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**Safeguarding against Capital Account Crises:
Unilateral, Regional and Multilateral Options
for East Asia**

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Safeguarding against Capital Account Crises: Unilateral, Regional and Multilateral Options for East Asia

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1. Introduction

Referring to the Mexican crisis of 1994-95 and the Thai crisis of 1997-98, Montiel (1999) has observed that “the similarities between Mexico and Thailand mattered much more than the differences, and the policy message from the two experiences is the same” (p.41). Among these similarities two stand out in particular. First, the devaluation seemed to trigger an outright financial and economic collapse. Second, the recessionary impulses were transferred from the “ground zero” countries (Mexico and Thailand) to neighbouring ones. An important point underscored by these new financial crises is that sound macroeconomic policies and robust domestic financial systems are certainly *necessary* but clearly *insufficient* to make a country resilient to the effects of sharp reversals in capital flows of the type experienced by East Asia between 1996 and 1998 (Table 1).

The severity of these crises, in terms of both depth and breadth, are important characteristics of “capital account” crises¹. Stanley Fischer has recently made the following observation:

(t)he huge expansion of international capital flows of the last decade has delivered significant economic benefits to borrowers and lenders alike. But as we have seen all too often in recent years, this silver lining has a cloud. Countries have been exposed to periodic crises of confidence when large inflows of capital suddenly go into reverse. As capital flows have increased relative to the size of national economies, so too has the disruption that such reversals can cause.

The spread of financial crises is far from random: contagion tends to hit weaker economies more quickly and more forcefully than strong ones. But even so, it is hard to believe that the speed and severity with which crises spread can be justified entirely by economic fundamentals...One reason to take excess contagion seriously is that an investor panic can itself push an economy from a good to a bad equilibrium: when a country's policies and institutions are subjected to pressure from a reversal of capital inflows, they may crack, appearing in retrospect to justify the reversal of flows that caused the crisis to begin with. (Fischer, 2001a, p.2).

While managing a conventional current account crisis involves a judicious combination of *adjustment* and *financing*, tackling a capital account crisis predominantly entails the restoration of “market confidence”. It is therefore a much more imprecise and difficult task. Accordingly, the emphasis is best placed on crisis prevention as opposed to *management* or *resolution*. In this regard,

¹ In recognition of the urgent need to further study and understand the workings and dynamics of international capital markets and flows, the IMF recently established a new International Capital Markets Department. The former Managing Director of the IMF, Michel Camdessus, was perhaps among the first to emphasise capital account factors as being the drivers behind recent financial crises in emerging and developing countries in 1995 when he referred to the Mexican crisis of 1994-94 as “the first financial crisis of the twenty-first century” (see Buira, 1999).

emerging and developing countries must supplement sound economic policies with appropriate financial safeguards to shield themselves from externally induced shocks and liquidity crises (Bussiere and Mulder, 1999, Fischer, 2001c, IMF, 2001d, Chapter 3 and World Bank, 2000b). Among the more important means of “bullet proofing” against capital account shocks are those aimed at liquidity enhancement, the selective imposition of restrictions on currency and financial flows, and adoption of “best practice” financial codes, standards and prudential regulations. This paper focuses narrowly on the first issue of liquidity support as an insurance policy against capital account crises².

It has long been recognised that inadequate liquidity can threaten the stability of international financial regimes. Illiquidity can create crises even when economic fundamentals are sound, or it can make a bad situation worse when the fundamentals are weak. Moreover, once it becomes problematic, illiquidity further undermines the confidence of international capital markets. Capital outflows accelerate, thereby reducing liquidity still further. The intensity of economic adjustment following a crisis is largely dictated by the scarcity of liquidity. Thus, Eichengreen and Rose (2001) stress that the East Asian process of “V-shaped” adjustment *has not* been very different from the stylised patterns of previous currency crisis episodes in developing countries. However, the degree of initial contraction (and subsequent rebound) has been far greater in East Asia, attributable to the severe liquidity crisis that was triggered by investors’ panic (Rajan and Siregar, 2001a).

Recognising that private capital flows tend to be procyclical rather than countercyclical and intensify shocks rather than offset them, this paper examines potential ways of enhancing the availability of liquidity in crisis conditions so as to minimise the potential for future crises and their social costs if they do occur. Liquidity enhancement measures are commonly seen in terms of being either unilateral or multilateral, the latter invariably involving an expanded role for the IMF. These measures are discussed in sections 2 and 3 respectively. As noted, the contagious transmission of impulses across borders appears to be an important characteristic of liquidity crises. A high-profile

² The issue of restraints of capital flows has been extensively discussed elsewhere. Eichengreen (2001a) takes up the issue of financial standards. The Financial Stability Forum (2000) has been at the vanguard of recommending such standards. Other important policies to prevent liquidity crises are officially sanctioned standstills to prevent rush to exits and collective action clauses, along with a general “constructive engagement” among borrowers, lenders and regional and international financial institutions (Eichengreen, 2001a,b and IMF,

Independent Task Force on the Future of the International Financial Architecture sponsored by the Council on Foreign Relations (1999) recently recognised the existence and importance of contagion and the need for some sort of facility to deal with the problem. According to them, such a facility should work in concert with the IMF but not actually be part of the IMF's lending facility. They went on to argue that only countries afflicted by "systemic crises" or episodes of contagion ought to be provided the funding, which should be disbursed quickly and be heavily front-loaded. As will be noted, contagion, which is defined in detail in Section 4, often tends to have a largely *regional* as opposed to *global* dimension (certainly there are exceptions). This feature of contagion provides the rationale for exploring regional approaches to tackling illiquidity concerns. Following on from this, Section 5 briefly highlights and assesses the regional initiatives that are currently underway in East Asia. Section 6 offers a summary and concludes with a few remarks on the nexus between monetary and financial regionalism and multilateralism. Two technical annexes follow the main text.

2. Unilateral Safeguards against Capital Account Crises

Beyond attempts to implement prudential measures on banks' borrowing in foreign currency and to diversify financial systems (i.e. moving away from the hitherto over-dependence on banks), some of the East Asian economies have unilaterally imposed restraints on capital flows³. For instance, as is well known, Malaysia imposed capital controls in September 1998. While the Malaysian controls have since been modified and somewhat loosened, an exit tax remains in place to try and prevent the buildup of "hot money". Other countries, such as Thailand and Indonesia, have taken measures to curb currency speculation via the imposition of quantitative restrictions on foreign currency flows. The IMF has been fairly supportive of such unilateral actions to restrain international financial flows. For instance, a recent IMF study has concluded that measures to limit the offshore trading of currencies "could be effective if they were comprehensive and effectively enforced, and were accompanied by consistent macroeconomic policies and structural reform" (Ishii et al., 2001, p.1).

2001b).

³ See Johnston and Otker-Rube (1999) and Abrams and Beato (1998) for indepth discussions of prudential regulations.

2.1 Reserve Build-up

While restraints on currency trading may have merit in some instances, an oft-ignored danger of such measures is that they could dry up liquidity and widen bid/ask spreads, thereby raising hedging costs. One obvious method of enhancing a country's liquidity positions is via the accumulation of international reserves. As Fischer (2001c) notes

Reserves matter because they are a key determinant of a country's ability to avoid economic and financial crisis. This is true of all countries, but especially of emerging markets open to volatile international capital flows...The availability of capital flows to offset current account shocks should, on the face of it, reduce the amount of reserves a country needs. But access to private capital is often uncertain, and inflows are subject to rapid reversals, as we have seen all too often in recent years. We have also seen in the recent crises that countries that had big reserves by and large did better in withstanding contagion than those with smaller reserves.. (pp.1-3).

This policy of reserve accumulation is clearly one that has been embraced by East Asia; the regional economies have rapidly built up international reserves despite purporting to have adopted flexible regimes (so-called "floating with a life-jacket") post crisis (Yung, 2001 and Figure 1)⁴. The replenishment and accumulation of international reserves, on the one hand, as well as the lengthening of the average maturity profile of external indebtedness of the regional economies (Table 2), on the other, has significantly reduced the region's vulnerability to the destabilising effects of volatile and easily reversible capital flows⁵. Nonetheless, recent weaknesses in the regional currencies and the desire by the central banks to offset at least part of the currency declines (vis-à-vis the US dollar) have led to a slight drain in reserves in some of the regional economies since late 2000 (Figure 1).

⁴ The accumulation of international reserves by developing countries is indicative of the "fear of floating" by emerging and developing countries (Calvo and Reinhart, 2000, Hausmann, et al., 2000 and Rajan, 2002).

⁵ The extent of short-term indebtedness has been found to be a key indicator of (il)liquidity and a robust predictor of financial crises (Bussiere and Mulder, 1999, Dadush et al., 2000, Rodrik and Velasco, 1999 and World Bank, 1999). According to Dadush et al., on the basis of data for 33 developing economies, the elasticity of short-term debt with GDP growth is 0.9 when there is a positive shock to output and -1.8 when there is a negative shock. This extreme reversibility of short-term debt in the event of negative shock exposes borrowers to liquidity runs and systemic crises. In a somewhat contrarian view, Jeanne (2000) argues that it is not clear that short-term debt contracts ought to be discouraged as they may play a socially advantageous function in reducing agency problems.

An important limitation of such a reserve-hoarding policy is that it involves high fiscal costs as the country effectively swaps high yielding domestic assets for lower yielding foreign ones⁶. Annex 1 provides rough estimates of these fiscal costs. They range between 0.3 and 1 percent of GDP in 1999. In addition, since the size of international reserve holdings has been found to be a theoretically and statistically significant determinant of creditworthiness (Bussiere and Mulder, 1999, Haque, 1996 and Disyatat, 2001), depleting them as a way of cushioning the effect of capital outflows on the exchange rate may make matters worse by inducing further capital outflows. If capital outflows reflect a perception within private capital markets that a country is illiquid, reducing international reserves and therefore curbing liquidity further is hardly likely to be an effective strategy. In other words, the reversibility that makes reserve depletion credible in the context of current account deficits is often absent in the context of capital outflows.

2.2 Foreign Bank Entry and Contingent Credit Lines

In light of the above, it has been suggested that the internationalisation of the domestic banking systems in developing countries could be an important additional means of overcoming illiquidity during crises periods. The argument is that a banking system with an internationally diversified asset base is more likely to be stable and less prone to bank runs and outright crises since the domestic branches of foreign banks are able to obtain financing from the foreign head office, which could act as a private lender of last resort. In addition, since foreign banks' portfolios are much less concentrated in any single country, particularly in the developing and emerging host ones, they ought to be less susceptible to country-specific crises. Thus, it is often noted that foreign banks in Argentina and Mexico were able to maintain access to offshore financing during the Tequila crisis of 1994 and 1995 while domestic banks were faced with acute credit squeezes. There are yet other

⁶ There is the additional question of what the appropriate size of reserve holdings is; against what yardstick should reserve adequacy be measured? The generally accepted rule of thumb that a country needs to hold reserve equivalent to short-term debt cover (i.e. debt that actually falls due over the year) is true only in the case where a country is running a current account balance and there are no other liabilities that are easily reversible (Fischer, 2001c). The optimal level of reserves depends on a number of factors such as degree of export diversification, size and variability of the current account imbalance and type of exchange rate regime operated (Bussiere and Mulder, 1999). A related issue pertains to the appropriate currency composition of reserves in terms of currency composition (Eichengreen and Mathieson, 2000). Steps have been taken to improve IMF's

potential advantages of allowing foreign bank entry per se - such as lowering overall financial costs structures - which may make it a desirable policy in and of itself⁷. Regardless of the national policy towards foreign bank entry, countries may find it useful to establish contingent lines of credit with foreign banks and private financial institutions as a means of providing additional international liquidity to deal with sudden capital flow reversals. Indonesia, Argentina, Mexico and South Africa are recent examples of countries that have arranged such private lines of credit with international banks.

This said, there are a number of problems and limitations of depending solely on privately contracted credit lines rather than doing so on a regional or multilateral basis via official channels. First, there may be high opportunity costs involved insofar as the individual countries have to commit certain assets/revenue streams as collateral. Second, calling on these lines of credit when needed could lead to a hike in the country's international risk premium. Third, while negotiating lines of credit with a country, the financial institutions could undermine the effectiveness of these commitments and their net exposures to that country via other channels (through various corporate risk management techniques). Foreign banks themselves could be a source of contagious transmission of crises. For instance, in response to a crisis in one country, multinational banks might attempt to liquidate positions in other regional economies to which they are exposed either to enhance overall liquidity or reduce (perceived) portfolio risks (see section 4.2 for further discussion). Eichengreen (2001b) provides an illuminating discussion of the inefficacy of such private CCLs in the context of Argentina's recent experience⁸. Appreciating the limitations of private credit lines, Fischer (2001a) has stressed the need for a multilateral response in the form of IMF lending to complement unilateral measures that countries may take towards liquidity enhancement so as to solve the first-mover problem, whereby no single creditor or investor is ready to extend the first offer of funds to a crisis

analytical framework for management of international reserves as well as to assess a country's external financial vulnerability in general (IMF, 2001d, Chapter 3).

⁷ See Bird and Rajan (2001) and Claessens et al. (1999) for discussions about the potential benefits of foreign bank entry. Of course, as with financial liberalisation in general, care must be taken to ensure that foreign bank entry is undertaken in a careful (gradual?) manner so as to avoid any major disruptions to the domestic financial system by enticing domestic banks to opt for increasingly risky investments. Montreevat and Rajan (2001) discuss Thailand's recent experience with bank restructuring and foreign bank entry.

⁸ The Argentine experience is revealing as it has often been held up to other emerging and developing countries as a poster child of how to establish good "investor relations".

economy⁹.

3. Multilateral Safeguards: Liquidity, Crisis and the IMF

3.1 IMF Contingent Credit Lines (CCLs)

The problem facing the Fund, which has constituted one component of the debate about a new international financial architecture (Table 3), has been how to provide adequate liquidity to help forestall a crisis in a distressed economy and prevent its spread to other countries where there is reluctance to make concessions in terms of conditionality and reluctance to substantially increase the Fund's lending capacity. The Fund's response has been to create the Contingent Credit Line (CCL). Officially, the CCL has been conceived as a "precautionary line of defense to help protect countries pursuing strong policies in the event of a balance of payments need arising from the spread of financial crises" (IMF, 2001d, p37). In other words, the idea here has been to establish a precautionary line of credit for countries with "sound" policies that might be affected by contagion from a crisis, and to finance this from outside the Fund's quota-based resources by new arrangements to borrow (NAB). The negotiation of conditionality (i.e. *ex-ante* criteria) with potential users of the CCL would therefore take place before the country needs to draw on the Fund. The facility has undergone some modifications in late 2000, including a reduction in the relatively high costs of borrowing from it and a review of the conditionality involved as part of obtaining the funding (Fischer, 2001a). Table 4, excerpted from IMF (2001b), details the recent changes undertaken to the CCL which primarily involve simplification and streamlining of the terms of access and reduction in the costs of such access.

However, this sort of "tinkering" fails to recognise a more fundamental drawback of such a scheme. Financial markets may view negotiating a CCL as a sign of a country's weakness rather than

⁹ As Eichengreen (2001b) notes,

In the climate of uncertainty that invariably surrounds a crisis, waiting has option value. Investors have an incentive to wait and see whether the commitment to reform is sustained instead of being first to provide new money. New money may increase the likelihood of success -- interest rates will come down, making it more likely that growth will resume -- but organizing the provision of those funds must surmount the free rider problem in which each investor prefers other investors to be the source of the additional liquidity (pp.24-5).

strength. There is a real possibility that by approaching the IMF to negotiate a CCL a country may send out a negative signal to private capital markets that it is vulnerable to a crisis rather than providing the requisite reassurance about the country's stability. This may make a crisis self-validating¹⁰. In view of this, it should be of no surprise that no country has yet formally applied for a CCL (IMF, 2001d). The facility remains un-used and un-tested.

3.2 Contagion: *Regional more than Global*

To recap, the primary reason for the establishment of the CCL has been the recognition of the importance of the contagious transmission of currency crises. Yet, with some notable exceptions (such as the Russian debt default in 1998), contagion has turned out to be more of a *regional* than a *global* phenomenon (consequently they are also referred to as “neighbourhood effects”). While the East Asian crisis did threaten to turn global, it did not. Similarly, while the currencies of Thailand, Hong Kong and the Philippines underwent brief periods of speculative attacks during the Tequila crisis, the crisis predominantly affected Mexico's neighbouring economies. In a recent study using a sample of 20 countries covering the periods of the 1982 Mexican debt crisis, the 1994-95 Tequila crisis and the 1997-98 Asian crisis, De Gregario and Valdes (2001) found contagion to be directly dependent on geographical horizon. Using a panel of annual data for 19 developing economies for the period 1977-93, Krueger et al (2000) concluded that a currency crisis in a regional economy raises the probability of a speculative attack on the domestic currency by about 8.5 percent points¹¹.

These findings raise the following questions. If the knock-on effects from financial crises are primarily a regional phenomenon, does it not follow that the liquidity provided in an attempt to forestall the contagion effects of crises (i.e. buy insurance against liquidity crisis) should be provided regionally in the first instance? There are signs that this is the direction in which the East Asian economies are moving. Before examining recent developments and the unresolved issues to which

¹⁰ Radelet and Sachs (1998) get the point across in a rather colourful manner when they note that the “arrival of the IMF gives all the confidence of seeing an ambulance outside one's door”.

¹¹ Other recent empirical studies confirming this regional dimension of currency crises include Calvo and Reinhart (1996), Frankel and Schmukler (1996), Glick and Rose (1999) and Kaminsky and Reinhart (2000a).

these developments in East Asia give rise, it is important to define and highlight the various transmission channels through which currency and financial crises may spread contagiously.

4. Contagion: Definitions and Transmission Channels

At a broad level, “contagion” refers to the simultaneous occurrence of currency crises in two or more economies. Such cross-border repercussions of national economic policies may be more formally defined as a situation where a currency crisis in one economy leads to a jump to a “bad” equilibrium in a neighbouring economy (Masson, 1998)¹². A distinction needs to be made between transmission channels that are related to investor sentiment or psychology (termed “pure contagion”) and linkages between countries that are measurable/observable *ex-ante* (referred to as “spillovers” or “linkages”)¹³. Spillovers in turn take the form of trade (real) or financial linkages between countries. Calvo and Reinhart (1996) call this type of crisis propagation “fundamentals-based contagion”.

4.1 Trade Spillovers

Glick and Rose (1999) have noted that “trade is an important channel for contagion, above and beyond macroeconomic influences. Countries who trade and compete with the target of speculative attacks are themselves likely to be attacked...This linkage is intuitive, statistically robust, and important in understanding the regional nature of speculative attacks” (pp.604-5)¹⁴. Trade

¹² Other definitions of contagion include an increase in asset price volatility across countries or a significant increase in cross-market linkages after a crisis to one country or group of countries. See Dornbusch et al. (2000) for a comprehensive review of the definitions as well as theoretical and empirical studies on contagion. Also see the World Bank website on the topic: <http://www1.worldbank.org/economicpolicy/managing%20volatility/contagion/index.html>

¹³ A third category, “common external shocks” or “monsoonal effects”, refers to all those factors that impact all regional economies (Masson, 1998). A number of external shocks have been suggested in the case of the East Asian crisis (Whitt, 1999). In a recent study using a comprehensive data set of financial statistics, product information, geographic data, and stock returns involving 14,000 companies in 46 economies, Forbes (2000) found all the preceding transmission mechanisms were important in the case of the East Asian crisis, particularly the product competitiveness channel. *A priori*, it is surprising that the common creditor/credit crunch effect (through banks) was not found to be as important. This may be explained by the fact that Forbes focused on *international* rather than *regional* propagation and did not explicitly test for the herding channel. Kaminsky and Reinhart (2000b) and Van Rijckeghem and Weder (1999) have concluded that the bank lender channel was particularly important in the East Asian crisis, though the inclusion of a trade competition variable tends to dilute the significance, due possibly to the high correlation between competition for funds and trade.

¹⁴ Also see Van Rijckeghem and Weder (1999). In a pioneering study, Eichengreen et al. (1996) emphasised this channel for industrial countries.

spillovers in turn could either be due to “complementarity” or “competition” in export product structures between regional economies.

With regard to the former (“direct channel”), there may exist extensive intraregional trade and investment linkages which could lead to contagion due to trade complementarities. For instance, on the one hand, currency devaluation in an emerging or developing economy is often accompanied by a sharp economic downturn (Rajan, 2001a and Rajan and Shen, 2001), thereby compressing imports. This in turn reduces exports of its trading partners, consequently leading to “demand-driven” trade spillovers. On the other hand, there may be extensive and growing trade, investment and other intraregional interdependencies leading to contagion due to trade complementarities that are “supply-driven”, i.e. “indirect channel”. For instance, it is commonly noted that Japanese foreign direct investment (FDI) has developed an intricate division of labour based on both horizontal and vertical differentiation in East Asia (Kawai and Urata, 1998). This in turn has stimulated intraregional trade which has constituted roughly two-fifths of the regions’ total trade, with parts and components (PCAs) playing a particularly important role in such transactions (World Bank, 2000a; also see Ng and Yeats, 1999). Accordingly, any disruption in one economy could interrupt the entire regional production network, leading to a withdrawal of investors from all other trade partners *en masse*.

In contrast to the complementary-induced channels, even economies that do not have strong trade and investment linkages with the crisis-hit economies may yet be indirectly impacted if their exports to third markets overlap significantly. In other words, currency devaluation in one economy may provoke devaluation in a trade competitor (i.e. another economy with similar export structures/comparative advantage) that suddenly finds itself in a competitive disadvantage (Gerlach and Smets, 1995 and Huh and Kasa, 1997). Corsetti et al. (1999) have shown that a game of competitive devaluation could generate currency overshooting if market participants, anticipating that a series of competitive devaluations will take place once there is a successful speculative attack in one country, flee from the trade competitors¹⁵.

¹⁵ Rajan et al. (2002) explore the various trade spillover channels noted above as they try to explain the spread of the crisis from Indonesia, Malaysia, Philippines, South Korea and Thailand to the city-states of Hong Kong and Singapore.

4.2 Financial Sector Spillovers and Pure Contagion

While trade spillovers appear to be relatively straightforward, in practise it can be difficult to clearly distinguish between trade and financial linkages as “most countries that are linked via trade channels tend also to be linked via finance channels” (Kaminsky and Reinhart, 2000a,b). As Dornbusch et al. (2000) note, a “channel similar to trade links can be financial links. The process of economic integration of an individual country into the world market will typically involve both trade and financial links. In a world or region that is heavily economically integrated - covering trade, investment, and financing links - a financial crisis in one country can then lead to direct financial effects, including reductions in trade credit, FDI and other capital flows to other countries” (p.6).

While acknowledging this fact, it is far more difficult to distinguish between financial spillovers, on the one hand, and pure contagion, on the other, as both pertain largely to investors’ decisions. The one substantive distinction between spillovers and pure contagion is that there must exist *ex-ante* linkages between the crisis-hit economies, while in the latter, the linkages only appear *ex-post*. Masson (1998, pp.5-6) shows how it is conceptually possible for “pure contagion” to make an economy relatively more susceptible to a currency crisis. To be sure, he notes that “pure contagion is only possible if changes in expectations are self-fulfilling, and this requires that financial markets be subject to multiple equilibria..(and)..(e)ven if each country separately is not subject to multiple equilibria, together they may be, since the fear of crisis in one will increase the devaluation probability in the other, making a crisis more likely in both.” Shifts in market sentiments could lead to jumps between one equilibria and the other, consequently introducing sharp volatility in financial markets. Theoretically, anything could act as the coordinating device leading to a jump from a “good” to “bad” equilibria.

To illustrate the practical difficulties in distinguishing between *financial sector linkages* versus pure financial contagion, consider the case of bank withdrawals. There could exist substantive linkages by way of the Asia-5 economies and Hong Kong/Singapore sharing a common creditor (e.g. Japanese banks). It is also possible that the two economies might be impacted as their own financial institutions have large exposures to the Asia-5 economies and experience sharp capital losses. These

are instances of actual pre-crisis linkages and qualify as financial spillovers. However, losses in one economy may lead banks (or open-end mutual funds, for that matter) to rationally unwind positions in other regional economies in which they have exposures. This so-called “forced portfolio adjustment” behaviour or “liquidity constrained” effect, which is a perfectly rational behavior, may occur for a number of reasons. These include, an anticipation of higher-frequency redemptions, the need to cover capital losses in other crisis-hit markets (“cash-in” effects), and in order to reduce portfolio risks and improve the liquidity position (“flight to safety” effects)¹⁶.

In addition to the direct linkages and liquidity constraints, there is the possibility of “panic herding” or “bandwagon” effects, as international creditors and investors choose to reduce exposures to all emerging and developing countries (particularly those in the region) if they are spooked by the crisis in one or more of the regional economies, leading to an international bank panic *a la* Diamond and Dybvig (1983), for instance. Krugman (1999) has stated that there is no way “to make sense of the..(East Asian)..contagion of 1997-98 without supposing the existence of multiple equilibria, with countries vulnerable to self-validating collapses in confidence” (pp.8-9). One can never be sure as to what causes these investor panics/sudden shifts in market expectations and an indiscriminate withdrawal from many markets. This is what makes multiple equilibria-based explanations difficult to pin down, as a jump between a good (i.e. non-attack) and bad (i.e. attack) equilibrium is driven by market psychology or changes in the interpretation of existing information. A weakness or attack on one currency could lead to a reassessment of the region’s “fundamentals” and the probability of a similar fate befalling regional economies with broadly similar macroeconomic stances (whether *actual* or *perceived*). This is popularly termed the “wake-up call” effect (Ahluwalia, 2000). This phenomenon could also simply involve a shift in “risk appetite” of investors (Kumar and Persaud, 2001). It could also refer to the sudden realisation of how little market participants truly understood about the regional economies, leading to a region-wide downgrading/sell-off (Radelet and Sachs,

¹⁶ See Calvo (1999) for a model involving two sets of agents (informed and uninformed), in which margin calls necessitate asset sales in one economy following price declines in another. Folkerts-Landau and Garber (1998) stress risk control systems as a possible reason for region-wide asset sell-offs and resultant contagion; while Van Rijckeghem and Weder (1999) emphasise the value at risk (VAR) technique in particular. However, Schinasi and Todd Smith (1999) show such financial contagion could result from normal/textbook portfolio diversification rules, with risk management techniques and rules not having any significantly different

1998). In related literature, Drazen (1999) has developed a contagion model which is based on economies being in an implicit or explicit currency/monetary union. Thus, devaluation by one economy acts as a wake up call to investors in the sense that it leads them to question the commitment of other regional economies to maintain “club membership” by not devaluing. Dooley (2000) suggests that the “bunching together” of crises may be due to revisions in the effective size of official lines of credit available to the regional governments to defend the currency (either from international agencies or ad hoc bilateral or multilateral agreements).

Such sudden capital withdrawals are, of course, neither limited to bank flows nor need arise solely in the context where financial markets are subject to multiple equilibria or self-validating expectations. For instance, focusing on portfolio flows and assuming that there exists some fixed costs of informational gathering and processing country-specific information, Calvo and Mendoza (1996, 2000) show how just a rumor of such vulnerabilities may suffice to generate large-scale reallocation of funds away from one destination to another, making small open economies susceptible to large swings in capital flows and costly boom-bust cycles. A bare-bones version of this model is outlined in Annex 2. Suffice it to note here that the Calvo-Mendoza model is most appropriately seen as an open economy extension of the information-based herding and cascades genre of models that have been recently developed to explain herding behavior in domestic financial markets *a la* Banerjee (1992), Scharfstein and Stein (1990) and others¹⁷.

The literature has hitherto been unable to come up with a consistent definition of financial sector spillovers. Following the definition of trade spillovers, which includes both direct and indirect channels, consistency seems to dictate that financial sector spillovers include both direct financial linkages as well as indirect or cross-market interconnection via the liquidity constraints. This leaves only capital outflows triggered in international financial markets due solely to sudden shifts of sentiment of financial agents (i.e. “animal spirits or herding”) following a crisis in another economy as qualifying as “pure contagion”. This appears closest to Masson’s (1998) definition. As Van Rijckeghem, and Weder (1999) note, “*(p)ure contagion*, refers to those crises triggered by a crisis

consequences on optimal sell-off periods/strategies. Also see Kumar and Persaud (2001).

¹⁷ Bikhchandani and Sharma (2000) provide a succinct discussion of the various types of recent herding

elsewhere but which cannot be explained by changes in fundamentals or by any sort of the rather ‘mechanical’ spillovers...but are possibly caused by shifts in market sentiments (increased risk aversion) or changes in interpretation given to existing information (an increased perception of risk or a ‘wake-up call’)” (pp.5-6). In turn, these shifts in market sentiments could either be due to “irrationality” of financial agents, or complete rationality but informational asymmetries and fixed costs in information-gathering and processing *a la* Calvo-Mendoza or financial markets that are subject to multiple equilibria (Pritsker, 1999).

5. Regional Responses: The Chiang-Mai Initiative

Much work remains to be done to disentangle the various transmission channels documented above and determine their relative impacts in various crises. Suffice it to note here that the regional dimension of the 1997-98 financial crisis as well as the perceived inadequacies of the IMF’s response to it, has motivated East Asian economies to explore regionally based institutional alternatives. A subgroup of East Asian economies have taken some small but noteworthy steps towards enhancing regional financial stability and protecting themselves against externally induced shocks and liquidity crises. The establishment of the Manila Framework group (MFG), the ASEAN Surveillance Process (ASP) which is managed by the newly created ASEAN Surveillance Coordinating Unit (ASCU), as well as the recently formed Regional Economic Monitoring Unit (REMU) of the ADB, are all steps in the right direction. These initiatives have been discussed in some detail by Chang and Rajan (2001), Rajan (2000), Manzano (2001) and others, and will not be repeated here. While these initiatives towards enhanced regional surveillance are important in their own right, they do not in and of themselves reduce a country’s susceptibility to capital account crises, which requires access to international credit lines as discussed previously. Against this background, and in recognition of the fact that financial stability has the characteristics of a regional public good, it is important to note that selected East Asian economies have recently agreed to create a network of bilateral currency swaps and repurchase agreements as a “firewall” against future financial crises. This has since come to be termed the Chiang Mai Initiative (CMI) following an agreement in Chiang-Mai, Thailand on May 6,

2000. Yung (2001) and Wang (2001) provide comprehensive descriptions of the CMI and offer suggestions on how it may be extended and its relation to the IMF. As such only a broad overview is provided here.

In general terms, the CMI is aimed at providing countries facing the possibility of a liquidity shortage with additional short-term hard currencies. The CMI extends and expands upon the little known ASEAN Swap Arrangement (ASA) and encompasses all ASEAN countries as well as China, Japan and Korea (i.e. ASEAN Plus Three or APT). The ASA was established in the 1970s to provide short-term swap facilities to members facing temporary liquidity or balance of payments problems. In 1977, there were only five ASEAN signatories - Indonesia, Malaysia, Philippines, Singapore and Thailand - each contributing about US\$ 40 million. This facility was increased to US\$200 million in 1978. At the Fourth ASEAN Finance Ministers Meeting in Brunei Darussalam (March 24-45, 2000), the Ministers agreed to expand the ASA to include the remaining ASEAN members, Brunei Darussalam, Cambodia, Lao PDR, Myanmar and Vietnam. In keeping with this expansion, the ASA was enlarged to US\$ 1 billion with effect from November 17, 2000. There are also a series of repurchase agreements (repos) that allow ASEAN members with collateral such as US Treasury bills to swap them for hard currency (usually US dollars) and then repurchase them at a later date. The expanded ASA is to be made available for two years and is renewable upon mutual agreement of the members. Each member is permitted to draw a maximum of twice its commitment from the facility for a period of up to six months with the possibility of a further extension of not more than six months.

This expansion of the ASA is the first step in putting into effect the CMI which envisages that hard currency lines of credit will be made available to members. In addition to the expansion of the ASA among Southeast Asian countries, the three ASEAN Dialogue partners (China, Japan and Korea) have simultaneously been in discussions aimed at establishing a bilateral swap arrangement (BSA) amongst themselves. Japan has recently signed BSAs totalling US\$6 billion with Malaysia, Thailand and Korea and is planning to add ones with other East Asian countries. BSAs among other members

of the APT are expected in the near future¹⁸. While the maximum amount of withdrawal under each of the BSAs will be determined by negotiations between the two countries concerned, in the spirit of “regional partnership”, there is planned to be full coordination and consultation among all members when deciding on disbursements.

The CMI appears to have been well received, even by the IMF and the US administration. The IMF Managing Director, Horst Kohler, extended support to the AMF and other regional initiatives as long as they are complementary to and not competitive with the IMF approach (Kohler, 2001). China too has extended open support for the CMI and has become an active participant in it (Goad, 2000 and Rowley, 2000, 2001). Backing by these entities is significant, not least because their opposition stifled the initial proposals for fortified monetary regionalism via an Asian monetary facility (Bird and Rajan, 2000 and Chang and Rajan, 2001). In fact, a successful introduction of a network of regional swap arrangements in East Asia (possibly enlarged to encompass most of Asia as defined by the ADB over time) has been viewed by some observers as an important step towards the eventual creation of a full-fledged regional monetary facility (Ariff, 2001, Rowley, 2001 and Wang, 2001).

While the basic idea behind the CMI is clear, a number of details remain to be worked out. However, economic analysis helps to identify some broad principles that need to be incorporated in the initiative.

First, the resources need to be capable of being disbursed quickly and front-loaded. Speed is of the essence in a crisis. Second, the credit lines need to be “sufficiently large” so as to generate confidence in private capital markets and to repel speculative attacks, as well as involve sufficient countries to avoid potential problems of co-variance and to allow the pooling of risks. Third, the rate of interest charged on the loans needs to be sufficiently high so as to guard against moral hazard. Countries need to be discouraged from using such credit lines as a matter of course. Fourth, access to such liquidity needs to be separated from the detailed negotiation of conditionality which would prejudice quick dispersal. However, given the part played in the East Asian crisis by weak domestic

¹⁸ While Singapore is a contributor to the ASA, it has announced its intention not to sign bilateral swap agreements under the Chiang Mai Initiative at this time.

financial structures, inadequate prudential standards and supervision, there is a strong argument for making access to the credit lines associated with the CMI conditional upon compliance with some minimum set of financial standards. This would encourage countries to push ahead with reforms to their domestic financial systems¹⁹.

A credible system of regional swaps based on these principles would have two key attractions. First, it ought to enable participants to avoid the severe output losses that are associated with extreme shortages of liquidity. Second, by creating confidence that such extreme shortages will not occur, the incidence of crises may be reduced. Of course, confidence would be undermined if the swap arrangements were used to try and defend disequilibrium real exchange rates. Therefore, the CMI should not be a mechanism for inappropriate currency pegging in the region. The history of bilateral swaps in the context of the Bretton Woods system demonstrates that they are an ineffective means of defending seriously misaligned currencies²⁰.

6. Concluding Remarks

Looking at the issues that have gone to make up the architecture debate and taking an Asian perspective rather than a global one, there is reason to believe that there is both more scope for reform and more motivation to pursue it²¹. In the main it was the East Asian economies that suffered the costs of the 1997-98 crisis. While one could quibble about the exact magnitude of these costs, it is widely

¹⁹ See Rajan and Bird (2001) for a brief progress report on financial restructuring efforts in the region.

²⁰ We should note that the East Asian and Pacific region does in fact already have an existing financial cooperative scheme in place in the form of the EMEAP or the Executives' Meeting of East Asia-Pacific Central Banks. The EMEAP is a cooperative organisation comprising central banks and monetary authorities of eleven economies: Australia, China, Hong Kong, Indonesia, Japan, South Korea, Malaysia, New Zealand, the Philippines, Singapore and Thailand. Spurred on by the Tequila crisis, substantive steps towards monetary cooperation have been taken by the EMEAP. For instance, a number of member economies signed a series of bilateral repurchase (repo) agreements in 1995 and 1996. Hong Kong and Singapore also reached an agreement to intervene in foreign exchange markets on behalf of the Bank of Japan. These creditor regional economies also attempted to help defend the Thai baht for some period before the Bank of Thailand succumbed to the speculative pressures (Rajan, 2000). There does not appear to have been any discussion in policy circles on the nexus between the EMEAP scheme and the CMI.

²¹ According to some observers the debate about a "new international financial architecture" was launched at the Halifax G7 summit in 1995 and to all extent and purposes concluded at the Cologne summit in 1999 (Kenen, 2000). According to Eichengreen and James (2001) one reason why international financial reforms are not occurring at a faster pace is because the recent financial crises do not appear to have threatened the global trading system.

agreed that they have been substantial, involving large-scale declines in output as well as overall living standards, the after-effects of which linger on.

While the term “contagion” has gained prominence, notoriety in fact, following recent currency crises, it should be recalled that it was used in a positive sense precrisis to describe the spread of trade and investment liberalisation and economic prosperity in East Asia. According to the logic of this argument, a positive externality of being associated with dynamic open economies involves the transformation of the conventional prisoner's dilemma - which suggests that protectionist policies are the “dominant strategy” for each country acting in isolation - to one of prisoner's delight, whereby trade liberalisation is the dominant strategy for a country in a region in which some other countries are already reaping the benefits of a liberal trade regime (Garnaut, 1994)²². An important policy conclusion drawn during that time was the need for a formalisation and institutionalisation of these market-driven linkages, i.e. creation of regional economic alliances. In similar vein, the contagious transmission of currency crises, which often tends to be regional, has provided the basis for regional financial and monetary cooperation.

There are at least two further reasons to believe that regional arrangements to augment international liquidity have a comparative advantage over multilateral ones when it comes to the provision of contingent credit lines. First, regional credit lines would have more of the features of a credit union than the IMF possesses. All participants in them would be able to perceive circumstances in which they might themselves need to use the credit lines, and these vested interests ought to create a stronger motivation to make the system successful than might exist in the case of the IMF's CCL. Second, prudential and supervisory standards might be more appropriately set at the regional level where special circumstances could be more easily identified and addressed.

Sceptics of regional financial facilities criticise such initiatives on two counts. One, they remain unconvinced that contagion is largely a regional phenomenon despite the growing evidence noted previously. Two, if contagion does have a regional dimension, they argue that risk diversification suggests the need for a more global as opposed to regional financial facility. While the

²² Of course, loosely speaking, an infinitely played prisoner's dilemma game predicts that a cooperative strategy could be supported if agents have high enough rates of time preference (so called “Folk Theorem”).

second point is well taken, the implicit assumption is that external shocks hit all regional economies simultaneously as the East Asian crisis illustrated, a more likely scenario is a transmission of crisis from the ground zero country to neighbouring ones successively. In any case, even if one accepted the argument of simultaneous shock impacting all simultaneously, and it is accepted that contagion tends actually to be global, that would provide less reason for the IMF's CCL as well. Indeed, in this scenario, there must remain some doubt as to whether the facility would be adequately financed and able to provide sufficient net liquidity during a crisis when a number of countries are simultaneously affected and subsequently in need of financing.

Boughton (1997) has reminded us that “although the intention was that the availability of the Fund's resources should prevent countries from experiencing financial crisis, in practice, the institution has often found itself helping its members cope with crises after they occur” (p.3) Monetary and financial regionalism, as discussed in this paper, could help the IMF fulfill its stated aim; it is consistent with the principle of “subsidiarity”. Why choose to deal with a problem at the global level when it can be handled adequately and perhaps more effectively at the regional level? Just as multilateral trade liberalisation and multilateral trade institutions have been joined by an increasing array of regional trading arrangements, regional financial crises may be better handled by regional arrangements. To the extent that regional arrangements may help reinvigorate interests in strengthening the international financial architecture, they could act as “stepping stones” towards multilateral reforms rather than “stumbling blocs”. Regional arrangements ought to promote greater commitment to and national ownership of programs and conditionality, a point that is universally recognised as being of significant importance.

For all the foregoing reasons, an efficient, regionally based cooperative arrangement for providing liquidity would be consistent with the central elements of the new international financial architecture. It is still possible to think *globally* and to act *regionally*²³. The IMF would continue to stand ready to assist economies where regional arrangements failed to resolve problems, but, in this

²³ Needless to say that in addition to these regional and multilateral liquidity pools, countries are expected to maintain sound debt and reserve management policies to minimise the chances and costs of disorderly exits.

event, it might be more reasonable to assume that these problems were not exclusively to do with shortages of liquidity, and this would raise the credibility of IMF conditionality²⁴.

²⁴ As Fischer (2001b) has noted, there are two primary objectives of Fund conditionality, viz. “to ensure that IMF resources are used to promote economic reform and adjustment, rather than to postpone it; and to ensure that the borrower is able to repay the loan on the agreed terms, making the resources available to other members who may need them.”

Annex 1: Estimating the Fiscal Costs of Reserve Accumulation in East Asia²⁵

As noted in the text, the costs of holding foreign reserves may be quite high. But exactly how costly? This Annex attempts to offer an illustrative estimate. Following Rodrik (2000), we make two key assumptions. First, all reserves beyond the age-old rule of thumb of three months' worth of imports are considered to be "excess". We treat these "excess" levels of reserves as the opportunity cost of maintaining an open capital account. Second, the spread between the yield on foreign reserves (the US Treasury bill rate) is used as a proxy of the marginal cost of domestic funds and is taken to be 6 percentage points²⁶. Under these assumptions, we find that the annual cost of this "insurance policy" against financial market unpredictability to be of the order of 0.3 to 1 percentage of GDP for the five crisis-affected economies in East Asia in 1999. As a share of GDP, these costs are the highest for Thailand and Malaysia and least for the Philippines.

Social Cost of Excess Reserves, 1999

Country	Foreign Reserves (million of US dollars) ^a	Reserves in months of imports	"Excess Reserves" (percent of GDP) ^b	Annual Cost of Excess Reserves (percent of GDP) ^c
Indonesia	26445	7.6	11	0.66
Malaysia	30588.2	4.8	15	0.90
Philippines	13299.7	4.3	5	0.30
Thailand	34062.8	7.3	16	0.96
South Korea	73987.3	5.9	9	0.54

Notes: a) Total reserves minus gold at the end of 1999

b) "Excess" refers to the level beyond the 3-month benchmark

c) Assuming a 6 percent spread between the yield on foreign reserves and the marginal cost of borrowing

Source: Computed from International Financial Statistics, IMF

²⁵ This draws from Rajan and Siregar (2001b)

²⁶ Ideally we would like to have obtained data on an individual country's market bond rates and estimated more exact spreads. Rodrik (2000) argues that for a lot of emerging and developing countries this 6 percent spread is likely to be a conservative estimate of the true opportunity cost of holding reserves.

Annex 2: The Capital Crisis Models

According to the IMF (2001b)

As international capital flows increased relative to the size of national economies, so too did the disruption threatened by their reversal. The need to maintain investor confidence can serve as a useful discipline, magnifying the rewards for good policies and the penalties for bad ones. But in recent years flows have become much more volatile than changes in the economic prospects of individual countries could explain or reasonably justify. Economies have thus become increasingly vulnerable to crises of confidence, akin to runs on banks. Investors on occasion overreact to economic developments, responding late and excessively (p.2).

The question that automatically follows is this: what are the exact mechanics by which mobile capital leads to a financial crisis? The crisis-inducing nature of bank loans/debts is straight forward, being based on an open economy version of the bank panic model *a la* Diamond-Dybvig (1983)²⁷. Following some negative shock, depositors, concerned about the safety of their savings, attempt to withdraw *en masse* (which occurs given the “first-come-first-served” rule of deposit withdrawals), while creditors are unwilling to rollover short-term loans. Since the banks’ liquid asset/reserves are less than their potential foreign currency obligations, they are forced into the premature liquidation of long-term investments. Given the partial irreversibility of investments, they obtain a lower return on liquidation. However, insofar as the foreign currency revenues obtainable in the short-term are still less than the corresponding short-term potential foreign currency obligations, the banks are “internationally illiquid”. This sudden termination of bank finance forces the abandonment of potentially solvent investment projects. This consequent decline in capital formation - indeed, capital destruction - leads to a sudden output/economic collapse.

While the maturity mismatch story leading to a possible bad equilibrium in the event of a bank panic is well known, less recognised is the manner in which portfolio flows may be crisis inducing. Insofar as the reversals of capital flows in Malaysia largely took the form of portfolio flows (in contrast to the rest of East Asia where bank flows dominated), as it was in Mexico in 1994-95, it is useful to consider a model of portfolio reversals in a little detail. We lay out below a bare-bones version of the Calvo-Mendoza (2000) capital crisis model -- a simple one period mean-variance

model of optimal portfolio diversification/allocation. We formalise the preceding observation by considering a bare-bones version of the Calvo-Mendoza capital crisis model - a simple one period mean-variance model of optimal portfolio diversification/allocation.

Assume the existence of homogenous atomistic investors. Assume J countries in which investors allocate a fixed pool of funds which we normalise to one unit. Assume returns in each are distributed i.i.d. with mean of ρ and variance of σ_0^2 . Focusing on a single agent, assume the investor hears a “rumor” that country k 's new stochastic return is r , where $(r - \rho) = \varepsilon \neq 0$. Let returns in country $k = \sigma_1$. Let \varnothing be the share of the portfolio invested in all countries other than country k . Denote the portfolio by X . Thus, the portfolio's mean and variance are respectively:

$$E(X) = \rho + (1 - \varnothing)\varepsilon, \quad (1) \quad \text{Var}$$

$$(X) = [(\varnothing\sigma_0)^2/(J - 1) + (1 - \varnothing)\sigma_1^2]. \quad (2)$$

Assume that the representative agent is a price taker. Under the assumption of normal distribution of returns, let the agent maximise the following quadratic objective function (U) w.r.t. \varnothing :

$$\text{Max } EU(X) = [(1 - \varnothing)\varepsilon + \rho] - v/2[(\varnothing\sigma_0)^2/(J - 1) + (1 - \varnothing)^2\sigma_1^2], \quad v > 0. \quad (3)$$

Solving for the proportion of funds devoted to country k obtains:

$$(1 - \varnothing) = [\Upsilon + \varepsilon/v]/[\Upsilon + \sigma_1^2], \quad (4)$$

where: $\Upsilon = \sigma_0^2/(J - 1)$.

In the absence of news on returns in country k (i.e. country k is identical to all other countries *ex-ante*), from eq. (4), the share of portfolio allocated to the country is $1/J$, as would be expected a priori. Accordingly, in the absence of news, the portfolio allocated to country k tends to become

²⁷ For recent formalisations, see Chang and Velasco (1998, 1999) and Goldfajn and Valdes (1997).

negligible as J gets arbitrarily large (i.e. abundant alternatives for portfolio diversification). On the other hand, from eq. (4), with the impact of news, the change in portfolio composition to country k becomes extremely sensitive to the expected mean return differential (ε) and variance in country k as $J \rightarrow \infty$. Specifically,

$$\partial(1 - \emptyset)/\partial\varepsilon = [v/[\Upsilon + \sigma_1^2]]^{-1}, \quad (5)$$

and, $\partial(1 - \emptyset)/\partial\varepsilon \rightarrow 1/(v\sigma_1^2)$ as $J \rightarrow \infty$. (5¹)

$$\partial(1 - \emptyset)/\partial\sigma_1^2 = -[\Upsilon + \varepsilon/v]/[\Upsilon + \sigma_1^2]^2, \quad (6)$$

and, $\partial(1 - \emptyset)/\partial\sigma_1^2 \rightarrow -\varepsilon/(v\sigma_1^4)$ as $J \rightarrow \infty$. (6¹)

Those who take a benign view of speculation argue that it would be in the agent's best interests to gather the necessary information upon which to make their investment decisions. To the extent that their actions are based on best available information, speculation cannot be considered arbitrary. The incentive for investors to gather information may be explored within this portfolio diversification model.

Let there be an unspecified fixed cost involved in learning about country k . Assume that the learning costs allow the agent to obtain information about returns in the country with certainty (i.e. $\sigma_1^2 = 0$). From eq. (4):

$$(1 - \emptyset) = [1 + \varepsilon/(v\Upsilon)]. \quad (4^1)$$

Assuming no short sales, the following relationship between the range of values of ε and $(1 - \emptyset)$ may be derived:

If ε	Then $(1 - \emptyset)$
[0, ∞)	1
[- $v\Upsilon$, 0)	(0, 1)
(- ∞ , - $v\Upsilon$)	0

From the above conditions we see that for $\varepsilon \geq 0$, as long as the fixed information costs are not prohibitively large, there is gain to be had from information gathering ex-post. Conversely, for $\varepsilon \leq -v\Upsilon$, there is no ex-post gain to be reaped from information gathering. What about the intermediate case of $\varepsilon = [-v\Upsilon, 0)$? As $J \rightarrow \infty$, there is no ex-post gain to be had, as the i.i.d. distribution of returns ensures that a highly diversified portfolio will provide a return of ρ which exceeds r (as $\varepsilon = r - \rho$). On the other hand, for small J , ex-post utility could still increase with information gathering. Putting all this together and assuming continuity, we have that the marginal gain of information gathering about any single country falls as portfolios get increasingly diversified internationally.

The second generation (escape clause-based) currency crises models *a la* Obstfeld (1994, 1996) require the existence of a range or zone of weakness (i.e. “gray area”) in which a currency is potentially vulnerable to a speculative attack. In contrast, the Calvo-Mendoza model does not necessarily require the existence of any actual macroeconomic weaknesses. Rather, just a rumor of such vulnerabilities may suffice to generate large-scale reallocation of funds away from one destination to another, making small open economies susceptible to large swings in capital flows and costly boom-bust cycles.

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Table 1
Net Capital Flows to East Asia, 1995-2001
(billions of US dollars)

	1995	1996	1997	1998	1999	Proj. 2000	Proj. 2001
<u>Asia-5 Economies^a:</u>							
Private Capital Flows	53.9	67.4	-15.6	-28.2	2.9	-22.4	10.6
Direct investment	8.8	9.8	9.8	10.3	13.1	9.1	9.0
Portfolio Investment	18.8	25.5	8.4	-8.2	12.8	13.20	3.3
Other Investment Flows	26.3	32.0	-33.8	-30.4	-23.0	-44.6	-1.7
Official Flows	0.7	-6.1	15.7	19.5	-6.7	5.0	-2.1
Reserves ^a	-18.5	-5.6	39.5	-47.0	-38.8	-19.2	-30.6
<u>Other Asian Emerging Economies:</u>							
Private Capital Flows	38.3	52.6	22.3	-12.5	-0.6	4.6	13.0
Direct Investment	39.3	44.4	45.3	49.6	41.1	38.4	38.9
Portfolio Investment	2.6	3.9	-0.1	-7.2	-8.9	-8.0	-0.2
Other Investment Flows	-3.5	4.3	-23.0	-54.8	-32.8	-25.8	-25.8
Official Flows	-3.8	-7.6	-8.3	-1.1	-0.1	-8.1	-4.2
Reserves ^b	-26.2	-43.1	-46.8	-16.9	-20.9	-16.4	-30.8

Notes: a) Asia-5 economies denote Indonesia, Malaysia, Philippines, South Korea and Thailand; b) Minus sign denotes a rise and vice versa

Source: IMF (2001c)

Table 2
External Debt of the Crisis-hit East Asian Economies^a, 1995-2000
(percentage of GDP)

Country	1995	1996	1997	1998	1999	2000
Indonesia ^b	56.3	53.4	63.9	149.4	95.5	93.8
Malaysia	37.6	38.4	43.8	58.8	53.4	49.3
Philippines	54.9	55.0	61.6	81.7	75.7	78.9
Thailand	49.1	49.8	62.0	76.9	61.4	51.7
Korea	26.0	31.6	33.4	46.9	33.4	26.5
<i>of which: Short Term Debt</i>						
Indonesia ^b	8.7	7.5	27.5	76.4	5.9	5.7
Malaysia	7.2	9.9	11.1	11.7	7.6	6.4
Philippines	8.3	12.0	14.0	15.6	11.3	7.5
Thailand	24.5	20.7	13.3	21.0	11.4	6.8
Korea	14.6	17.9	23.1	9.7	9.3	7.7

Notes: a) Asia-5 economies denote Indonesia, Malaysia, Philippines, South Korea and Thailand;
b) The data for Indonesia exclude trade credits

Source: IMF (2000)

Table 3
Components Constituting Reform of the International Financial Architecture

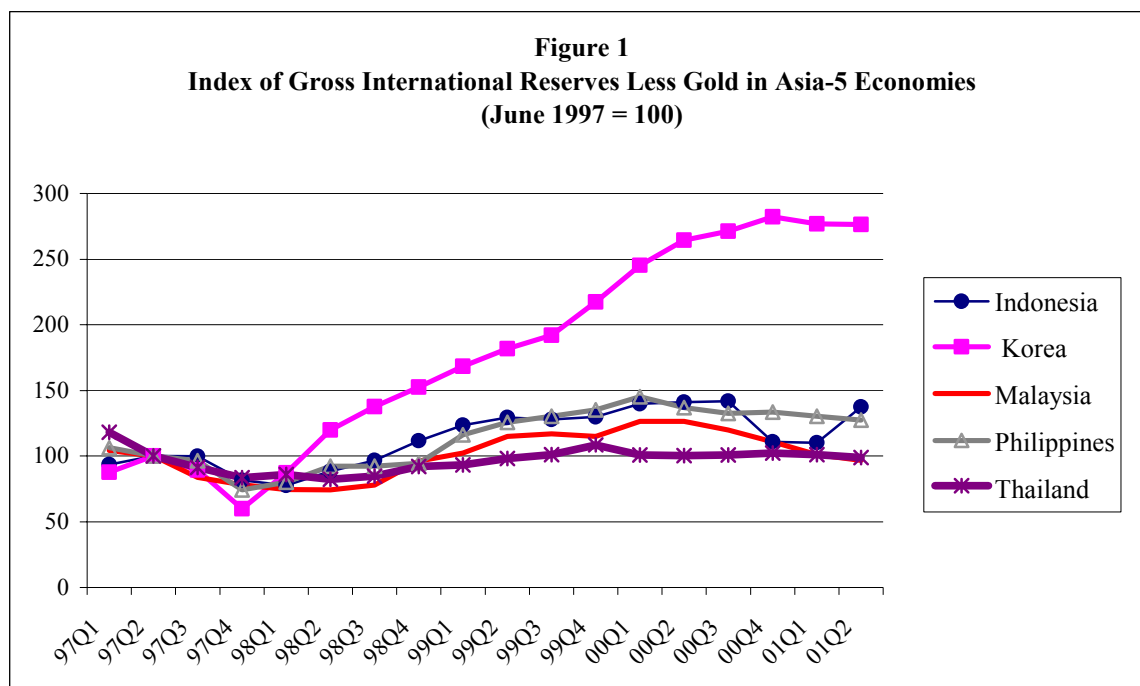
I.	<u><i>Detecting and Monitoring External Vulnerability</i></u> : While good macroeconomic policies and adequate foreign reserves remain the key to reducing vulnerability, work has concentrated on improving IMF surveillance of policies, and on tools to help countries better assess the risks they face.
II.	<u><i>Strengthening Financial Systems</i></u> : Financial regulators need to upgrade supervision of banks and other financial institutions to keep up with the modern global economy and ensure that risk management and other practices keep institutions from getting into difficulties.
III.	<u><i>International Standards and Codes</i></u> : Adherence to international standards and codes of good practices helps ensure that economies function well at the national level, which is a key prerequisite for a well-functioning international system.
IV.	<u><i>Capital Account Issues</i></u> : Architecture reform aims to help countries benefit from international capital flows, an important element of which is helping them open to such flows in ways that avoid risks and emphasise careful preparation.
VI.	<u><i>Sustainable Exchange Rate Regimes</i></u> : Financial crises have often been marked by inconsistencies between the exchange rate regime and other economic policies. The IMF is advising countries to choose a regime that fits its needs, especially in light of the risks of pegged exchange rates for countries open to international capital flows.
VII.	<u><i>Involving the Private Sector in Forestalling and Resolving Crises</i></u> : Better involvement of the private sector in crisis prevention and management can limit moral hazard, strengthen market discipline by fostering better risk assessment, and improve the prospects for both debtors and creditors.
VIII.	<u><i>Reform of IMF Financial Facilities and Related Issues</i></u> : The IMF is implementing important changes to help focus its lending on crisis prevention and to ensure more effective use of IMF funds.
IX.	<u><i>Measures to Increase Transparency</i></u> : Measures are being taken to make available timely, reliable data, plus information about economic policies and practices, to inform both policymakers and market participants, and to reduce the risk of crisis.

Source: Excerpted from IMF (2001a, p.1)

Table 4
Recent Modifications to the IMF's Contingent Credit Lines (CCLs)

- Monitoring arrangements for members that had strong track records on policies and that qualified for the CCL would be less intensive than for members under other IMF arrangements. Accordingly, in its request for a commitment of CCL resources, the member should present a quarterly quantified framework to guide its macroeconomic policies that would be a basis for monitoring, but there would be no need for a detailed definition of program targets. Also, while the initial consideration of the member's eligibility should include an assessment of its structural program and the progress expected under that program, formal structural benchmarks would not be necessary. Finally, in appropriate cases, the midterm review of arrangements with CCL resources could be completed on a lapse-of-time basis (without formal discussion by the IMF's Executive Board). Between reviews, staff and management would remain in close touch with the member and inform the Board if there were concerns that slippages in the member's policies might make it vulnerable to crises. The Board agreed that the IMF must continue to have the means to make a member exit formally from the CCL - primarily in the form of the limited (one-year) commitment period under the CCL and the midterm review.
- A member approved for a CCL could request financing at any time, which would lead to a special "activation" review by the Board. In September 2000, Directors agreed to simplify the conditions for completing the activation review to assure members using the CCL of greater automaticity in the disbursement of resources. The activation review would be divided into an "activation" review and a "post activation" review. The former would be completed quickly and would release a predetermined, large amount of resources - normally a third of the total commitments - and the member would be given the strong benefit of the doubt as to any required policy adjustments. In the post activation review, phasing and conditionality would be specified for access to the remaining resources.
- One formal condition for the completion of the activation review would be eliminated. Under the original policy, the Board had to agree that "up to the time of the crisis, the member has successfully implemented the economic program that it had presented to the Board as a basis for its access to CCL resources." This condition was intended to guard against the possibility that the member's own policies had contributed to the buildup of its balance of payment difficulties. The Board agreed to omit this as a separate condition because this possibility would not be consistent with the member's difficulties being judged to be largely beyond its control (a separate condition for the activation review).
- The overall rate of charge and the commitment fee on CCL resources was reduced. The initial surcharge was lowered from 300 basis points to 150 basis points (half of the surcharge under the Supplemental Reserve Facility, or SRF). The surcharge would then rise with time, to a ceiling of 350 basis points. The commitment fee on the CCL (and other large arrangements) was reduced by replacing the prevailing flat commitment fee of 25 basis points with a new schedule—to be applied to all IMF arrangements - of 25 basis points on amounts up to 100 percent of quota, and 10 basis points for amounts in excess of 100 percent of quota. This structure recognises the importance of fixed costs in setting up an arrangement.
- To allow for a meaningful period of experimentation with the revised facility, the Board extended the sunset clause on the CCL until November 2003. The Board will conduct its next review of the CCL in November. The design of IMF-supported programs will be guided by the requirement that the member should be able to meet repurchase obligations. The member's ability to meet the repurchase expectations would signal as a general rule a stronger-than-expected improvement in its external position. Members may request an extension of repurchase expectations at any time. Should a member fail to meet a repurchase expectation not extended by the Board, its right to make further drawings, including under ongoing arrangements, would be automatically suspended. The Board agreed to review the operation of early repurchase expectations by November 2005.

Source: Excerpted from IMF (2001b, pp.37-8)



Source: ARIC website (www.aric.org)

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