMF liquidity support is provided in response to a crisis, it is essential to involve private international creditors by encouraging them to agree on a “standstill,” which entails a suspension of payments on external debt and a debt restructuring negotiation that may eventually lead to rollover, extension of maturities, and interest or debt reductions. In the case of

commercial bank loans, coordination between a limited number of international creditor banks and domestic debtor banks can relatively easily result in an agreement on temporary standstills on repayments.<sup>14</sup>

Official standstill provisions in the form of a temporary suspension of debt payments can constitute an integral part of crisis management [World Bank, 1998a]. This procedure functions as a floodgate that helps stop the decline in the currency value and enables the authorities to buy time to put in place a credible adjustment program and to organize creditor-debtor negotiations. This arrangement, if combined with appropriate, early debt workout agreements, could result in better outcomes for both the debtor economy and the creditors.

To facilitate sovereign debt resolution, two approaches have been proposed: the contractual approach and the statutory approach. The contractual approach suggests the inclusion of collective action clauses in sovereign bond contracts so as to allow quick and orderly processes of bond restructuring in the event of insolvency. The statutory approach, notably the so-called “sovereign debt restructuring mechanism” proposed by Krueger [2002], requires legal changes or treaties to allow all types of sovereign debt to be resolved in the event of a debt sustainability crisis. Some important progress has been made in the area of collective action clauses. This practice needs to go beyond sovereign bonds and cover private debt because of the rising importance of private-to-private investment, as was the case in Asia.

*Pitfalls.* Bailing-in the private sector is not always easy. First, in the case of emerging economy bonds, agreeing on standstills in the event of emergencies would be more difficult because of a large number and dispersion of bondholders involved. This difficulty is real because most of the financial flows to emerging markets now take the form of bond issues. For such bonds, developing collective action clauses or debt restructuring mechanisms that would obligate

bondholders to accept rules of the game—including standstills, rollovers, and restructuring—because they enhance predictability and pace of debt restructuring in the event of a crisis. Still, agreement on these mechanisms is not easy to achieve across market participants in different parts of the world. A second difficulty of bailing-in is that it may be hard to adopt a rules-based system because of the specific nature of country and market circumstances. Until international bankruptcy procedures are put in place, official debt standstills had better be invoked on a case-by-case basis.

## **RESOLVING THE SYSTEMIC CONSEQUENCES OF CRISES**

The final focus of policymakers should be to strengthen crisis resolution mechanisms that would create conditions for early resolution of the systemic consequences of a crisis and initiation and acceleration of the recovery process. Such mechanisms include the establishment of frameworks for dealing with nonviable banks and non-bank financial institutions (NBFIs), the strengthening of domestic corporate insolvency procedures, the development of international debt-restructuring arrangements—as mentioned in Lesson 6—and the improvement of the social safety net. The basic frameworks of these mechanisms need to be put in place before a systemic crisis occurs, i.e., at normal times, rather than at times of a crisis because their designing and development take time.

***Lesson 7: Move swiftly to establish domestic and international resolution mechanisms for impaired assets and liabilities of nonviable banks and corporations.***

First, in East Asia domestic procedures of banking sector resolution were often inadequate. Resolution of weak banks and NBFIs should involve the following procedures: diagnostic reviews of bank portfolios that are based on internationally accepted classification rules and accounting principles, identification of viable and nonviable banks, resolution of nonviable

banks—liquidation, closure, temporary nationalization, merger and acquisition, etc.—with a view to protect depositors and viable corporate borrowers, establishment of official asset management companies (AMCs) to carve out non-performing loans (NPLs) from weak or closed financial institutions, and recapitalization of viable banks after full provisioning and reevaluation of NPLs at fair market prices and realistic recovery rates. Emerging market economies must introduce such resolution procedures so as to effectively resolve the systemic impacts of a crisis and to accelerate the recovery process, with a medium-term objective of restoring healthy financial and corporate sectors, within a longer-term prospect of reforming the financial and corporate structures.

Second, in East Asia domestic insolvency procedures of corporations were also inadequate for private creditors and debtors to reach agreements. Insolvency procedures include the establishment of effective bankruptcy, reorganization and foreclosure laws for creditors wishing to take legal action to recover assets, creation of enabling environments for corporate restructuring, the introduction of “London rules” type, voluntary out-of-court frameworks for corporate restructuring, and the empowerment of the official AMCs to dispose of and restructure the acquired assets and/or debtor corporations. Enabling environments intend to provide creditors and debtors with sufficient incentives (sticks and carrots) to implement voluntary workout through eliminating legal, tax, and regulatory impediments to, or introducing tax or other incentives for, corporate restructuring. The presence of deep capital markets is also helpful in facilitating corporate restructuring through securitization of corporate assets and price discovery in the market.

Finally, internationally supported arrangements for orderly debt workout must be developed to facilitate efficient external-debt restructuring in the event that debtors become

insolvent or cannot meet debt-servicing obligations to their creditors. These arrangements are designed to enable debtors and creditors to share the costs of crisis resolution, rather than leaving borrowers with all of the consequences, and would take the form of a contractual or a statutory approach as described in Lesson 6. Though usually costly and time consuming, these procedures are critical institutional mechanisms to avoid more costly solutions and would become truly effective if extended from sovereign to private debt. The East Asian experience shows that as long as a country's external debt, particularly private corporate debt, is not resolved, its banking sector remains unprofitable and weak, economic stagnation tends to procrastinate, and the economic recovery is likely delayed.

*Pitfalls.* The drawback with these lessons is that the mechanisms mentioned above should be established before crises happen. Experience shows that these mechanisms are rarely set up ex-ante, as the incentives are not present to prepare for a bad time. Once a crisis erupts, liquidation of banks and corporations tends to delay, because of the difficulty to disentangle liquidity from solvency crises. Also, at that time, it is hard to establish those resolution mechanisms, as authorities are focused on managing short-run problems.

Even introducing such mechanisms ex-ante would not be easy. They would certainly require financial, accounting, legal, and judiciary expertise, which is lacking in most emerging market economies. Strong enforcement of laws through the judiciary process and the presence of effective regulatory and supervisory frameworks would demand such expertise. The government would have to pay very high salaries to judges and other public officers overseeing the regulatory and supervisory frameworks in order to attract highly competent experts and to avoid corruption.

***Lesson 8: Cushion the effects of crises on low-income groups through social policies to ameliorate the inevitable social tensions associated with adjustment.***

The disruption and very large social costs witnessed in the aftermath of economic crises have highlighted the need to address the social vulnerability exposed by the crisis. Without such attention, the crisis would be accompanied by excessively large adjustment costs, especially for the poor and the vulnerable segments of society with long-term, and often irreversible impacts such as the destruction of human capital, social institutions, and political stability. Reduction of social costs and an increase in resilience to crisis require a broad approach in developing countries, spanning from the creation of market insurance against job or income losses—e.g., unemployment insurance and protections to individual savings of the poor—to self-protection against becoming poor—e.g., health maintenance and increased education. [See de Ferranti, et al., 2000; and World Bank, 2000c.] The most important step that each developing country can take is to establish an institutional framework to minimize the risks and severity of economic downturns at times of crises, and then respond to the particular needs of the poor during crises.

Policies include: better information on the poor and their exposure to economic risk, targeting of scarce fiscal subsidies on programs for the poor, especially during crises, improving evaluation of spending programs to ensure a positive pro-poor focus, particularly in health and education, and automatic programs—such as unemployment insurance or stay in school programs—which provide more predictable institutional responses to economic downturn, regardless of cause.

These policies can be financed typically through loans made by the multilateral development banks, such as the World Bank, the Asian Development Bank and the Inter-

American Development Bank, and by bilateral donor countries, like the New Miyazawa Initiative that was extended to cover fiscal needs for crisis resolution during the Asian crisis.

*Pitfalls.* It is often difficult to give social policies the deserved priority during crises because budgets tend to be under pressure. Moreover, loans by the regional and multilateral development banks to social programs during crises tend to be tied to IMF conditionality, and it typically takes time for countries to reach an agreement with the IMF, which hampers disbursements in these programs. Even when early disbursements are possible, the lack of reliable institutions that effectively manage and oversee social spending can reduce the impact of the program.

### REGIONAL AND GLOBAL FRAMEWORK

Although most attention has focused on the global and domestic policy reforms, developing an effective regional framework can help complement a new international financial architecture and strengthen domestic policy reforms. This is particularly the case when economies in a region are interdependent among one another, as in East Asia, in trade, FDI, financial flows, and macroeconomic activity.

***Lesson 9: Improve mechanisms for crisis prevention, management, and resolution at the regional level in a way consistent with improvements in the global framework.***

Because an economic contagion tends to begin with a geographic focus, a regional framework for financial coordination to address crisis prevention, management, and resolution is logical. An efficient cooperative framework for regional financial management can be designed to cope with currency crises, contagion, and simultaneous economic contraction.<sup>15</sup> At the same time, such a regional framework must be consistent with a global framework in order to secure



efficient response to, and management and resolution of, crises because contagion can be also global and international creditors from outside the region need to be involved.

A framework for regional financial coordination may include four issues, covering policy dialogue for regional economic surveillance and monitoring, schemes to augment international liquidity in times of crisis, monetary and exchange rate policy coordination, and programs to assist crisis-affected countries to resolve the systemic impact of the crisis and accelerate the recovery process.

First, regional policy dialogue for economic surveillance/monitoring is instrumental to crisis/contagion prevention. The process should encourage information exchanges on macroeconomic and structural issues, including fiscal, monetary and exchange rate policies, capital flows, domestic and external debts, and financial sector conditions, and promote “peer pressure” to work so as to induce good macroeconomic and structural policies that are conducive to stable external accounts and currencies. The East Asia region has established several such forums, including the Manila Framework Group, the ASEAN surveillance process, the ASEAN +3 Economic Review and Policy Dialogue (ERPD) process, and the Executives Meeting of East Asia-Pacific Central Banks (see Kuroda and Kawai [2003]). The most active among these is ASEAN+3, i.e, ten ASEAN members plus China, Japan and Korea, and its ERPD process focuses on regional surveillance that is intended to apply peer pressure for better policymaking among the members.

Second, to contain the potential potential for regional contagion and to avoid possible delays in disbursements of international liquidity in times of crises and to augment globally available resources, a regional financing facility can play a complementary role. Such a facility, however, needs to be designed to minimize moral hazard problems as well as to be consistent

with a global framework in order to ensure policy coherence and exploit the synergy. The East Asia region has developed a network of currency swap arrangements under the Chiang Mai Initiative, which may be invoked to support a member currency that is under speculative attack, contagious impact, or in a crisis situation.

Third, for economies that are highly integrated with, or competitive or complementary to, one another in trade and FDI and, hence, have high degrees of macroeconomic interdependence, intra-regional exchange rate stability is a public good due to the spillover effects. Intra-regional exchange rate stability requires the regional economies to develop greater exchange rate and monetary policy coordination. However, the East Asia region has been slow in developing formal mechanisms to ensure intra-regional exchange rate stability.

Fourth, in the face of a systemic crisis in the banking, corporate, and social sectors, mobilizing fiscal resources is essential to quickly resolving the crisis. Fiscal resources that are needed to recapitalize weak banks, facilitate corporate debt restructuring, and increase social safety net spending may be limited due to the lack of domestic fiscal headroom, lack of access to international capital markets, and lack of MDB resource availability. Hence, regionally concerted action to mobilize such resources, particularly from the core countries in a region, would contribute greatly to crisis resolution, if done consistently with global frameworks.<sup>16</sup>

*Pitfalls.* Setting up regional arrangements is not easy and has been opposed by some members of the international financial system. For example, an early attempt to set up an Asian Monetary Fund (AMF) was met by strong oppositions by the United States and the IMF on grounds of moral hazard and duplication. They argued that an East Asian country hit by a currency crisis would bypass the tough conditionality of the IMF and receive easy money from

the AMF, thereby creating potential for moral hazard; and that an AMF would be redundant in the presence of an effective global crisis manager, the IMF.

Though the idea of establishing an AMF was abandoned, it is becoming increasingly feasible. First, because of the high frequencies of emerging market crises, international liquidity needs have expanded while the capacity of the IMF to lend has not risen substantially. AMF resources can complement IMF resource. Second, regional economic interdependence has deepened significantly over the last decade, calling for a need to ensure stable intra-regional exchange rates, and thus an institutional mechanism for it. Third, the region is strengthening the regional surveillance mechanism through ASEAN+3, which is expected to augment the region's capacity to analyze the risks of regional economies, formulate adjustment policies in the event of crises, and monitor the implementation of necessary policies. This would reduce the moral hazard problem associated with AMF lending to a crisis country. Fourth, the CMI may evolve into a more formal institution of reserve pooling. Fifth, potential borrowers may have incentives to participate in the regional surveillance and peer pressure process, because doing so would make them eligible to receive short-term liquidity at the time of currency and balance of payments difficulties. Finally, China, which was not supportive of the idea of creating an AMF in 1997, is now changing its stance.

### **CONCLUDING REMARKS**

Financial crises in emerging market economies can originate either domestically or externally, and either from bad fundamentals or herd behavior. Crises associated with sharp reversals of capital flows are likely to be an enduring feature of the global financial landscape for some time to come. This article has summarized what we believe are now the nine lessons from the East Asian crisis. If heeded by policymakers in developing countries, rich countries, and the

international financial institutions, these lessons could significantly reduce the frequency and damage from capital flow reversals and contagion. The paper has also highlighted the lack of incentives and difficulties in implementing these lessons, which might explain why some of these policies have not been adopted. Still, though easier said than done, the international community should study these issues in a systematic way to better prepare for prevention, management, and resolution of future crises and contagion.

**Table 1. Summary of Nine Policy Lessons**

Objective	National Measures	Global Measures	Regional Measures
Preventing or reducing the risk of crises	1. <i>Avoid large current account deficits financed through short-term, unhedged capital inflows.</i>		9. <i>Improve mechanisms for crisis prevention, crisis management, and resolution at the regional level in a way consistent with the global framework.</i>
	<ul style="list-style-type: none"><li>Secure adequate foreign exchange reserves</li><li>Maintain sound fiscal and monetary policy</li><li>Adopt a viable exchange rate regime</li><li>Establish orderly capital account liberalization</li></ul>		
	2. <i>Aggressively regulate and supervise financial systems to ensure that financial institutions manage risks prudently.</i>		
	<ul style="list-style-type: none"><li>Strengthen regulatory and supervisory frameworks over financial institutions</li><li>Allow prudential regulation as financial safeguards and cushions</li><li>Improve information transparency</li><li>Introduce limited deposit insurance</li></ul>	<ul style="list-style-type: none"><li>Strengthen IMF surveillance</li><li>Tighten regulations over financial institutions that lend to highly leveraged institutions</li></ul>	
	3. <i>Put in place incentives for sound corporate finance so as to avoid high leverage and excessive reliance on foreign borrowing.</i>		
	<ul style="list-style-type: none"><li>Establish good corporate governance</li><li>Introduce greater competition to product, factor and financial markets</li><li>Develop capital market-based finance</li><li>Better information disclosure</li></ul>		
Managing crises	4. <i>Mobilize timely external liquidity of sufficient magnitude.</i>		<ul style="list-style-type: none"><li>Establish a regional facility for liquidity support</li></ul>
	<ul style="list-style-type: none"><li>Restore market confidence</li><li>Reduce moral hazard problems</li></ul>	<ul style="list-style-type: none"><li>Strengthen IMF liquidity support</li></ul>	
	5. <i>Do not adopt a one-size-fits-all prescription for monetary and fiscal policy.</i>		<ul style="list-style-type: none"><li>Strengthen regional capacity to formulate needed adjustment policies</li></ul>
	<ul style="list-style-type: none"><li>Adopt appropriate monetary and fiscal policy contingent on the specific conditions of the economy</li></ul>		
	6. <i>Bail-in private international investors.</i>		
<ul style="list-style-type: none"><li>Impose official stand-stills</li><li>In extreme cases, allow involuntary private sector involvement</li></ul>	<ul style="list-style-type: none"><li>Establish international rules of the game through private sector involvement</li></ul>		
Resolving the systemic consequences of crises	7. <i>Move swiftly to establish resolution mechanisms for impaired assets and liabilities of banks and corporations.</i>		<ul style="list-style-type: none"><li>Finance regional programs to help resolve the systemic impact of crises through the regional MDBs and bilateral donors</li></ul>
	<ul style="list-style-type: none"><li>Establish procedures for bank exits, recapitalization and rehabilitation</li><li>Establish frameworks for corporate insolvencies and workouts</li></ul>	<ul style="list-style-type: none"><li>Establish international frameworks for private sector involvement in external debt resolution</li></ul>	
	8. <i>Cushion the effects of crises on low-income groups through social policies to ameliorate the inevitable social tensions.</i>		
	<ul style="list-style-type: none"><li>Strengthen social safety nets to mitigate social consequences of crises</li></ul>	<ul style="list-style-type: none"><li>Finance the activity through the MDBs and bilateral donors</li></ul>	

## REFERENCES

- Baig, T. and Goldfajn, I.** Monetary Policy in the Aftermath of Currency Crises: The Case of Asia. *Review of International Economics*, 2002, 92-112.
- Barth, J., Caprio, G., and Levine, R.** Bank Regulation and Supervision: What Works Best? NBER Working Paper, 2002.
- Calvo, G.** Capital Market Contagion and Recession: An Explanation of the Russian Virus. University of Maryland, College Park, 1998.
- Calvo, G. and Reinhart, C.** When Capital Inflows come to a Sudden Stop: Consequences and Policy Options, in *Key Issues in Reform of the International Monetary and Financial System*, edited by P. Kenen and A. Swoboda. Washington DC: International Monetary Fund, 2000.
- Claessens, C., Djankov, S., and Lang, L.** Corporate Growth, Financing, and Risks in the Decade before East Asia's Financial Crisis. Policy Research Working Paper, World Bank, 1998.
- Corsetti, G., Pesenti, P., and Roubini, N.** What Caused the Asian Currency and Financial Crises? A Macroeconomic Overview. *Japan and the World Economy*, 1999, 305-373.
- De Ferranti, D., Perry, G., Gill, I., and Servén, L.** *Securing Our Future in a Global Economy*. World Bank, 2000.
- De la Torre, A., Levy Yeyati, E., and Schmukler, S.** Living and Dying with Hard Pegs: The Rise and Fall of Argentina's Currency Board. *Economia*, 2003, *forthcoming*.
- Demirguc-Kunt, A. and Detragiache, E.** The Determinants of Banking Crises in Developing and Developed Countries. *IMF Staff Papers*, 1998, 81-109.
- Dooley, M.** A Survey of Literature on Controls Over International Capital Transactions. *IMF Staff Papers*, 1996, 639-87.
- Dornbusch, R., Park, Y. C., and Claessens, S.** Contagion: Understanding How It Spreads. *World Bank Research Observer*, 2000, 177-97.
- Drysdale, P., ed.** *Reform and Recovery in East Asia: The Role of the State and Economic Enterprise*, New York, NY: 2000.
- Edison, H. and Reinhart, C.** Stopping Hot Money. *Journal of Development Economics*, 2001, 533-553.
- Edwards, S.** How Effective Are Capital Controls? *Journal of Economic Perspectives*, 1999, 65-84.
- Eichengreen, B.** *Toward a New International Financial Architecture: A Practical Post-Asia Agenda*. Washington, DC: Institute for International Economics, 1999.
- Eichengreen, B. and Rose, A.** Staying Afloat When the Wind Shifts: External Factors and Emerging Markets Banking Crises, in *Trade, Capital Mobility, and Growth: Essays in Honor of Robert Mundell*, edited by G. Calvo, R. Dornbusch, and M. Obstfeld, 2000.
- Frankel, J.** No Single Exchange Rate Regime is Right for All Countries or at All Times. *Essays in International Finance*. Princeton: Princeton University Press, 1998.
- Frankel, J., Fajnzylber, E., Schmukler, S., and Servén, L.** Verifying Exchange Rate Regimes. *Journal of Development Economics*, 2001, 351-386.
- Furman, J. and Stiglitz, J. E.** Economic Crises: Evidence and Insights from East Asia. *Brookings Papers on Economic Activity*, 1998, 1-135.
- Gallego, F., Hernandez, L., and Schmidt-Hebbel, K.** Capital Controls in Chile: Effective? Efficient? Working Paper, Central Bank of Chile, 1999.

- Goldstein, M.** *Managed Floating Plus*. Washington, DC : Institute for International Economics, 2002.
- Goldstein, M. and Turner, P.** Banking Crises in Emerging Economies: Origins and Policy Options. BIS Economic Papers, 1996.
- Guidotti, P.** Currency Reserves and Debt. Speech to World Bank Conference on Recent Trends in Reserves Management, Washington, DC , 1999.
- Haggard, S.** *The Political Economy of the East Asia Crisis*, Washington, DC: Institute for International Economics, 2000.
- Hunter, W., Kaufman, G., and Krueger, T., eds.** *The Asian Financial Crisis: Origins, Implications, and Solutions*, Boston, MA: 1999.
- IMF (International Monetary Fund).** *International Capital Markets: Development, Prospects, and Key Policy Issues*. Washington, DC, 1998a.
- \_\_\_\_\_. *World Economic Outlook*. Washington, DC, 1998b.
- Ito, T.** Growth, Crisis, and the Future of Economic Recovery in East Asia, in *Rethinking the East Asian Miracle*, edited by J. Stiglitz and S. Yusuf. Washington, DC: World Bank, 2001, 55-94.
- Kaminsky, G. and Reinhart, C.** On Crises, Contagion, and Confusion. *Journal of International Economics*, 2000, 1145–68.
- Kaminsky, G., Lyons, R., and Schmukler, S.** Managers, Investors, and Crises: Mutual Fund Strategies in Emerging Markets. *Journal of International Economics*, 2003, *forthcoming*.
- Kaminsky, G. and Schmukler, S.** What Triggers Market Jitters? A Chronicle of the Asian Crisis. *Journal of International Money and Finance*, 1999, 537–60.
- \_\_\_\_\_. Short- and Long-Run Integration: Do Capital Controls Matter? *Brookings Trade Forum 2000*, 2001, 125–178.
- Kawai, M.** The East Asian Currency Crisis: Causes and Lessons. *Contemporary Economic Policy*, 1998, 157-72.
- \_\_\_\_\_. Evolving Patterns of Capital Flows and the East Asian Crisis. *Asia Pacific Financial Deregulation*, 1999, 89-126.
- \_\_\_\_\_. Exchange Rate Arrangements in East Asia: Lessons from the 1997-98 Currency Crisis. *Monetary and Economic Studies, Special Edition*, 20 (December 2002), Institute for Monetary and Economic Studies, Bank of Japan, pp. 167-204.
- Kawai, M. and Takagi, S.** Proposed Strategy for a Regional Exchange Rate Arrangement in Post-crisis East Asia. Policy Research Working Paper, World Bank, 2000.
- \_\_\_\_\_. Rethinking Capital Controls: The Case of Malaysia. PRI Discussion Paper Series, No. 03A-05 (May 2003), Policy Research Institute, Ministry of Finance, Tokyo. [A revised version of the paper presented to the International Conference on the “Monetary Outlook on East Asia in an Integrating World Economy” (September 5-6, 2001), organized by Chulalongkorn University, the University of Paris-Dauphine and the University of Mannheim, Bangkok.]
- Kraay, A.** Do High Interest Rates Defend Currencies During Speculative Attacks? *Journal of International Economics*, Forthcoming.
- Krueger, A.** A New Approach to Sovereign Debt Restructuring. *Pamphlet* (April 1, 2002), International Monetary Fund, Washington, DC.
- Krugman, P.** What Happened to Asia? Massachusetts Institute of Technology, 1998.
- \_\_\_\_\_. Balance Sheets, the Transfer Problem, and Financial Crises. *International Tax and Public Finance*, 1999, 459-473.

- Kuroda, H. and Kawai, M.** Strengthening Regional Financial Cooperation. A revised version (May 2003) of the paper presented to the Seminar on “Regional Economic, Financial and Monetary Co-operation: The European and Asian Experiences” (April 15-16, 2002) organized by the European Central Bank in Frankfurt am Main.
- Lindgren, C.J., Balino, J., Enoch, C., Gulde, A.M., Quintyn, M., and Teo, L.** Financial Sector Crisis and Restructuring: Lessons from Asia. *Occasional Paper*, International Monetary Fund, 2000.
- Martinez Peria, M. S. and Schmukler, S.** Do Depositors Punish Banks for Bad Behavior? Market Discipline, Deposit Insurance, and Banking Crises. *Journal of Finance*, 2001, 1029-1051.
- Perry, G. and Servén, L.** The Anatomy and Physiology of a Multiple Crisis: Why Was Argentina Special and What Can We Learn from It? Washington, DC: World Bank, 2002.
- Radelet, S. and Sachs, J. D.** The East Asian Financial Crisis: Diagnosis, Remedies, Prospects. *Brookings Papers on Economic Activity*, 1998a, 1–90.
- \_\_\_\_\_. The Onset of the East Asian Financial Crises, in *Currency Crises*, edited by P. Krugman, 2000, 105-153.
- Rajan, R. and Zingales, L.** The Great Reversals: The Politics of Financial Development in the 20<sup>th</sup> Century. *Journal of Financial Economics*, Forthcoming.
- Reinhart, C. and Reinhart, V.** On the Use of Reserve Requirements in Dealing with Capital Flow Problems. *International Journal of Finance and Economics*, 1999, 27-54.
- Stiglitz, J. E.** Knowledge for Development: Economic Science, Economic Policy and Economic Advice, in *Annual World Bank Conference on Development Economics 1998*, edited by B. Pleskovic and J. E. Stiglitz. Washington, DC: World Bank, 1999a, 9-58.
- \_\_\_\_\_. Towards a New International Economic Architecture: Principles and Policies. European Investment Bank Lecture Series, European University Institute, 1999b.
- Stiglitz, J. E. and Bhattacharya, A.** The Underpinnings of a Stable and Equitable Global Financial System: From Old Debates to a New Paradigm. in *Annual World Bank Conference on Development Economics 1999*, edited by B. Pleskovic and J. E. Stiglitz. Washington, DC: World Bank, 2000, 91-130.
- Summers, L. H.** Roots of the Asian Crises and the Road to a Stronger Global Financial System. Remarks made at the Institute of International Finance, 1999.
- World Bank.** *East Asia: The Road to Recovery*. Washington, DC, 1998a.
- \_\_\_\_\_. *Global Economic Prospects*. Washington, DC, 1998b.
- \_\_\_\_\_. *East Asia: Recovery and Beyond*. Washington, DC, 2000a.
- \_\_\_\_\_. *Global Development Finance 2000*. Washington, DC, 2000b.
- \_\_\_\_\_. *World Development Report 2000/2001*. Washington, DC, 2000c.
- \_\_\_\_\_. *Finance for Growth: Policy Choices in a Volatile World*. Washington, DC, 2001.
- Yusuf, R.** *Innovative East Asia: The Future of Growth*. Washington, DC: World Bank, 2003.



## NOTES

We are grateful to Kenneth Koford (the editor) and two anonymous referees for very useful comments. This paper is a shorter version of its working paper version, "Crisis and Contagion in East Asia: Nine Lessons," *Policy Research Working Paper* 2610 (June 2001), Washington, DC: World Bank. We thank David Bisbee and, particularly, Tatiana Didier for his research assistance. The findings, interpretations, and conclusions expressed in this paper are those of the authors and do not necessarily represent the views of the World Bank, its Executive Directors, or the countries they represent. E-mail addresses: masahiro.kawai@mof.go.jp, rnewfarmer@worldbank.org, sschmukler@worldbank.org

1. Several authors have written on the causes of the Asian crisis and the roots of the recovery, including: Krugman [1998], World Bank [1998a and b], Eichengreen [1999], Radelet and Sachs [2000], Hunter, Kaufman, and Krueger [1999], Lindgren et al. [2000], Drysdale [2000], Ito [2001], and Yusuf [2003]. Some authors [Corsetti et al., 1999; International Monetary Fund, or IMF, 1998a; 1998b; Krugman, 1998; and Summers, 1999] have emphasized the facts that the East Asian countries financed unproductive investments because of implicit government guarantees and "crony capitalism." Such unproductive investment tended to weigh down long-term growth rates and hence generate vulnerabilities both in the real and financial sectors of the economies. At the same time, the governments accumulated large contingent liabilities because of the need to protect depositors of banks and other financial institutions. The strong trade linkages among these economies helped to propagate the crisis throughout the region. Others, such as Furman and Stiglitz [1998], Radelet and Sachs [1998a; 2000], Krugman [1999], and Kaminsky, Lyons, and Schmukler [2003] emphasize imperfections of the international financial markets as the major source of a crisis and contagion. Whether because of its fundamental weaknesses or out of self-fulfilling expectations, investors' panic transmitted the crisis to other markets, and decided to pull their investments out of these neighboring countries. In a world of self-fulfilling investor expectations, there exist multiple equilibria.
2. Investor sentiment and perceptions were undoubtedly the main driver of contagion. This appears to have two distinct elements. First, a common reaction to perceived problems and, second, a common fear—irrespective of individual agent judgments about the perceived problems—of what the herd of investors might do. In Korea, investors simultaneously came to note the risk of large short-term external debt, relative to foreign exchange reserves, and began to sell the won, while any individual investor could ignore the stampede only at his peril. In Indonesia, the collapse was also driven by investor panic. In this case, domestic investors were scared by the haphazard closure of the domestic banks and some news associated with President Soeharto's ill health. The politics of regime change added to the uncertainty in Korea, Indonesia, and Thailand and fed investor panic. Malaysia did not have large short-term external debt or a grossly weak banking sector (if perhaps somewhat overextended in real estate), and, without IMF financing, adopted macroeconomic policies that were akin to those under IMF programs—tight monetary and fiscal policies—at least until the spring of 1998. Beyond perceptions, the nature of bank finance also propagated the contagion. For example, a shock in one country induced international commercial banks to reduce exposure in other countries to protect the quality of their portfolios, thus propagating shocks and crises across countries. That some Japanese, European, and Korean banks, badly hit by the rupiah depreciation, were driven into distress or at minimum saw rapid deterioration in their portfolio quality, thereby reducing their bank exposure to the region, argues that they were possible channels of contagion [Kaminsky and Reinhart, 2000].
3. Much the same could be said for Argentina after 1998, when fiscal policy turned sporadically expansionary; the resulting larger borrowing led to higher debt ratios and subsequently higher costs of capital (as external conditions worsened), and these factors in turn offset any minimally short-run expansionary effects. See Perry and Servén [2002].
4. There is no one-size-fits-all solution. Though two corner solutions are not excluded, more realistic approach would be what Goldstein [2002] calls "managed floating plus." This is a combination of "managed floating," i.e., a system with occasional intervention to limit excessive short-term fluctuations in exchange rates without being accompanied by a publicly announced exchange rate target, and "plus," i.e., inflation targeting and aggressive measures to reduce currency mismatches. Measures to reduce currency mismatches include: periodic announcements of the size of short-term external debt (as a ratio of foreign exchange reserves), development of deeper capital markets, and regulation on sovereign borrowing in foreign currencies. When a country has diversified economic (trade, investment, etc.) relationships with the US, Japan and Europe, like

- 
- those in East Asia, a system of using a basket of the US dollar, the yen and the euro, rather than a single international currency, as a reference currency might have some benefits over a simple peg. For more discussion on feasible exchange rate regimes see, among others, Frankel [1998], Frankel et al. [2001], Kawai [2002], and De la Torre, Levy Yeyati, and Schmukler [2003].
5. As has been argued in the above, however, even more important was the unwillingness of the authorities to take early corrective action to adjust external imbalances when investor perceptions began to shift against local assets and capital inflows began to attenuate.
  6. Chile had unremunerated reserve requirements in place from 1991 until September 1998.
  7. In addition, countries with large foreign exchange reserves and access to contingent liquidity facilities will be able to inject liquidity in the system, avoiding credit squeeze and bank runs.
  8. A corollary from Argentina is worth noting: ignoring lesson number one (that requires good macroeconomic policies), even if you obey lesson number two (that requires a strong banking sector), can spell disaster. After 1991, Argentina worked hard to improve its banks, their oversight, and the organization of the industry. By the eve of the crisis in 2000, they were widely regarded as among the best in Latin America and perhaps the developing world. Nonetheless, when the government managed poorly its response to severe external shocks, higher and unsustainable public borrowing eventually led to a run against the peso, a freezing of deposits, and eventually the abandonment of the currency board that caused a shock to bank balance sheets. Government policy in managing the devaluation aggravated the shocks by trying to push the adjustment onto banks' capital. Poorly managed macro trumps well-managed financial sectors every time. See De la Torre, Levy Yeyati, and Schmukler [2003].
  9. Private debtors and creditors may expect that IMF financial interventions will reduce the risk of lending and borrowing. As long as IMF liquidity support is required at times of crises, therefore, private creditors and debtors should bear as fully as possible the consequences of the risks that they have voluntarily assumed. IMF interventions should not bail them out.
  10. Radelet and Sachs [1998a; 1998b], Furman and Stiglitz [1998], and Stiglitz [1999a], among others, discuss this point. Stiglitz, for example, argues that a high interest rate policy can cause capital outflows and exchange rate depreciation, instead of capital inflows and currency appreciation, when it increases the probability of bankruptcies in the presence of highly indebted corporations that have large domestic-currency debt servicing obligations. This would weaken domestic banks' balance sheets because corporations are their major clients and, thus, induce capital outflows in an anticipation of eventual currency depreciation.
  11. Some governments may be compelled to try to escape this dilemma by invoking unilateral standstills on external debt payments or thorough unorthodox policies that combine closing the capital account and fixing the exchange rate. Malaysia adopted the latter, unorthodox policies in September 1998, without being accompanied by unfavorable consequences, partly because the program was based upon conservative monetary and fiscal policies and its capital controls were short-lived. See Kawai and Takagi [2003].
  12. See Radelet and Sachs [1998a; 1998b]. Stiglitz [1999b] argues that fiscal contraction during an East Asian-type of crisis would be a beggar-thyself policy, which is worse than the beggar-thy-neighbor policy of the 1930s. Fiscal contraction causes recession in the domestic economy and, as a result, adversely affects the neighboring countries through trade linkages, which feeds back to the domestic economy and magnifies the extent of recession through multiplier effects.
  13. Argentina provides another corollary that large official financing might not be enough unless government finances are in order. After 1997, the government did not reign in its fiscal deficit, but increased expenditures somewhat for political reasons in 1998 and early 1999, by borrowing abroad. However, as the economy continued to slide, the revenues slackened, the fiscal position worsened and rising debt levels began to make markets nervous, thereby raising borrowing costs and worsening the cycle. In late 2000, the government approached the IMF for a new loan package with a proposal for a large but minimally increasing fiscal deficit; the IMF, having learned the virtues of Keynesian expansion in East Asia, offered to finance an even larger fiscal deficit. The government readily agreed. But the markets read the agreement as "no fiscal adjustment," and the risk premium rose rather than declined on fears that Argentina would not meet even these looser fiscal targets—which indeed they did not. The lesson here is that, when the cause of the crisis is a large fiscal deficit, fiscal headroom is already exhausted and public debt is high and government credibility low, fiscal contraction cannot be avoided to bring confidence to the markets.
  14. An example is Korea's external debt restructuring arrangement at the end of 1997 through the beginning of 1998. The Korean government, representing the interest of the country's commercial banks, agreed with international bank creditors on a standstill, during which period they negotiated to restructure external debt that

was due shortly. The Korean government provided guarantees for debt payment, and the governments of major industrialized countries convinced their banks that the restructuring arrangements would be in their best interest. The restructuring agreement restored the confidence not only in the currency market but also in the financial system, providing a basis for the subsequent recovery.

15. Some countries generate more contagion effects than do other countries. Allocating resources to only one country in the midst of a regional crisis might not be very effective, because other neighboring countries may suffer contagion. Moreover, preventing and containing crises in the countries that generate more spillover is relatively more effective to control regional and global shocks.
16. An example is the so-called New Miyazawa Initiative, which was introduced in October 1998. Under this Initiative, Japan pledged US\$30 billion to support the economic recovery of the crisis-affected East Asian countries. Half of the pledged amount was to be dedicated to short-term capital needs during the process of implementing economic restructuring and reform, while the rest was earmarked for medium-term and long-term reforms. A commitment to provide a large amount of resources helped stabilize the regional markets and economies, thereby facilitating the recovery process.